INDIAN GEOTECHNICAL SOCIETY

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INDIAN GEOTECHNICAL SOCIETY

Daughters of Indian Soil

75

Influential Indian Women in Geotechnical Engineering

INDIAN GEOTECHNICAL SOCIETY
Registered under Societies Act vide Regn. No. S/18957 dated 16.05.1988)
(Affiliated to INTERNATIONAL SOCIETY FOR SOIL MECHANICS AND GEOTECHNICAL ENGINEERING)

Dr. Anil Joseph
President,
Indian Geotechnical Society

Dear Reader,

With immense pleasure, I extend my warm greetings as we embark on a remarkable journey through *"Daughters of Indian Soil."* This literary celebration highlights remarkable women in Geotechnical Engineering, enriching our nation's tapestry and leaving an indelible mark on our home soil.

Indian Geotechnical Society, established in 1948, is currently spread across 52 centers with about 6,000 members and is celebrating its 75 years of formation. The 75th anniversary celebration of our IGS Society has been marked by numerous programs nationwide. The initiative of the publication of the book titled *"Daughters of Indian Soil"* is part of the 75th year celebration. This book portrays the experience of 75 Geotechnical women leaders who made a mark in the development of knowledge in the field of Geotechnical Engineering in our country.

As President of the Indian Geotechnical Society, I'm delighted to see this endeavor spotlighting their accomplishments. Each session unveils resilience, determination, and brilliance, shaping individual experiences and contributing significantly to our country with diverse soil profiles. *"Daughters of Indian Soil"* exemplifies diversity and breaking barriers in Geotechnical Engineering and beyond.

I especially appreciate the efforts of the team led by Prof. Madhavi Latha to bring out this book to the authors, editors, and all involved in bringing this tribute to fruition. May *"Daughters of Indian Soil"* inspire all of us, especially the younger generations, to challenge norms, break stereotypes, and create an environment where every individual's potential is recognized and celebrated.

Wishing you an enriching reading experience.

Yours sincerely,

Secretariat :
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Prof. A.P. Singh
Honorary Secretary,
Indian Geotechnical Society

Dear Reader,

Writing a preface to this valuable collection gives an entirely different feeling. The 75th year celebration of our IGS Society is marked with many exceptional recognitions. IGS has come up with a novel resolution to publish the precious book titled "Daughters of Indian Soil," which will connect us directly to the 75 powerful women leaders of Indian origin in Geotechnical Engineering. This exceptional recognition remains the most special and distinguished one of all by IGS on the occasion of its 75th year of existence.

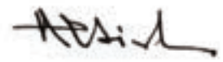
The gender gap in civil engineering has been a long-standing subject for several years. Women are significantly underrepresented in the field, and one of the reasons is the lack of representation of female role models and mentors. Through this book, we aim to bring visibility and recognition to women achievers in the field of Geotechnical Engineering so that the reason for the lack of role models doesn't exist anymore.

From time immemorial, women have been the undisputed leaders in home building and the epitome of courage, strength, and compassion. There is no reason these dynamic personalities cannot be the finest Civil Engineers in the field. It is rightly said, "God created few strongest women and made them Civil Engineers and even more stronger among the strongest ones as Geotechnical Engineers"!

I would like to congratulate each of our 'Daughter of Soil' on their success and thank them wholeheartedly for sharing their experience.

Wishing a motivational reading experience.

Yours sincerely,



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Prologue …

Indian Geotechnical Society is celebrating its 75th year of existence in 2023. While the Society has a long and distinguished legacy that continues to grow bigger and stronger over the years, the contributions of the Indian women Geotechnical engineers remained largely unnoticed. The Sub-committee SC-15 of the Indian Geotechnical Society is entrusted with the very important task of improving the gender ratio at all levels of Geotechnical Engineering education and professional practice in India. The primary focus of the committee is to inspire young girls to pursue geotechnical engineering education, take up initiatives that motivate more women to take up geotechnical engineering careers and provide guidance to young women in this field. Apart from these, the committee strives to bring visibility and recognition to every woman achiever of Indian origin in the field of geotechnical engineering and bring their contributions to the spotlight.

The SC 15 committee has taken a resolution to publish this book titled "Daughters of Indian Soil," which recognizes 75 women leaders of Indian origin in Geotechnical Engineering, in line with the 75th year celebrations of IGS. As the convenor of the committee, I had the privilege of editing this book. The book presents the personal and professional journeys of each of the 75 selected women, along with their photographs. This book will not only be a document that collates the contributions of Indian women geotechnical leaders but it is also expected to inspire and motivate the young girls of India.

When we started listing the names, many people asked us, "Do you really have 75 significant Indian women in Geotechnical Engineering to bring out a book on them"? But the list grew bigger and bigger, but we had to stop at niche number 75. Hence it must be understood that the book is not a complete catalog of the Indian Women Geotechnical Engineers who made significant contributions to the profession, but it only provides the details of a selected few who represent the bigger picture of what it's like to be a woman in a career that is male-dominated. The sketches presented in this book are entirely based on the information provided by the selected women, and hence, IGS does not take any responsibility for the authenticity of the data. Since the information was received in 75 different formats, a little bit of editing was necessary to present it in a concise and organized form. I thank my Post-doc Geethu and Ph.D. students Anusree and Aarya for helping me with the editing. I take full responsibility for any slips that occurred during editing and formatting. The biosketches are alphabetically ordered, and hence the order does not represent any prioritization or ranking. Finally, I thank IGS for trusting me on this, EC members of IGS for their valuable suggestions, and the entire SC-15 committee for their help in making this book a reality. Let the book unfold the fascinating stories of 75 successful daughters of Indian soil and let the entire Indian Geotechnical fraternity revel in their contributions to the Geotechnical Engineering profession.

- Madhavi

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Aali Pant

My name is Dr. Aali Pant, and I am currently working as an Assistant Professor in the Civil Infrastructure and Engineering Department of IIT Jodhpur. I work in Geotechnical Engineering and research the use of geosynthetics for infrastructure development. My interest in Geotechnical Engineering developed when I was in my 3rd year of B. Tech and was first introduced to the subject of Soil Mechanics. The importance of this area in each of the civil engineering projects fascinated me immediately. Thereafter, I cleared the GATE exam in 2011 and was offered the opportunity to pursue an M. Tech in Geotechnical Engineering from IIT Roorkee. Although I also received a Graduate Engineer Trainee position at one of India's leading civil engineering firms, my bias toward learning more about soil and its behavior led me to choose the former. IIT Roorkee allowed me to grab the coveted DAAD fellowship and gave me the chance to work on a field-based research project at the Technical University of Munich, Germany. The place gave me my first international travel experience and introduced me to global academic research and industry outlook. I thus pursued a Ph.D. thereafter and graduated from IIT Delhi in 2020.

Research in the geotechnical field often requires you to work with heavy machinery and harsh conditions, which deters many women researchers from taking up this profession in the first place. I still remember that during my research days, I had to visit remote locations, often on trucks, to collect materials for testing, which worried my family. The machines often used to give up during a test, the sample preparation for which used to take a long time. Also, getting drenched in dust became an everyday norm. But a successful test and desired results made you forget all the physical and mental exhaustion and inspired you to work harder. I published several research papers in journals at national and international conferences. Apart from many other accolades, including research and travel grants, I was granted a patent on my designed machine. My journey as a Geotechnical Engineer has been tumultuous at times but very satisfying and fulfilling.

My message to students and researchers (specifically women) who want to pursue geotechnical engineering is that there will be challenges and hurdles in this journey, but don't lose your passion and motivation for the subject, as it is an extremely rewarding field, and you can contribute immensely to nation building in the long run.

Aarti Bhargava

With 35 years of experience, I, Aarti Bhargava, began my career in 1988 at Aimil, holding degrees in Economics (Hons) and MBA. This marked the start of a journey into Instrumentation technologies, where I gained insights. Venturing into the corporate world at a young age felt like entering Wonderland, diving into practical sessions on Quality Control Instruments for Soil, Sand, Cement, and Asphalt testing.

As a non-engineer in an Engineering organisation, proving competence was a constant challenge, acting as a catalyst for personal and professional growth. Navigating a male-dominated world, I balanced family needs after marriage, driven by a passion for continuous learning, managerial skills, and maintaining a work-life balance.

Progressing through roles in IT, Order management, Export-import management, Vendor Management, Strategic Sales, and Corporate Marketing, I gained valuable global exposure and demonstrated adaptability, innovation, and a commitment to fostering teams. Playing a pivotal role in corporate growth, ERP, CRM, ISO implementation, and embracing good management practices, I developed marketing and sales strategies for Civil Engineering Equipment across countries.

Currently holding dual responsibilities at Aimil, I am the National Head (Sales) of Civil Engg Instruments and Head of the MarCom Division. Leading teams of Civil Engineers nationwide and a Marketing team in Delhi reflects my commitment. My role at MarCom honed my marketing skills from traditional to digital, initiating a new department that evolved with the ever-changing business landscape, touching diverse industries.

Representing Aimil at various platforms such as IGS, IRC, BIS, ISRM, ICI, CBIP, CII, and PHDCC, I have shared a special bond with IGS for over 25 years. Recently completing my second term as Chairperson for the IGS Delhi Chapter in November 2023, winning best chapter awards, I actively participate in the National Executive Committee and the G2 committee of the Indian Roads Congress, contributing to the Human Resource Development of Highway Engineers.

My journey enhanced my ability to navigate complex social dynamics with transformative initiatives in communication, relationship building, resilience, time management, creativity, and a commitment to excellence. Always ready to take up new challenges, I believe each challenge leads to success or learning.

Beyond professional pursuits, I engage in social causes through empowering blogs, poetry, videos, Nukkad-Natak performances, and philanthropic activities. Looking ahead, I am eager to explore new opportunities, become a better version of myself, and leverage competencies built over my personal and professional landscape.

Ajanta Sachan

My name is Ajanta Sachan, and I am an Associate Professor of Civil Engineering at IIT Gandhinagar. I began my journey in a traditional "Jameendaar" family in Kanpur (UP), where the idea of "Girl Education" was alien. I attended a government girls' school with inadequate facilities and guidance, yet I managed to pass the 10th Board test in the state of Uttar Pradesh by relying only on my self-study. This gave me a lot more confidence to pursue additional education.

After completing my 12th grade, I secured admission to the prestigious Civil Engineering Institute, the University of Roorkee (IIT Roorkee). Following my BE degree in 1997, I worked as an Engineer at WAPCOS India Limited for two years. Subsequently, I pursued higher studies in the USA, obtaining my Ph.D. from the University of Tennessee Knoxville in 2005. Following my doctorate, I was honored with a DST Young Scientist Research Fellowship and served as a DST-sponsored Senior Scientist at IIT Kanpur for three years. Thereafter, I served as an Assistant Professor at IIT Guwahati for 1.5 years before joining IIT Gandhinagar in 2010 during its formative stage.

Throughout my tenure at IIT Gandhinagar, I played a crucial role in establishing various sections, including the Student Placement Office, Civil Engineering MTech, PhD & BTech programs, and Civil Engineering Laboratories. My passion as an experimentalist led me to focus on establishing a top-notch geotechnical laboratory equipped with high-end research equipment for both basic and advanced soil testing. My research areas encompass liquefaction, cyclic instability, dynamic properties, unsaturated soils, suction, strain localization, crack detection, and collapse potential. With 50 journal papers and 60 conference papers published, I have contributed significantly to esteemed journals in soil mechanics and soil dynamics.

In 2014, I initiated a virtual geotechnical laboratory (http://research.iitgn.ac.in/stl/) offering live lab sessions, aiding geotechnical engineers worldwide in understanding various soil tests. I have provided training to PhD students, faculty members from other universities, and industry professionals on advanced geotechnical testing methods. My contributions include conducting short courses, workshops, symposiums, conferences, conclaves, and summer schools in Geotechnical Engineering. I oversee online activities for iGrip (Initiative Geotechnical Research and Innovative Practices), offering lectures and webinars on various geotechnical engineering topics. Recently, I introduced a unique full-semester program titled "Focus School in Geotechnical Infrastructure Design" for BTech students across the country (https://sites.iitgn.ac.in/iitgnx/gid).

Akanksha Tyagi

I am Dr. Akanksha Tyagi, currently serving as an Assistant Professor at the Department of Civil Engineering, Indian Institute of Technology (IIT) Roorkee. My journey began on 22 August 1989 in Pantnagar, Uttarakhand. I received the Certificate of Merit in high school for ranking among the top 0.1% in the All India Secondary School Examination 2005, scoring a perfect 100/100 in Mathematics. I earned my B. Tech. in Civil Engineering from G.B. Pant University of Agriculture & Technology in 2011, receiving the Vice-Chancellor's Gold Medal in B.Tech. (Civil Engineering). My pursuit of knowledge led me to earn an M.Tech. in Geotechnical specialization at IIT Bombay from 2011 to 2013. At IIT Bombay, my interest in geotechnical engineering flourished, particularly centrifuge modeling of geotechnical structures. Continuing my academic journey, I joined the Civil and Environmental Engineering National University of Singapore (NUS) in 2013, securing the NUS Research Scholarship for Doctoral Research from the National Research Foundation (NRF) Singapore and the Ministry of Education (MOE) Singapore. My Ph.D. thesis, titled "Design framework for circular tunnels with cement-admixed soil surrounds," delved into the failure behavior and stability characteristics of large-diameter circular tunnels in soft soils improved by in-situ soil mixing techniques.

After completing my Ph.D., I worked as a Geotechnical (Design) Engineer at Keller Foundations (SE Asia) Pte Ltd. in Singapore, followed by a maternity break and a brief stint as an Assistant Professor at IIT Bhubaneshwar. In July 2019, I joined the Civil Engineering Department at IIT Roorkee. My research at IIT Roorkee focuses on tunneling and excavations in soft soils, in-situ ground improvement techniques, cut-off walls/seepage barriers, modeling spatial variability, random finite element analysis, and the use of industrial wastes as geomaterials. I am also an associated faculty member at the International Centre of Excellence for Dams at IIT Roorkee. As a Principal Investigator (PI), I received the SERB Core research grant for the "Reliability-Based Design of Tunnels in Anisotropic Spatially Variable Residual Soil Slopes" project from Feb 2023-2026. Over the years, I have guided 4 M.Tech. theses and am currently supervising eight Ph.D. students.

I am an Associate Member of the American Society of Civil Engineers (ASCE) and serve as an official member of the Soil Mixing Committee at the Deep Foundations Institute. Additionally, I am a Life member of the Indian Geotechnical Society and a nominated member of TC-307: Sustainability in Geotechnical Engineering, International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE) for the term 2022-2025. My research contributions have been published in reputed peer-reviewed journals, including ASCE Journal of Geotechnical and Geoenvironmental Engineering, Elsevier Tunnelling and Underground Space Technology, ASCE Journal of Hazardous, Toxic and Radioactive Waste, and ASCE International Journal of Geomechanics.

Beyond my research endeavors, I am passionate about teaching and interacting with young minds, motivating them to explore the exciting and challenging world of Geotechnical engineering.

Akhila Manne

My journey into Civil Engineering was driven by my parent's commitment to discipline, a value I embraced throughout my academic path while witnessing the construction of various civil projects. The 2001 Bhuj earthquake and the 2004 Tsunami in India, causing around 20,000 and 10,000 fatalities, deeply impacted me. Understanding the pivotal role of well-designed foundations in preventing loss of life, I focused on graduate projects related to seismic retrofitting and disaster preparedness. However, despite graduating with honors and securing the top rank, finding a job aligned with my passion proved challenging due to the prevalent bias favoring male candidates. To deepen my expertise in earthquakes, I pursued postgraduate research on 'Seismic site characterization and ground response analysis,' involving on-site and desk studies. Subsequently, my Ph.D. work on 'Modelling of dynamic laboratory tests for liquefaction estimation' enhanced my technical, programming, collaboration, and leadership skills. This period marked my initiation into knowledge dissemination through publications, teaching assignments, and engaging in technical discussions. Despite facing misappropriation of my work, my commitment to the field remained steadfast.

Joining Keller Ground Engineering, a global firm focusing on ground improvement solutions, proved fulfilling. I contributed substantially to projects such as the Polavaram cofferdam in India and public projects for oil and gas, and railways. Collaborating with global experts and academicians enriched my technical skills, integrating my research knowledge with real-time applications. Despite the challenge of finding female mentors, recognition for my contributions and acknowledgment as the "Best Team Leader" boosted my confidence. Participating in geotechnical conferences since 2011, I authored around 20 articles. Associating with the Women in Deep Foundations committee facilitated interactions with inspiring women engineers, leading to mentorship and support. Co-chairing a webinar focused on careers in academia for geotechnical engineers aimed to address the underrepresentation of women in leadership positions.

Interactions with industry experts led me to recognize the imperative for automated data analysis and machine learning in Geotechnical Engineering. This realization prompted my transition into a programming role to acquire proficiency in programming and product development. Throughout my professional journey, my family provided unwavering support. Looking ahead, I am eager to contribute to the development of software for geotechnical applications, enhancing engineering decisions in this field. My goal is to inspire and encourage women to pursue careers in Geotechnical Engineering, addressing the existing underrepresentation in leadership positions.

Anitha G Pillai

I am Dr. Anitha G. Pillai, and I earned my Ph.D. from Cochin University of Science and Technology in 2015, following my Master's in Construction Engineering from the same institution, where I secured the first rank. Currently, I hold the position of Principal at SCMS School Of Engineering and Technology (SSET). My journey with SSET has been extensive, starting as a faculty member and becoming deeply involved in its academic and administrative processes since its establishment in the year 2001, assuming various roles.

My professional experience includes working at the first large-scale fertilizer plant in India - Fertilizers and Chemicals Travancore- as a site engineer with a prominent builder in Kerala for 2.5 years. This came after completing my Bachelor's in Civil Engineering from Government Engineering College, Thrissur. Drawing from my industry experience, I am familiar with the intricate accreditation process and quality control measures for higher education institutes in India. I led the SSET NAAC (National Assessment and Accreditation Council) accreditation team and the NBA (National Board of Accreditation) team.

My involvement in professional bodies such as the Indian Concrete Institute (ICI), the Indian Geotechnical Conference (IGS), and the Indian Society for Technical Education (ISTE) has enriched my perspective. Actively associated with the IGS Kochi Chapter since its inception in 2009, I have served as an Executive Committee member for two terms, including the current one. Additionally, I am a National Executive Committee member of IGS. I played a key role in organizing the Indian Geotechnical Conference 2011 (IGC 2011) and contributed to the success of IGC 2022. In the Indian Concrete Institute (ICI), Kochi Centre, I served as Secretary from 2011 to 2015 and as the chairperson from 2015 to 2017. I organized several professional programs for students and technocrats across Kerala and actively participated in various activities.

My research contributions include publications in peer-reviewed journals, both international and national and presentations at conferences and seminars. I currently represent the Indian Geotechnical Society (IGS) on the International Technical Committee TC-306 on "Geo-engineering Education" of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE) for the term 2022-2025. Known as a teacher adored by students, an academician who inspires many, and an adept leader with exceptional administration and organizing skills, I continually challenge myself to reach greater heights.

Anjana Bhasi

As an Assistant Professor in the Department of Civil Engineering at the National Institute of Technology Calicut, I am deeply invested in the realm of Geotechnical Engineering. My academic journey began with a Bachelor of Technology in Civil Engineering from T.K.M Engineering College Kollam, Kerala University. Subsequently, I pursued my Master's and Ph.D. degrees at the Indian Institute of Technology Madras, specializing in Geotechnical Engineering under the mentorship of Prof. K. Rajagopal.

My doctoral research at IIT Madras revolved around 'Performance Evaluation of Geosynthetic Reinforced Embankments Supported on Piles.' I extensively utilized ABAQUS (3D) during this period to explore the arching phenomenon in geosynthetic reinforced columnar embankments. My study also delved into investigating various design codes like BS8006-1, EBGEO, and CUR (226) pertinent to embankment construction.

Previously, I served as a faculty member in the Geotechnical Engineering division of the Civil Engineering Department at the National Institute of Technology Karnataka, Surathkal, from 2015 to 2018. In June 2018, I commenced my tenure as an Assistant Professor at NIT Calicut, contributing to the Department of Civil Engineering.

My research interests encompass finite element modelling and simulation of geotechnical engineering structures, ground improvement methods, geosynthetics for reinforcement of earth structures, soil mechanics, and foundation engineering. I was honored with a SERB (ECR) grant, facilitating an investigation into the design and performance analysis of encased stone column-supported embankments with geocells as basal reinforcement.

Reputable journals, including the ASCE International Journal of Geomechanics, Geotextiles and Geomembranes, Journal of Natural Fibres and Geomechanics, and Geoengineering, have published what came out of the research I conducted. In addition to actively reviewing articles for these prestigious publications, I work as a consultant and conduct tests in the field of Geotechnical Engineering.

Annapoorni Iyer

"This is the start of something beautiful," and it truly encapsulates my journey in the field of Civil Engineering. Back in the '90s, during my school days, I had no inkling that I would embark on this wonderful path. When the 12th standard results were announced, I was resolute in choosing either Civil or Mechanical engineering, steering clear of Software Engineering. My interest in Civil Engineering burgeoned, and by 2002, when I joined Maccaferri Group, it had further narrowed down to Geotechnical Engineering. My assignments at work were rife with challenges, shaping me both as an individual and as a professional. The frequent opportunities to visit remote sites were instrumental in my growth. The gratitude I feel towards my seniors echoes a sense of mentorship and support that played a pivotal role in my development.

Despite being well-placed in a renowned organization for over a decade and a half, leaving my comfort zone and delving into entrepreneurship was not spontaneous. The desire for independence, instilled in me during my formative years by my mother and nurtured by my husband, drove me towards this choice. My decision to venture into entrepreneurship is fuelled by a desire for independence and a passion to excel and leave a lasting impact on my chosen industry.

The challenges any new entrepreneur, especially a first-generation entrepreneur, faced were no different for me. Building self-confidence, breaking internal barriers, and gaining the trust and confidence of clients as a 'startup engineer' were hurdles I had to overcome. Proudly, I reflect on my contributions to various prestigious nation-building projects, such as the Imphal-Kangchep-Tamenlong Road Project and the Versova Bandra Sea Link.

My commitment to staying motivated and finding a sense of purpose is underlined by my deep-seated desire to give back to society. Mentoring is my chosen way to contribute meaningfully. By sharing my knowledge and experiences with young engineers, I actively participate in cultivating talent within my professional community, contributing to the overall advancement of the field. My professional affiliations include close bonds with bodies like the Indian Geotechnical Society (IGS), the Association of Consulting Civil Engineers of India (ACCE), and the Deep Foundation Institute (DFI).

Balancing my multifaceted role as a family woman while being professionally engaged, handling domestic and social commitments, and responding to calls from remote sites required a dynamic balancing act. I firmly believe that success is never complete without the support of family, the blessings of teachers, professors, senior colleagues, associates, and the Almighty. As I conclude this narrative, I leave a small message for young entrepreneurs: "Identify your areas of interest to deliver your best and stay focused on that. Success might take a year or a decade. Stay consistent."

Anumita Mishra

In a field traditionally dominated by men, I embarked on a journey into Civil Engineering, driven by an unconventional passion and a source of inspiration close to my heart—my father, a Civil Engineer himself. His guidance and unwavering support shaped my educational choices, making Civil Engineering my first and resolute preference.

I joined VNIT Nagpur in 2009 to pursue a BTech in Civil Engineering. After my Bachelor's, I had a strong desire for research and a special liking for academia. Pursuing knowledge led me to IIT Kanpur for my PhD in Geotechnical Engineering in 2013. This phase marked a transition from the known to the unknown as I delved into research in foundation engineering and advanced my understanding of the intricate dynamics of soil mechanics. It was a period of intellectual growth, marked by challenges that sculpted not just my academic acumen but also my resilience.

Post-PhD, I joined AECOM India Pvt Ltd, where I contributed to various ongoing metro and tunneling projects in India from 2018 to 2019. This experience exposed me to the practical applications of my academic pursuits, bridging the gap between theory and real-world challenges. Working in a dynamic environment, I honed my skills, adapting my academic knowledge to the intricacies of geotechnical projects, a valuable chapter in my journey of continuous learning.

The next significant milestone unfolded as I embraced the role of an Assistant Professor in Geotechnical Engineering at IIT Roorkee in 2019. This transition from industry to academia brought with it a new set of challenges and triumphs. The joy of imparting knowledge, guiding aspiring minds, and contributing to cutting-edge research became integral to my professional narrative. However, this journey was not without personal sacrifices. Living alone at IIT Roorkee while my husband pursued his endeavors in Delhi presented a unique set of challenges. Balancing the solitude of academic pursuits with the warmth of personal connections became an art that required meticulous planning and an unwavering commitment to both spheres of life.

Aruna Kumari Garaga

I take this humbling opportunity to share my career-life journey with all through the forum of "Daughters of Indian Soil." My parents, hailing from a humble background from the Nalgonda district of Telangana, were the epitome of Khalil Gibran's words, "Every Child comes through you but not from you" leaving no stone unturned towards providing unparallel moral support throughout my academic journey spanning JNTU Kakinada, IIT Madras and IISc Bangalore.

My academic journey taught me that "Excellence and recognition are byproducts of perseverance, delivering one's duties in a just manner, and trusting the process." Be it consistently performing in the top 2% ranking among peers or receiving recognition for academic research work, my mentors, the Late Prof. Sreerama Rao from JNTU, Prof. S. Narasimha Rao from IIT Madras and Prof. Madhavi from IISc, played a vital role in framing my personal and professional pedigree strengthening my core to take on the challenges the industry and life has to offer for women professional. I owe my development to these humble mentors with whom I was destined to cross paths.

In my professional journey, perhaps it was destiny that I landed in the energy industry. As they say, one can connect the dots only by looking back, and in order to do so, one should keep an open mind towards any obstacles or opportunities that come along the way. From a humble beginning as an engineer with L&T Valdel, Nauvata and progressing to leadership roles with Worley managing 80+ strong teams, and now as Engineering Team Lead with ExxonMobil, my career has been shaped fairly by the choices I had to make along. The culmination of my career journey to date is my contribution to 25+ major offshore greenfield and brownfield developments. Being featured in the "People of Worley" series and the CEO's special recognition award for Global Geo-Technical and Offshore Structural Expertise is a recognition that serves as a sweeter icing on the cake.

Staying connected to one's roots and cherishing opportunities to give back to the community is something I am passionate about. Be it stewarding young careers on professional growth, supporting alma mater(s) as Board Member of Studies in JNTU Civil Faculty, long term contributions to IGC journals and conferences, delivering institutional keynote talks such as TED Talk IISc, shaping women's professional growth through interest groups, viz. as Chapter Lead for Women of Worley, Preceding Officer for workplace POSH, and now with ExxonMobil's Women-In-Technology are few contributions that I am glad to share with all.

Balancing personal and professional walks of life is a layer of complexity that most women professionals excel as second to none, emphasizing the reality that even in the face of success, challenges are real, and taking them on aids us to emerge stronger. Unconscious work place bias and the perpetual struggle for workplace-life balance are challenges I strongly hope will be problems that our generation can put an end to.

While I pause to share a thought with aspiring women geotechnical engineers, I recap that hard work, perseverance, resilience, passion, and dedication are the catalysts in the relentless pursuit of becoming a wholesome professional.

Aswathy M S

My professional journey began in L&T Construction, Chennai, where I joined as a postgraduate engineer trainee (PGET). The exposure I got as a Geotechnical Engineer at L&T was immense, and I had the privilege of handling more than 50 projects over a period of 5 years. I was responsible for preparing soil investigation BOQ, foundation recommendation, analysis and design of shoring schemes, and ground improvement methods. In L&T, I got the opportunity to work on prestigious projects like Prestige Bella Vista, Chennai, Godrej Palmgrove, Chennai, UPHDB, Ghaziabad, Experion sector 108, and Shipra, Ghaziabad.

My turning point in life also happened to be in L&T, where I found my life partner, Mr. M. Vinoth, who is also a Geotechnical Engineer. In September 2016, I bid adieu to L&T for a new beginning in my personal life as a mother and in my professional life as a researcher.

In November 2016, I joined CSIR - Central Building Research Institute, Roorkee, as a scientist with the full support of my husband, who also joined as a scientist in the sister lab- CSIR- Central Road Research Institute Delhi and my parents to take care of my three months old baby when I was at the office. I won't deny the fact that life takes a 'u turn' when you become a mother, and your priorities will change. So was mine; my initial days in the office were struggling because of my mother's guilt, living away from my husband while trying to accept the difference between a scientist and an engineer. But with hard work and everyone's support, I worked on a mission-mode project on the 'Conservation and Restoration of Heritage Buildings', where I was the geotechnical task leader. Meanwhile, in 2018, my husband was transferred to CBRI Roorkee, which was a blessing for our family. In my professional life, I became part of a niche-creating project on tunneling and underground structures. Apart from the core research projects, I also contributed to many consultancy projects, which helped me to give solutions to real geotechnical problems. With my experience as a Scientist and Geotechnical Engineer, I was able to publish two Sci articles, five Esci articles, and nine conference papers.

To enhance my research capabilities, I joined as a part-time PhD scholar at IIT Roorkee in July 2023. I may not be perfect in all my roles- as a mother (I have two lovely kids now), wife, daughter, scientist, or student, but I try to find a balance between them all. Looking back, I feel blessed, and I hope my journey as a woman and a professional will be an inspiration to many young ladies. I owe this recognition as one of the top 75 Indian women leaders in the field of Geotechnical Engineering to my family and my mentors and colleagues.

Atasi Das

As the Assistant Vice President of G R Infraprojects Limited, I am passionate about encouraging aspiring female geotechnical engineers to contribute to innovative infrastructure development. Over my 25-year career, I've supervised extensive projects in pavement, materials, and geotechnical engineering. Transitioning from a Consulting firm to a contractor firm after 15 years was a challenging yet rewarding shift for me.

Initially, I stood as the lone female engineer among thousands of male colleagues, striving to establish equal opportunities for women in construction. Over time, my efforts influenced a shift in perspective within the company. We now actively seek and value female talent—a significant accomplishment that I take pride in. One of the projects close to my heart involved overseeing the intricate design and construction monitoring of reinforced soil structures (RSS) along an 8-km stretch consisting of 110 locations with heights up to 35 meters. Our innovative design approach and the use of geosynthetics empowered our in-house team to handle both the design and execution flawlessly. This resulted in a seamless construction process without any reported failures or mishaps, providing a sustainable and safe solution for the hill road project connecting Parwanoo to Solan en route to Shimla.

By implementing reinforced soil walls and slopes, we ensured enhanced safety for fill slopes that would have otherwise required conventional retaining wall systems. This proved to be an effective solution and conserved scarce aggregates in the weathered geological profiles. Additionally, utilizing composite hybrid systems in areas with considerable heights showcased innovation and safety.

My focus revolves around reducing fuel, manpower, and machinery usage while maintaining quality design and rigorous site monitoring. I emphasize seamless coordination from design to construction methodology. Beyond my professional endeavors, I deeply invest in research, aligning highway engineering practices with international standards while tailoring designs to local conditions in line with government initiatives such as "Swachh Bharat Abhiyan."

I am passionate about value engineering practices, promoting safe and sustainable solutions, fostering industry relationships, actively participating in workshops/seminars, and advocating for optimized construction practices aligned with modern designs. Beyond managing projects, mentoring my team, where I share knowledge gained from prestigious projects, is a priority for me. Over the past decade, I've nurtured over twenty junior engineers in Geotechnical Engineering, aiming for the betterment of the nation's infrastructure through talent development.

"The development of our nation should not only be for our own betterment,

but, also for the home we live and work in – the Environment."

"We do not inherit the world from our forefathers

we borrow it from our children".

Barnali Ghosh

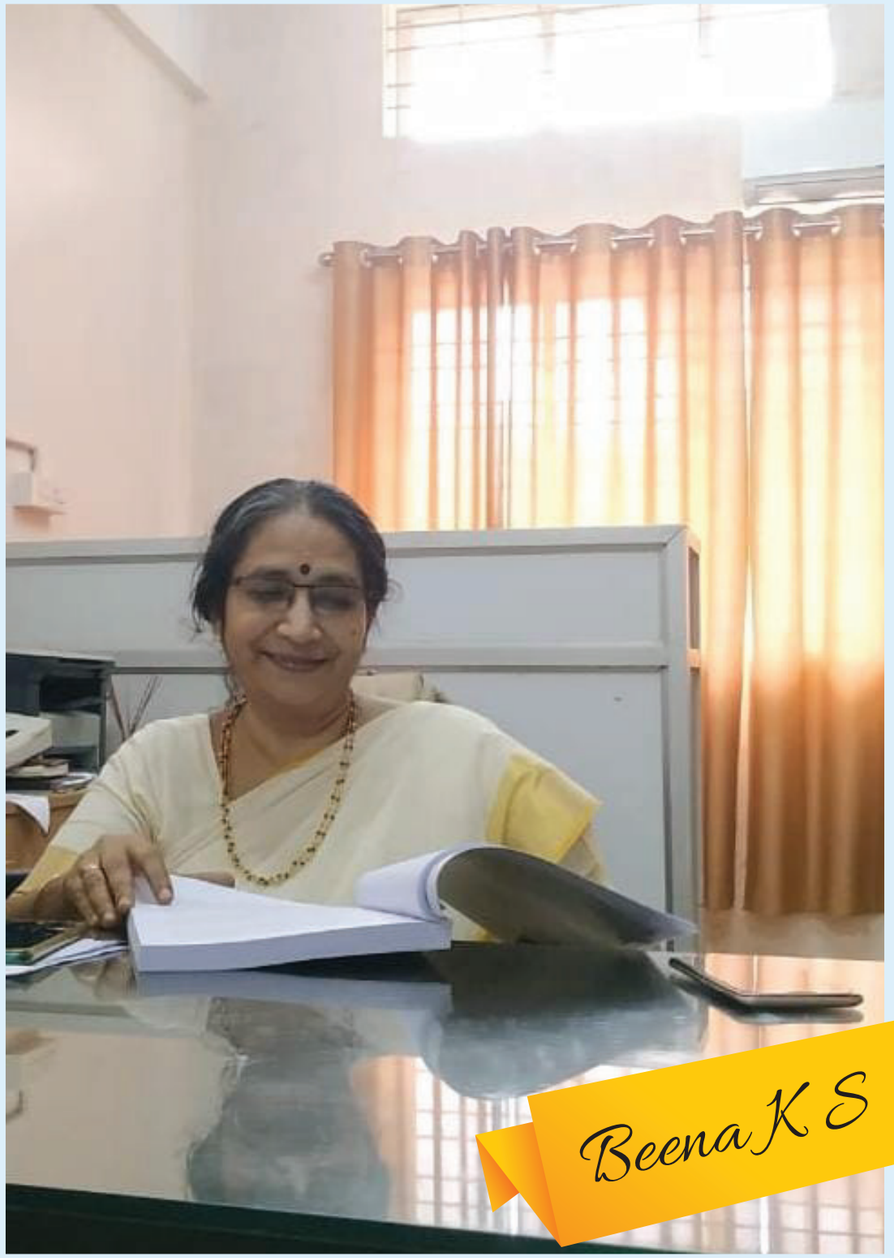
I discovered my fascination for Geotechnical Engineering during my undergraduate studies, captivated by the soil's unpredictable nature compared to concrete. Its diverse behaviors intellectually challenged me, leading to a deeper exploration of earthquake geotechnics during my Master's and Ph.D. at Cambridge University. I chose the engineering consulting sector to establish my mark as a woman professional in a challenging field.

Drawing upon the advanced knowledge gained during my PhD, I've spent 22 years specializing in seismic engineering, rendering my research expertise into practical Civil Engineering Practice. My extensive global project portfolio addresses significant challenges in strengthening seismic resilience and infrastructure safety. Often representing Mott MacDonald as a Seismic Specialist, my work directly or indirectly fulfills the UN's 17 Sustainable Development Goals (SDGs).

In my pivotal technical lead role, I meticulously assess seismic risks, employ innovative design techniques, and effectively communicate risks to stakeholders, ensuring safer designs. My innovative solutions in various international projects align closely with UN sustainability goals, creating impactful improvements in infrastructure and construction outcomes. For instance, my contributions to the Dhaka Environmentally Sustainable Water Supply Project in Bangladesh aim to provide clean drinking water to 4 million people, involving extensive pipeline construction, tunnels, and a large treatment plant.

Throughout my career, I've encountered and challenged misconceptions about balancing ambition and family as a woman professional. However, I strongly advocate that with technical expertise and passion, success can overcome any obstacles. Encouraging women in Geotechnical Engineering, I emphasize the power of networking and collective effort, dedicating significant time to mentor young women in pursuing their aspirations.

My impactful efforts in mentoring have earned me recognition, including the Top 50 Women in Engineering Awards (2020) by the Woman Engineering Society. Additionally, I serve as a Royal Academy Visiting Professor for geo seismic engineering at Cambridge University and hold a fellowship at the Institution of Civil Engineers (FICE). Notably, I received the prestigious John Mitchell Award from the British Geotechnical Association, marking the first time a woman received this honor, a testament to my significant contribution to Geotechnical Engineering.



Beena K S

I hold the title of Emeritus Professor at Cochin University of Science and Technology, where I dedicated 34 years to teaching and research. Retiring as a Professor in Civil Engineering from the School of Engineering at the same university, I've had a fulfilling career. I also served as the former Principal of the School of Engineering and held roles such as Dean of the Faculty of Engineering and Syndicate Member at Cochin University of Science and Technology in Kochi, Kerala.

My academic journey commenced with a Bachelor's degree in 1984 from the College of Engineering, Trivandrum, Kerala, followed by an MTech degree in Civil Engineering (Geotechnical Engineering) in 1986 from the same institute. Subsequently, I earned my doctoral degree in Civil Engineering from the Indian Institute of Technology, Madras, in 1994. I began as an Assistant Professor at Kerala Agricultural University in 1988, gaining practical experience as an Assistant Engineer/Assistant Director in the Kerala State Irrigation Department in 1993. Transitioning to Cochin University of Science and Technology in 1999 as a Reader, I progressed to become a Professor in 2006, concluding my tenure in April 2023.

My research interests encompass diverse areas such as soft soil and ground improvement, liquefaction studies, geosynthetics and natural geotextiles, gabion retaining walls, finite element modeling, transportation geomechanics, ground motions and vibration, landslides mitigation, and geoenvironmental studies. Over the years, I successfully completed four major sponsored projects, supervised 8 PhD candidates, and mentored the progress of 8 more. I have a substantial publication record comprising over 100 technical papers, including refereed international journal papers, conference papers, book chapters, scholarly books, and pending patents.

In addition to my academic endeavors, I review submissions for renowned international journals such as ASCE Journal of Materials in Civil Engineering, International Journal of Geosynthetics and Ground Engineering, Proceedings of the Institution of Civil Engineers - Forensic Engineering, ICE-Ground Improvement, and International Journal of Geotechnical Earthquake Engineering. I've also actively contributed to organizing conferences and short courses, including co-organizing the Indian Geotechnical Conference 2011 in Kochi and serving as the joint organizing secretary for IGC 2022. In 2015, I received the Endeavour Research Fellowship Award as a Post-Doctoral Fellow from the Government of Australia, followed by recognition as an Ambassador for the Australian Awards in 2017.

Outside academia, I serve as a Nominated Governing Body Member of the National Coir Research and Management Institute, Government of Kerala. I hold memberships in esteemed organizations like IGS, the Institution of Engineers, India, the Indian Society for Technical Education, the Indian Road Congress, and the Indian Society of Systems for Science and Engineering. My dedication spans various domains, reflecting my commitment and leadership in academia, research, governance, and professional organizations.

Beena Sukumaran

I am Beena Sukumaran, currently serving as Professor and the Dinesh and ILA Paliwal Dean of the College of Engineering and Computing (CEC) at Miami University in Ohio, United States. Prior to joining Miami, I held a faculty position in the Civil and Environmental Engineering (CEE) Department at Rowan University since 1998. Before transitioning to academia, I gained valuable experience at Amoco and the Norwegian Geotechnical Institute. I earned my Ph.D. in Civil Engineering from Purdue University in 1996, an MS in Civil Engineering from Auburn University, and a BTech in Civil Engineering from the College of Engineering, Thiruvananthapuram, Kerala University, India. My PhD co-advisors were Professors Gerald A. Leonards and Patrick J. Fox.

In Miami, I am dedicated to enhancing the student experience through increased opportunities for experiential learning. Recognizing the importance of industry collaboration, I am actively expanding our industrial outreach. I strongly advocate for applied research, entrepreneurship, and the commercialization of research. Embracing the Socially Engaged Engineering and Computing theme, a hallmark of the College, is another key aspect of my vision. Furthermore, I am committed to diversifying the engineering profession and encouraging more women and underrepresented minorities to pursue engineering careers. This commitment stems from my journey as a first-generation immigrant in the United States and a woman in the geotechnical engineering profession. I feel a deep responsibility to pave a smoother path for the next generation of women and underrepresented minorities.

In my previous leadership role at Rowan, I served as Vice President for Research from 2018 to 2020. Additionally, I held the position of President's Fellow for Diversity, Equity, and Inclusion (DEI) from 2017 to 2018. During my tenure at Rowan University, I also served as Chair and then Head of the Department of Civil and Environmental Engineering from 2010 to 2017.

Chinchu Cherian

I hail from a small town in Ernakulam, Kerala. My father, a Civil Engineer, served as my ultimate role model, inspiring me to pursue a path in Geotechnical Engineering.

I obtained my Bachelor's degree from the Mar Athanasius College of Engineering (MACE) Kothamangalam, Kerala. My love for the subject translated into tangible success as I achieved a University Rank and was honored with a Gold Medal. While I initially intended to complete my studies and secure a government job, my plans changed during my academic journey. This shift led me to pursue a Master's in Environmental Geotechnology at the National Institute of Technology Calicut (NIT Calicut, Kerala). Later, I joined the Indian Institute of Technology Madras (IITM) and successfully completed my Ph.D. under the guidance of Dr. Dali Naidu Arnepalli. Significant personal milestones, including marriage and the joyous arrival of my first child, marked this period in my life.

Despite facing inquiries from friends about the possibility of quitting during my pregnancy, I remained resolute in my determination to complete my Ph.D. Shortly thereafter, I encountered the unexpected loss of my father. Adding another layer to the challenges, I defended my Ph.D. while expecting my second child, turning my journey into a true roller coaster ride. My supervisor, Dr. Arnepalli, exhibited tremendous understanding and support throughout these challenging times. He gave me the freedom and flexibility to navigate my academic and family responsibilities seamlessly.

Following the completion of my Ph.D. Dr. Arnepalli reignited my ambitions. Encouraged by his words, I, eight months pregnant, took a bold step and applied for a Postdoctoral Research Fellowship with Dr. Sumi Siddiqua in the Faculty of Applied Science at the University of British Columbia (UBC), Canada. I consider myself fortunate to have had Dr. Siddiqua, a women's leader, as my mentor. The positive and inclusive environment at UBC gave me the confidence to produce work of high caliber, even amid significant changes as an immigrant and a working mother. After completing my postdoctoral fellowship, I actively sought teaching opportunities at UBC and other educational institutions. I have a strong passion for teaching, and I nurture a dream of evolving into an educational leader and positively impacting the upcoming generation of learners.

Presently, I am an Assistant Professor in Geotechnical Engineering within the Faculty of Science and Engineering at the University of Northern British Columbia (UNBC) in Prince George, BC, Canada. The profound influence of role models such as Dr. Arnepalli and Dr. Siddiqua played a pivotal role in shaping both my professional trajectory and personal journey.

Chitra R

I was born on June 6, 1966, in Tirunelveli, Tamil Nadu. Dreaming of becoming an engineer since childhood, I was always at the forefront of leading the school in various activities. Graduating in Civil Engineering from the Government College of Engineering, Tirunelveli, Tamil Nadu, in 1987 marked the beginning of my career in the field. I believe in " Dream, grab it and never let it go."

Immediately after graduation, I started my journey in Civil Engineering at the Inland Waterways Authority of India, Ministry of Surface Transport, pursuing it with passion alongside my personal and family life. After two years, I shifted to the Central Soil and Materials Research Station (CSMRS), Ministry of Jal Shakthi, where I have over 35 years of experience and currently Head of the Department. A decade into my professional career, I decided to pursue higher studies, earning my MTech and PhD from the Indian Institute of Technology, Delhi. This experience significantly bolstered my confidence and determination to achieve my dreams.

Since joining CSMRS, I've been associated with more than 400 projects within India and neighboring countries, contributing to planning, guiding, and executing geotechnical investigation works for river valley projects. Noteworthy projects include the Tehri Dam Project, Bhakra Dam Project, Sardar Sarovar Dam Project, Gararda Dam Project, Kota Barrage Project, Punatsangchu Hydroelectric Project (Bhutan), and Salma Dam Project (Afghanistan). My involvement extends to various sectors, including thermal power, nuclear, railway, road, and mining projects. Contributions to interlinking projects, such as the Ken-Betwa Link Project and Mahanadi-Godavari Link Project, stand out. I also provide consultancy services, conduct health assessments, and monitor construction afterwards.

In addition to publishing over 275 technical papers in distinguished journals and conference proceedings, I've served on the editorial boards of proceedings of conferences, symposiums, seminars, and workshops. I've held leadership roles for organizations like the IGS Delhi Chapter and the Indian Chapter of the International Geosynthetics Society. Actively engaging with and contributing to the geotechnical fraternity through lectures, training sessions, and guiding students at undergraduate and graduate levels is a fulfilling aspect of my career. My impact extends to dam safety review panels and national committees like BIS and IRC, where I contribute significantly to formulating and reviewing standards. The accolades I received reflect my exemplary work in geotechnical engineering.

Balancing family and professional life, I attribute my success to a positive attitude, hard work, perseverance, and a never-say-die approach. My message to young engineers is to "dream big, work hard to achieve it, never lose hope because there is always a stone of hope looking at you from the mountain of despair and despondency." I aspire to continue my journey, leaving an inspiring legacy in the field.

Divya P V

I am currently serving as an Associate Professor at the Indian Institute of Technology Palakkad in Kerala, India. As a woman practicing in the field of geotechnical engineering, I've encountered challenges and difficult times. The journey has not always been smooth, marked by setbacks and obstacles that are part of the experience.

A woman serving as a faculty member at IIT often grapples with a persistent feeling of guilt, as she may perceive herself as not entirely meeting societal expectations in her roles as a mother, wife, and daughter. Coming from a traditional and conservative family in Tripunithura, Kerala, where joint families were the norm, I faced resistance to pursuing education outside my immediate surroundings. Convincing my family to support my higher studies was a struggle, eventually leading to an agreement that I would study at one of the nearby government engineering colleges.

Despite societal pressure to conform to the conventional path of marriage, I remained determined to pursue my education. With the support of my understanding husband, who recognized and encouraged my passion for research, I continued my studies, eventually undertaking research at IIT Bombay. This marked my first experience of leaving Kerala after marriage.

I was fortunate to have an exceptional mentor at IIT Bombay who provided continuous encouragement, guidance, and freedom to explore new ideas in my research. Additionally, the harmonious synergy between the outstanding research environment at IIT Bombay, my inner determination, and my relentless hard work helped culminate a successful and productive research endeavor. My doctoral research focused on Centrifuge model studies, using the Large beam Centrifuge facility (NGCF) available at IIT Bombay, investigating the flexural distress of reinforced soil layers. This work received recognition from international agencies through publications in peer-reviewed journals and conferences. I received the "Award for Excellence in Research Work" from IIT Bombay for the years 2012-2014.

Upon joining IIT Palakkad as an Assistant Professor, I recognized the demanding and challenging nature of the field. Despite initial apprehensions, my love for teaching and research motivated me to persevere. The constant blessings from the Almighty, support from my parents, and the selfless backing of my husband provided unexpected courage in times of need.

I took an active role in diverse institutional development and management initiatives at IIT Palakkad, representing my institute in various state, national, and international level committees. To aspiring young women hesitant to pursue a research career, I emphasize that societal stereotypes should not deter them. Motivation is as crucial as innate intelligence in succeeding in creative research. No matter how small the contribution, the joy derived from original research is indescribable and must be experienced.

The geotechnical engineering field is both complex and exciting. Each site presents unique challenges that require exploration. I believe that fear should not hold anyone back. Understanding your potential and having faith and confidence in yourself is key to overcoming obstacles. While we say the sky is the limit, a proper understanding of your capabilities comes only when you fearlessly fly.

Dola Roychowdhury

Growing up in the typical 70's small town Nagpur in a household of a father who was a schoolteacher, a home-maker mother, and three sisters, it was a nearly idyllic life of school, painting, and basketball (I went ahead to represent in district and state level tournaments). Being good at maths and science made engineering a logical career choice, though architecture was my first love. Life at Walchand College in Sangli was a breeze with a skewed gender ratio, over-protective but progressive faculty, hordes of co-curricular activities, and competitive peers, which molded my personality and taught me the importance of diversity. My First job after graduation in 1992, when there were negligible campus recruitment openings for women Civil Engineers, was with a transmission tower company in my hometown, followed by a stint in marketing at the just-launched INDALCO Roofing Sheets. Here, I got great mentors who influenced my decision to opt for my MBA in Marketing in 1995. This was also the start of my journey in geosynthetics when I joined NETLON at Baroda and got the opportunity to explore the on-site applications in multiple geographies across the country at a time when the geosynthetic industry was just opening up.

I moved to Z-TECH (India) in 1996 and learned to spread my wings technically with the vast array of geo-materials and pan-India exposure with postings in places like Chennai, Gandhinagar, and Delhi. I got to design-build the bulk of the early MSE walls for flyover approaches in Mumbai, Chennai, Bangalore, Kolkata, and Delhi during 1998-2000. This was followed by many "firsts" over the next ten years – MSE wall on NH-5 to cross 10 m height in India, geomembrane lined ash pond at Torangallu, GCL application in hazardous landfill, HDPE landfill capping at Ankaleshwar, and many others. I could derive a great sense of fulfillment in being a part of the progression of the geosynthetic industry through its first three decades in India. Thus, being accorded a Lifetime Achievement Award – "In recognition of Contribution for the development and promotion of Geosynthetics in Infrastructure Projects" – by the International Geosynthetic Society (India Chapter) and CBIP in 2015 and an Appreciation Award in 2019 "In Recognition of contribution to the activities of IGS (India)" by iGrip seemed like validation to this journey. The continued desire to innovate in value engineering pushed me to opt out of the job in 2019 and start G-CUBE Consulting Engineers, bringing global best practices in geosynthetics for ground engineering with a long-term objective to provide SoA practices in design optimization through innovative thinking. Further, I went in for an expansion into niche turnkey solutions for ground engineering in hilly terrains, coastal protections, and mining with the incorporation of G-CUBE Engineering Pvt Ltd in 2022 – thus becoming a bootstrapped serial entrepreneur.

Through these 25+ years, I was blessed to have a partner who continued to provide me the support below despite his very demanding career and spent equal efforts, if not more, in bringing up our two boys. They motivated me to return to school in 2016 and get a PG degree in International Business from IIFT- Delhi. When I am not working- I spend time mentoring or volunteering, contribute to the activities of BIS & IRC Code committees and other professional groups like IGS, WiDF of the DFI, and International Geosynthetic Society, teach at IAHE, and travel to my heart's content. Through all this, I have managed to keep my love for books, photography, balcony gardening, and cooking alive.

Jayalekshmi S

My journey exemplifies resilience against numerous challenges I faced persistently. Achieving a National Merit Certificate in the tenth class in 1984, becoming a university topper in ME (Geotech) from Annamalai University in 1995, and receiving an international award (International Geosynthetic Society Student Award) for my PhD work at IIT Madras in 2004, paved the way for my career. I joined REC Trichy (now NIT Tiruchirappalli) as a lecturer in February 2000, marking my entry as the first and only woman faculty in the Civil Engineering Department. Since then, I've grown as a Professor, guiding three PhD students, two in Terramechanics and one in structural engineering. I've been a Professor since 2019. One of my significant achievements is the development of our country's first lunar simulant, TRI -1 or Tiruchirappalli 1, as part of my guidance. I fabricated an experimental wheel-soil interaction setup for rover applications. Early in 1990, I explored the application of geotextiles to shallow foundations. My Master's thesis in 1995 focused on soil-structure interaction when civil and military aircraft hit rigid airport pavements on various soil types.

I played a key role in establishing the creep testing facilities at IIT Madras. As a post-doctoral fellow, I fabricated accessories and conducted initial tests for accelerated creep testing of geosynthetics. For my parametric analyses, I engaged in meticulous analyses (72 cases), running for days on less sophisticated computers. I spent months and years in my laboratory, always finding joy in my work. Many seemingly useless, discarded items became part of my sustainable setup, and I even fabricated shoe racks from carton boxes.

At NIT Trichy, I've guided MTech students in various specializations, from structural engineering to transportation engineering and management, environmental engineering, construction technology and management, and geotechnical engineering. Under my recent guidance of BTech students, we successfully extracted nano cellulose from fruit waste and developed a lysimeter. I am passionate about teaching and handling 29 UG, PG, and PhD subjects. I introduced seven new courses, covering diverse topics such as simulant materials, constitutive modeling of geologic materials, soil-structure interaction, marine foundations, microbial geotechnology and ground improvement, environmental geotechnical engineering, and geotechnical earthquake engineering.

In addition to my academic roles, I've contributed as a convenor in the faculty recruitment scrutinizing process and served as a member of my institute's Safety and Security Committee. My joint IPR program, NIPAM 2022, earned an appreciation certificate from the Government of India as part of Amrit ka Mahotsav celebrations. I conducted the first gender sensitization program for Ph.D. scholars and faculty at the institute. Being part of ACE 2016, international conference, Singapore's organizing committee, and serving as a track co-chair for Civil Engineering in FEAST 2017 and 2018 showcase my commitment to academic activities. I've also worked as a reviewer for the Institution of Engineers (Series A) and the Canadian Journal of Geotechnical Engineering. As a Life Member of IGS, IGS (Chennai Chapter), and Member of the Institution of Engineers (India) and ISTE, I continue contributing to the academic community.

Lalita Oka

I was born and raised in Wardha, a small town in Maharashtra. My father, a veterinary doctor who loved teaching, and my mother, a homemaker who also taught in a pre-elementary school, provided a nurturing environment. In 1985, I completed my Diploma in Civil Engineering and embarked on a transformative journey by joining Vivekananda Kendra as a life worker trainee. For nearly three years, I worked in rural Tamil Nadu under the rural development program, an experience that reshaped my outlook on life and instilled in me the ability to remain positive in the face of adversity.

In 1990, I got married and relocated to Mumbai, marking a significant turning point in my life. I secured a job as a junior engineer in a small civil engineering consultancy firm, setting the stage for my career in Civil Engineering. In 1991, I took the initiative to pursue a part-time degree in Civil Engineering at Sardar Patel College of Engineering (SPCE), University of Mumbai. Juggling full-time work and evening college, I successfully earned my Bachelor's degree (BE) in Civil Engineering in 1995 and followed it up with a Master's degree (ME) in Geotechnical Engineering in 2000. This challenging period was made possible through the unwavering support of my family and mentors.

In 2004, I decided to take my academic journey further and pursued a Ph.D. in Civil Engineering with a specialization in Geotechnical Engineering in the United States of America. Completing my doctoral studies in 2012 at the University of Vermont, I joined the faculty at California State University, Fresno (Fresno State), in 2013.

In 2017, a significant opportunity arose when Dr. Shobha Bhatia from Syracuse University invited me to join the Geotechnical Women's Faculty (GTWF) group. Discovering that the entire U.S. had less than 100 women faculty in geotechnical engineering, and women constituted only 13-15% of engineering faculty in the California State University system, we initiated a study that resulted in a $1.25 million grant from the National Science Foundation (NSF) aimed at increasing the number of women in engineering.

Currently serving as an Associate Professor at Fresno State, I feel a sense of fulfillment, having completed a full circle from growing up in a family of educators to pursuing my passion for engineering education. I attribute my journey to the aspirational India that nurtured me and provided the opportunities to become who I am today. I now reside in Fresno, California, with my husband, Ganesh, and our daughter, Anu.

Lekha K R

I completed my BTech from TKM College of Engineering, University of Kerala. After graduation, I spent a year at Kerala Financial Corporation as a Graduate Engineer Trainee. Subsequently, I pursued an ME in Geotechnical Engineering from Annamalai University, Tamil Nadu. Later, I joined the Indian Institute of Technology, Madras, as a Senior Research Fellow, contributing to a DST-funded structural engineering project. Eventually, I transitioned to a regular PhD scholar role at IIT Madras.

I became a scientist at the Centre for Water Resources Development and Management (CWRDM) Kozhikode during this period. I conducted field studies on applying coir geotextiles to minimize soil erosion in degraded hill slopes. This work earned me the prestigious Young Scientist Award at the 12th Kerala Science Congress. Additionally, I led a demonstrative project on using coir geotextiles to stabilize waterfront clay structures, such as polders, canals, and ponds in the low-lying Kuttanad region in Kerala. These pioneering DST-funded projects on coir geotextiles resulted in publications in the International Journal of Geotextiles and Geomembranes, with one article recognized as one of the top 25 hottest articles in the Journal of Geotextiles and Geomembranes.

I completed my PhD from IIT Madras, focusing on consolidating clay soils. I formulated novel governing equations for vertical and radial consolidation of saturated clay soils, considering non-linearity in terms of time-dependent loading, variable compressibility, and variable permeability. These results have been published in the ASCE journal. I also explored the impact of discrete coir fiber in enhancing the unconfined compressive strength of clay soils. My research also delved into GIS, where I drafted a "Water Atlas" on the 44 river Basins of Kerala and developed a GIS model for Block-level groundwater estimation.

After 15 years in research, I transitioned to the Kerala State Council for Science, Technology & Environment (KSCSTE). At KSCSTE, I played a pivotal role in establishing the prestigious Kerala School of Mathematics. I spearheaded the creation of a dedicated division to promote meritorious women and students in science in Kerala. Several programs were formulated under my guidance to attract and retain women and students in science. A notable initiative was the 'Back-to-Lab Fellowship' program, aimed at talented women returning to mainstream science after career breaks. I also formulated and implemented the Prathibha Scholarship Scheme to motivate academically brilliant students in science for their UG and PG courses. Additionally, I spearheaded various other science promotional activities at KSCSTE.

With a fulfilling career spanning 32 years in research in geotechnical and water resources engineering, research administration, and management, I have dedicated efforts to promote women and students in science in Kerala.

Lini Dev K

Currently serving as an Assistant Professor in the Department of Civil Engineering at the National Institute of Technology, Patna, I have forged a distinguished path in Geotechnical Engineering. My unwavering commitment to academic excellence is reflected in my journey, marked by significant achievements and contributions to teaching and research.

Despite hailing from an underprivileged background as a daughter of poor parents, my academic journey commenced with a stellar performance at the Government College of Engineering, Kannur, Kerala, where I secured the coveted position of University First Rank in BTech in Civil Engineering. This beginning set the tone for my subsequent academic pursuits. I continued my education at the prestigious Indian Institute of Technology Madras, where I completed my MTech in Geotechnical Engineering, followed by a PhD in the same discipline. My impressive CGPA of 9.50 during my doctoral studies underscores my exceptional academic prowess. After obtaining my PhD, I further honed my research skills as a Post-Doctoral Fellow at the Geotechnical Division of IIT Madras.

In my current role as an Assistant Professor at NIT Patna, I have continued to make impactful contributions to the academic and research community. My teaching responsibilities extend to BTech, MTech, and PhD students, where I impart knowledge and demonstrate advanced geotechnical laboratory equipment. My commitment to education is coupled with accurate and in-depth knowledge, effective communication skills, and a strong sense of responsibility. Beyond my accomplishments, I have actively contributed to the academic community by organizing various conferences. My administrative and research experiences include serving as a Senior Project Officer in formulating jet grouting design mixes and determining permeability for the Pollavaram Dam in Andhra Pradesh.

My research has been published in reputable peer-reviewed journals, with topics ranging from controlled low-strength materials to the application of pond ash in geotechnical engineering. Notably, my paper on a double-acting piston-based volume change apparatus earned me the IGS-HC Verma Diamond Jubilee Award for the best paper on "Innovative Instrument Design" in 2017. In addition to my journal publications, I have authored book chapters on the cyclic behavior of pond ash-based controlled low-strength material and stability analysis of non-homogeneous slopes. My research findings have been presented at national and international conferences, further establishing me as a respected figure in geotechnical engineering.

My academic and research journey is a testament to my dedication, passion, and pursuit of excellence. As I continue contributing to the advancement of geotechnical engineering, my trajectory promises to inspire and shape the future of aspiring women leaders.

Lucky Nagarajan

I've always been drawn to breaking the mold and charting my own path. I am Lucky Nagarajan, a Geotechnical Engineer with over 18 years of extensive experience in diverse fields such as deep foundation design, construction, problem-solving for clients, and building a robust network for market share strategies. Raised in South India, my early ambitions took a different turn. Even in my youth, the allure of tall structures and architectural marvels captivated me. This fascination led me to pursue a Bachelor's in Civil Engineering from Dr. Ambedkar Institute of Technology in Bangalore, India. Seeking to break away from the expected life for young daughters in India, I furthered my education at the University of Texas at Arlington.

Upon graduating, my career in the industry steadily progressed. Starting as a young staff engineer in a geotechnical consulting firm in Florida, I ventured into a New Orleans-based company to tackle challenging soils, contributing to the rebuilding efforts post-Hurricane Katrina. This phase opened doors to explore the realms of oil and gas, energy, mining, and the natural gas industry. Transitioning into business development after accumulating 13 years of design and construction experience, the past nine years have seen me working for North America's largest steel manufacturer, a global Japanese equipment manufacturer/supplier, and now, a French company specializing in de-risking projects with advanced technologies and products. These roles have provided invaluable experiences in project and cultural dynamics across South America, Mexico, Canada, and India, shaping my understanding of industry challenges, funding pipelines, political influence, and the impending challenges in Civil Engineering. My foray into technical associations in 2017 has been transformative, propelling me into diverse roles within numerous associations. Fueled by ambition and passion, I've been a key contributor to major initiatives advocating for women and nurturing young talent in the industry. Currently serving as the Chair of Women in Deep Foundations DFI Board of Trustees, I co-founded the WiDF group in India, Metro NYC, Mexico, and was honored with the 2020 DFI President's Award for my contributions. Participating in panels for "Women in Geotechnical Engineering" in Mexico, India, and Colombia, I've engaged with engineers worldwide to advance women's roles in the industry, promote diversity, equity, and inclusion, and address the gender gap.

My commitment and passion for uplifting others create a positive impact on those around me. Facing challenges typical in any career, especially as a woman in a male-dominated field, I've learned to view challenges as opportunities for victory. Challenges, like m&m candies, come in every color, size, and place, but breaking through their shell can turn them into great opportunities. My message to the younger generation is to embrace personal challenges, adapt to changing environments, cultivate patience in the face of failure, and find allies who will support and guide them. Early mentorship is crucial, and I've been fortunate to encounter inspiring individuals who have shaped my journey. "Be The Change, Be Bold, and Victorious!"

Madhavi Latha Gali

"Wow! You are a Professor at IISc."
"Wow! You are one of the top 75 women in STEAM of India."
"Wow! You are the geotechnical consultant to the world's highest railway bridge on Chenab."

Every time I hear these accolades, I remember the young, shy, and helpless myself with a million dreams in my heart and no specific goal in life. My professional trajectory to reach the current position and make my mark in the geotechnical arena to find a place in this book has many twists and turns, but the journey has been incredible so far.

I was born in a farmers' family in Yedugundlapadu, a small village near Ongole in Andhra Pradesh. I started school when I was three, and my entire education was in government schools and colleges. The Z. P. Govt. High School and T. R. R. Govt. College of Kandukuru and the teachers there are mostly responsible for what I am today. Living in a joint family with three siblings in a small house in a community with diverse households and stories was a learning that couldn't be acquired in any school. I vividly remember walking along the not-so-clean edges of a lake, looking up into the sky at an airplane, and telling myself, "I don't belong here. One day, I will find my corner of the sky and fly high". My grandmother was ready with a groom while I studied in tenth class. The deal was that she would allow me to study further if I top the school and had no other choice.

I am the first engineer from my village. Coming from a humble village background and studying in Telugu medium till 12th class, joining B.Tech. at JNTU College of Engineering Kakinada at the age of 15 years was a big culture shock to me. I couldn't fit into the crowd and ran away from college within three months. It was my grandmother at home who sent me back to college the next year, saying that I was meant for bigger things in life. Higher education was not a choice for my parents, but my elder sister supported me in continuing my studies. My deep penchant for soil became evident during my MTech at NIT Warangal. During one of the technical sessions of IGC-1994 at Warangal, my thought-provoking questions about geoenvironmental engineering research in the country brought me to the limelight and spurred a huge debate among the geotechnical gurus present. It made me discover my potential for scientific research and apply for a PhD at IIT Madras, which became the turning point in my personal and professional life. IIT Madras has given me everything – knowledge, skill sets, good friends, broader perspectives towards life, and more importantly, my life partner.

After a one-year short stint at IIT Guwahati as an Assistant Professor, I joined IISc as the first woman faculty member in the Department of Civil Engineering in 2003 and embarked on an accomplished professional journey. I pioneered many research areas, which include geocell reinforced soil structures, micro to macro of sand-geosynthetic interactions, 3D printing of geosynthetics, and shaking table studies. I became the first woman Editor-in-Chief of the world-renowned Springer Engineering journal and led the Indian Geotechnical Journal for six years. I am currently the chair of the Centre for Sustainable Technologies at IISc. I am the first recipient of the IGS Best Woman Researcher award. I derive contentment in training some of the brightest young scholars in Geotechnical Engineering. Here I am, going forward in life, with a little more hope, a little more commitment, and a little more trust in my abilities every day.

Madhurima Madhav

I am Madhurima Madhav, a determined Civil Engineer from Dhanbad. My journey reflects resilience and ambition, ingrained by my close-knit joint family in the industrious hum of Dhanbad. The principles of love, unity, perseverance, and strong work ethics formed a robust foundation for my academic and personal pursuits. My educational journey began at the Indian School of Learning and Delhi Public School. Combining academic excellence with a passion for knowledge, I consistently ranked among the top students. Engaging in extracurricular activities like painting, debates, and hosting school events enriched my academic experience. Fuelled by a profound interest in problem-solving and a love for mathematics and science, I pursued a career in engineering. Excelling in the Bihar Combined Entrance Examination, I secured admission to the Bihar Institute of Technology, Sindri (now Birsa Institute of Technology) in Civil Engineering. Graduating in 2003 marked the beginning of my remarkable professional journey.

Over two decades, my trajectory reflects expertise and commitment. Starting as a Research Intern at CSIR-Central Road Research Institute (CRRI), I earned the Best Research Intern Award in 2004 for contributions to fiber-reinforced concrete. Transitioning to RITES Ltd as a Project Engineer, I contributed significantly to diverse civil engineering projects, emphasizing earthwork and reinforced concrete construction. Notably, my role in the Railway Siding and MGR construction for the Sipat Thermal Power Plant of NTPC provided insights into collaboration and shared responsibilities. My involvement in a railway project sparked a newfound fascination for soil and foundation. Immersed in soil testing, characterization, earthwork, and foundation construction, I developed a deep passion for Geotechnical Engineering.

Relocating to Delhi, I cleared the entrance exam for the Bureau of Indian Standards (BIS) in 2006. Currently holding the position of Scientist 'D'/Joint Director in the Civil Engineering Department, I serve as the Member Secretary for several BIS technical committees, including those on soil and foundation engineering. My dedication is evident in formulating and revising essential Indian Standards. I played a pivotal role in contributing to the National Project on Revision of the National Building Code of India (NBC) in 2016. My involvement in the prestigious endeavor, Promotion of National Building Code of India 2016 (NBC 2016), aims to streamline building approvals and enhance ease of doing business. Standardized Development and Building Regulations based on NBC 2016 have been prepared for each State and UT. My efforts were recognized during World Standards Day 2023 by the Hon'ble Minister of State for Consumer Affairs, Food and Public Distribution and Environment, Forest and Climate Change, Shri Ashwini Kumar Choubey. Actively participating in national and international conferences/seminars, I presented technical papers on geotechnical engineering, water efficiency, and more.

Currently engaged in critical projects involving machine foundations, pile foundations, pile testing, ground improvement methods, shallow foundations, soil testing, my multifaceted contributions continue to shape the landscape of civil engineering and standardization in India. My journey exemplifies excellence and dedication in advancing the field, showcasing the transformative power of family values that have been my guiding light.

Mariya Dayana P J

I would be delighted to describe my journey within the field of Geotechnical Engineering. Hailing from Kerala, my early academic years at Kendriya Vidyalaya, Calicut, were marked by excellence, securing the top position in HSC and earning accolades for my prowess in Mathematics. My enthusiasm for engineering led me to pursue Civil Engineering at the College of Engineering, Trivandrum, where my interest in Geotechnical Engineering blossomed.

My quest for advanced knowledge took me to Sardar Vallabhbhai National Institute of Technology, Surat, where I pursued a post-graduation in Soil Mechanics and Foundation Engineering. It was a gratifying experience to receive a Gold Medal, showcasing a remarkable CGPA of 9.9/10. My internship at IISc Bangalore further fueled my ambition for a career centered on research.

Transitioning between roles in both industry and academia, I commenced my professional journey at Larsen & Toubro TI IC in Mumbai, serving as a member of the Engineering Design and Research Centre. My role as a Design Coordinator for a distinct project at Kannur International Airport was particularly rewarding, earning me a prestigious 'Special Award.' Subsequently, I contributed significantly as a geotechnical design engineer in various infrastructure projects encompassing roads, railways, and airports.

In 2019, I married Mr. Jeswin Jose, a Highway Design Engineer, and later joined the Bangalore EDRC team at Larsen & Toubro. My responsibilities expanded to coordinating the Operation and Maintenance Manual for Bangalore International Airport.

In 2021, a pivotal turning point in my career unfolded when I secured a Scientist position in the Geotechnical Engineering Division at CSIR-Central Road Research Institute, Delhi. At CSIR-CRRI, I am actively involved in diverse research and consultancy projects, ranging from the utilization of marginal materials to landslide mitigation and sustainable road construction materials. Beyond my research pursuits, I mentor students, participate in training programs for civil engineering professionals, and engage in an online degree course in Data Science and Programming from IITM to stay updated on emerging trends.

My career trajectory speaks of my passion for embracing challenging opportunities and my dedication to contributing meaningfully to the field of Geotechnical Engineering.

(late) Maruthi Ghanta

Maruthi Ghanta was born on 28th March 1948 in her native place of Chodavaram, Krishna District. She did her schooling in West Godavari, and she completed her SSC at the very early age of 11 years. Then she did her PUC and BSc in Bheemavaram, West Godavari District, and later persued her B E in Civil Engineering from Government engineering college, Kakinada.

On 17th March 1969, she got married to Dr. Ghanta Venkat Rao and had two kids, Mallika and Bhaskar. She did her M.E. in soil mechanics and foundation engineering from Regional Engineering College, Warangal. She worked as a Junior Engineer in the Irrigation Department of the Andhra Pradesh Public Service Commission.

Because of her passion for teaching, she started her teaching career as a faculty member in the Civil Engineering department of Regional Engineering College Warangal in December 1981. She was the first lady faculty of this institute, and she used to feel very happy as a teacher because both her parents were teachers. She used to be the favorite teacher for all the UG and PG students because of her teaching skills.

She used to have an exceptional memory, where in she used to remember all the roll numbers and names of around 80 students in a class. She used it to catch any student who gave a proxy attendance immediately. In addition to her passion for teaching, she had a great interest in Music, and hence she used to be a judge for singing competitions in both Telugu and Hindi languages and in addition for Quiz competitions based on names of movies and Directors, Producers, singers along with Dumb charades. Also, she is best known for her skills in Antyakshari Programs. With her kind heart, she used to provide free education for needy people (either students or kids of some staff of RECW). Many students have completed their UG/ PG and PhD degrees with her financial support. Many people got very good jobs, and some have even gone to foreign countries.

Under her leadership, the Civil Engineering Department and Indian Geotechnical Society – Warangal chapter have successfully conducted two IGC's (IGC - 1994 & 2004). The two conferences were so successful to such an extent that the geotechnical fraternity remembers the hospitality and technical events even to date and have become benchmarks for future conferences nationwide.

During her tenure at REC & NITW, she was a loving mother and sister to many faculty members. She used to invite many students to her house, cook tasty food, and spend a lot of time with them, and she used to tie Rakhis to many faculty members of this institute. Many students used to feel motherly affection although they were away from their actual residences.

She served in various capacities during her service at RECW and then NITW and took voluntary retirement during August 2010 because she had a major surgery for joint replacements.

Meenu P S

I am currently working as a Senior Geotechnical Engineer at TechnipFMC, India, and I bring more than eight years of professional work experience to the table. My expertise spans over four years in the oil and gas sector, specifically in offshore and subsea projects, and another four years in highway and infrastructure projects.

I am a native of Kerala, a southern state in India. Following my schooling in my hometown in Kerala, I pursued my B. Tech in Civil Engineering from Government Engineering College Thrissur, Kerala, graduating in 2012. Subsequently, I completed my Master's in Geotechnical Engineering from the prestigious Indian Institute of Technology Bombay, where I excelled as the batch topper in Geotechnical specialization and the 2nd topper in the Civil Engineering Department in 2015. My outstanding academic performance was recognized with a departmental special mention at IIT-B for exemplary achievements.

Post my Master's, I commenced my professional journey with Maccaferri in the Rockfall team in Pune. Initially, my work focused on the design of Rockfall mitigation measures and cut slope stabilization works. Later, I actively participated in code formulating committees of the Indian Road Congress, contributing significantly to the "Guidelines for engineering of natural slope" for the H-4 Committee of IRC. This work encompassed investigation, slope stability analysis, and methods of slope stabilization for rock and soil slopes.

My role then transitioned to the core technical marketing team, where I undertook diversified responsibilities. This included coordinating and acting as an interface between sales, business development, finance, and the technical team of India and the South-East-Asia-Pacific regions. I played a crucial role in tracking, reporting, and aligning progress with the strategic initiatives of the company identified by the headquarters in Italy. I was also responsible for implementing technical marketing activities such as short courses, webinars, and publications of technical articles and papers by interfacing with the regional teams.

In my current capacity, I serve as a Geotechnical Engineer in the Subsea team of TechnipFMC, India. I predominantly handle offshore projects worldwide, overseeing various scopes such as soil investigation data review, interpretation, selection of design parameters, design of mud mat including its installation and recovery analysis, deep foundation/suction pile design/pin pile design including installation and retrieval assessment, pipe soil interaction assessment, and more. My performance in this role has earned me recognition, including a silver medal and acknowledgment as a star performer for ensuring quality deliverables on time and earning trust with operating centers and clients. I have authored over ten journal and conference papers covering various aspects of geotechnical engineering.

Meghna Sharma

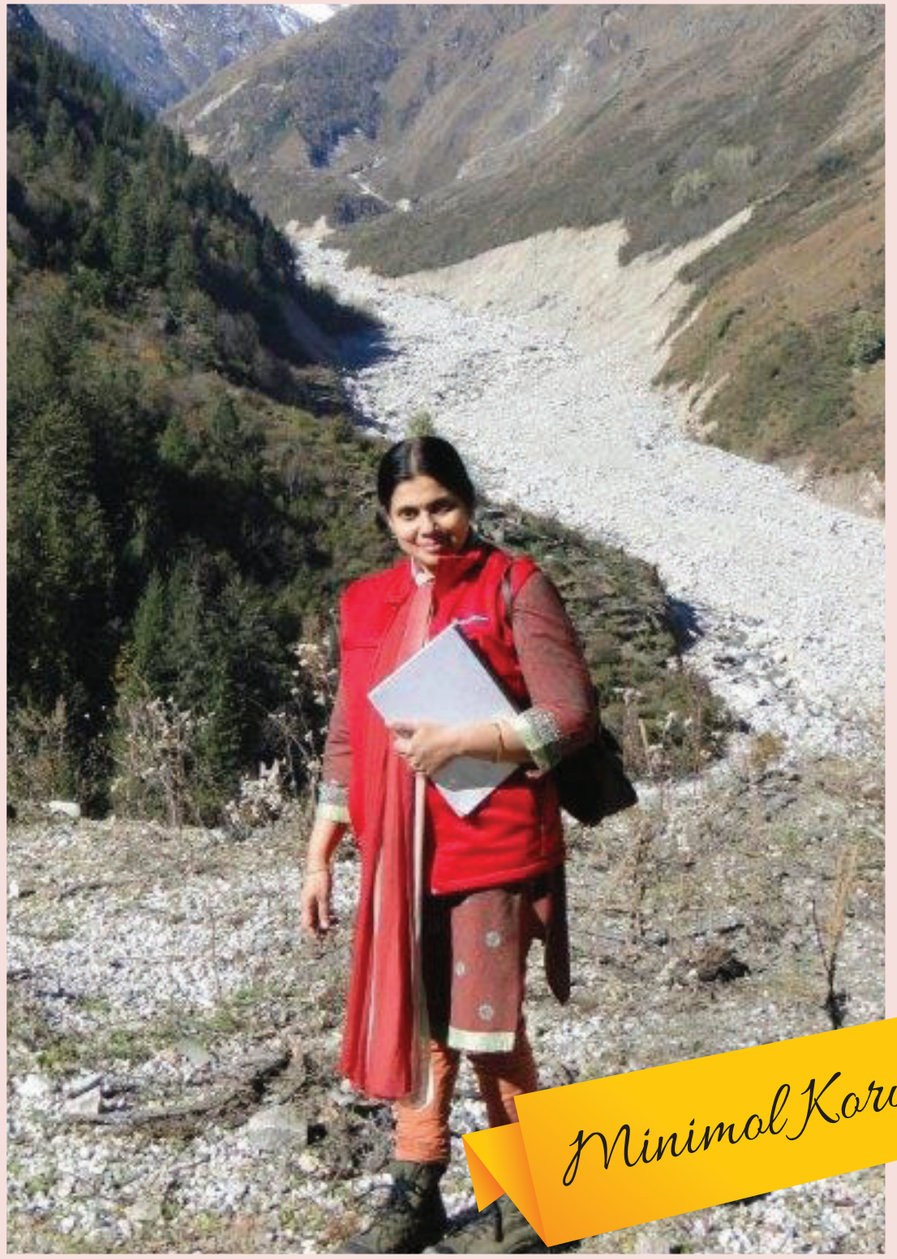
I am Dr. Meghna Sharma, currently serving as an Assistant Professor in the Department of Civil Engineering at the National Institute of Technology (NIT) Hamirpur. In February 2023, I was honored with the DST INSPIRE Faculty Fellow Award for a tenure of five years, focusing on the project titled "In-situ and Generic Applications of Microbially Induced Calcite Precipitation Technique for Ground Improvement." My journey in academia includes a stint as a DST INSPIRE Faculty at the Department of Civil Engineering, IIT Ropar, and an Institute Post-Doctoral Fellow at the Department of Civil Engineering, IIT Bombay, from October 2021 to April 2023.

My academic pursuits led me to earn a Ph.D. in Civil Engineering from IIT Indore in August 2021. Over the course of my research, I have secured one Indian Patent Grant and authored 15 technical articles, along with presenting five conference papers. My innovative research on "Design of Bio-Chem-Reactor for Liquefaction Mitigation using Microbially Induced Calcite Precipitation Method" earned me the prestigious “IGS-Sardar Resham Memorial Award 2023”. I have also been recognized with the "Springer Best Paper Award" for a paper presented in IGC 2021 and the "Best Research Paper Award" from IIT Indore for the academic year 2020-2021. Currently, I serve as an "Early Career Editorial Board Member" of the Bio geotechnics Journal.

My involvement extends beyond research, as I am a Sub-Committee Member (SC15: Women Forum for IGS members) of the Indian Geotechnical Society (IGS), actively encouraging engineering graduates, especially females, to consider Geotechnical Engineering for academic and industrial careers. In addition to my academic and research roles, I possess 4.5 years of teaching experience in prominent private universities in India. My academic journey includes receiving the Gold Medal for being the best-graduating student in M.Tech. from NIT Kurukshetra, presented by the former President of India, Dr. A.P.J. Abdul Kalam, during the Convocation in 2015. I earned my B.Tech. Honours from University College of Engineering, Rajasthan Technical University Kota.

Beyond my professional endeavors, I am a motivational speaker, sharing personal and professional life experiences to inspire students. As a mother to a 6-year-old boy named "Pramegh," I navigated the challenges of balancing research and motherhood. Pramegh was cared for by his paternal grandparents during crucial phases of my career, and I ensured that every moment without him was dedicated to advancing my professional journey.

Throughout my journey, I have been fortunate to receive unwavering support from both sides of my family. Before marriage, my parents and brother motivated me to set high aims, and after marriage, I received unconditional support from my parents-in-law, sister-in-law, and husband, Prateek. Prateek's constant support and our shared commitment to overcoming challenges have instilled in me a never-give-up attitude. I attribute my success to the blessings of God, the guidance of teachers, the support of family, and the encouragement of friends. With gratitude, I look forward to continuing my journey of excellence in the future.



Minimol Korulla

Being born in a village in Kerala surrounded by rivers, where every monsoon witnessed flooded roads, my inadvertent introduction to the geotechnical field occurred in childhood. I used to get excited to see the piling done for embankment construction over soft clay near my home. Raised by teacher parents and having a scientist brother, my family gave me advantageous platforms compared to other girls of my age in the neighborhood. Being a physics teacher, my mother fuelled my curiosity, turning the kitchen into a laboratory for demonstrating principles of mechanics.

Opting for Civil Engineering, I believed it to be closely connected to humankind. After graduation, I married Satish, a naval officer. Satish and my parents always served as inspirations for achieving a balanced life. Initially struggling to continue in the challenging construction field, I transformed into a seasoned professional who empathized with the difficulties faced by young colleagues. I took my PG in Geotech after the birth of my son. My postgraduate degree time in Geotechnical Engineering at the College of Engineering Trivandrum (CET) Trivandrum was exciting. However, distance from my baby and husband affected me, and I did my final semester project at Cochin University of Science and Technology (CUSAT) Kochi with special approval and stayed with my family.

Joining Maccaferri in 2001 marked a turning point in my professional life. Maccaferri provided unique opportunities to adapt to global culture, collaborate with expert colleagues worldwide, and study beyond working hours. Representing the company in BIS and ISO technical committees, I worked with veterans in committees and Maccaferri's top management. Eventually becoming the head of the World Design Center of Global Maccaferri, I mentored young engineers to become world specialists. During this time, I balanced my career with family responsibilities, welcoming a daughter in my early forties.

Attaining a senior position in the corporate ladder with significant responsibilities, I faced tough decisions that necessitated upskilling through an MBA. Acting as a Design Director for landmark projects in disaster management, slope stability, and ground improvement, I also chaired subgroups in authoring guidelines. For the past 12 years, I have dedicated my weekends in Delhi to the general welfare of the industry. Entering a new phase, I underwent a transition as my core family relocated to Kerala, and I adopted a hybrid work mode. Grateful for the support from my lovely daughter-in-law, son, and daughter, I remain motivated to explore new purposes. I acknowledge my indebtedness to family, friends, teachers, colleagues, seniors, and the industry for their care and support throughout my journey.

Mousumi Mukherjee

I started my professional journey as a Civil Engineer at Jadavpur University, Kolkata, where I completed my undergraduate studies in 2006. Having a keen interest in physics and mathematics, mechanics-related subjects got my special attention during this time, including Soil Mechanics, which was introduced to me by two great teachers and experts in the field of Geotechnical Engineering, Prof. Phalguni Bhattacharya and Prof. Nitin Som. Their insightful and thought-provoking discussions made me inquisitive about the strength and deformation characteristics of the soil. I decided to pursue further studies in Geotechnical Engineering and joined the MTech program at the Indian Institute of Technology Kanpur. In the very first semester, I was offered a departmental elective on Constitutive Modeling of Frictional Materials by Prof. Amit Prashant. I was fascinated to learn about the advanced mechanics-based approaches for modeling complex soil behavior. This interest was further magnified while working with Prof. Prashant on my Master's dissertation on soil site characterization employing the SASW technique. After a short research stint at the University of Wollongong, Australia, in 2009, I rejoined IIT Kanpur with Prof. Prashant for doctoral studies, which was focused on the characterization of mechanical behavior of geomaterials with particular emphasis on the instability and rate-dependency phenomena. During my doctoral research, Prof. Anurag Gupta from the Mechanical Engineering Department also became one of my supervisors. Discussions with him and interactions with my Mechanical and Material Science peers further imparted a strong interdisciplinary and mechanistic vision toward addressing the related geotechnical engineering problems. Upon submission of my doctoral thesis, I received a fellowship to visit Kyoto University, Japan, and got an opportunity to explore the discrete element-based modeling technique for granular materials. After obtaining Ph.D. from IIT Kanpur in 2016, I joined the research group of Dr. Giang Nguyen at The University of Adelaide, Australia, as a post-doctoral researcher and continued working on the macro- and micro-level modeling of geomaterials.

I have been an Assistant Professor in the School of Civil and Environmental Engineering at the Indian Institute of Technology Mandi since 2017. My research group is working on the theoretical and computational aspects of geomechanics, which include the development of constitutive models for granular materials addressing strain-rate effect and particle shape characteristics, soil instability analysis, DEM-based micro-mechanical modeling of granular media, numerical modeling of large deformation problems like debris flows and pile penetration process. These research outcomes are published in over 40 technical articles in reputed journals and conference proceedings, including book chapters and technical reports. I was a member of the ISSMGE TC-105 Committee on 'Geomechanics from Micro to Macro' and recipient of several awards, including "The IGS - Prof. C. S. Desai Biennial Award," "SIRE Fellowship," "MATRICS Grant," "Early Career Research Award" and "International Travel Support Grant" by SERB, India. Like all professional journeys, my path also faced struggles and ups and downs, but I was never baffled and could overcome them with the incessant support and encouragement of family members, friends, peers, and students.

Muttharam M

Born on 11th January 1971 in a middle-class family in Neyveli, Tamil Nadu, I received my school education at Neyveli Lignite Corporation Higher Secondary School, Mandarakkuppum. Despite securing the second rank in higher secondary exams and qualifying for the Engineering Entrance examination, my relatives advised against sending me for engineering education, suggesting marriage instead. However, my father, Mr. R. Madhavan, a follower of Mr. Periyar, and my mother, Mrs. Sivagamasundari, were determined to see me pursue an engineering degree. Faced with financial constraints, I was admitted to B.E. Civil Engineering at Arulmigu Meenakshi Amman College of Engineering, Kancheepuram. Family friend Mr. Chinnasamy played a crucial role in securing my application, while neighbour aunty Mrs. Azhilarasi served as my inspiration. To manage financial challenges, my grandmother, Mrs. Sivagnanam, stayed with me in a rented house to avoid hostel fees during my studies.

Upon completing my B.E. in 1992 with the seventh rank at Madras University, I was offered a lecturer position at my college. However, my encounter with salary disparity and a disrespectful remark from the Principal led me to leave the college. Motivated by this incident, I prepared for GATE 93, facing financial constraints even to obtain the application form. A neighbour aunt, who had immense love for me and understood my predicament, gifted me the GATE application form as a birthday present. While awaiting my appointment as an Assistant Engineer in the Tamil Nadu Government, I pursued an M.E. in Hydrology and Water Resources Engineering at the College of Engineering Guindy (CEG), Anna University, using my GATE score. I completed my M.E. with a CGPA of 9.81 and secured the University's First Rank. Guided by Prof. Thayumanavan, I attended an interview for Ph.D. admission at IISc. Dr. V.K. Stalin, who was my teacher during my undergrad years, guided me to attend the interview in the geotechnical panel, which was instrumental in making me a Geotechnical Engineer.

Though there were some hurdles in the initial period, with the guidance of Prof. Sudhakar Rao and Prof. Venkatrama Reddy, I obtained my Ph.D. from the Geotechnical Engineering Division in 2001. In the same year, I married Mr. J. Rajendran, and with his support, I pursued post-doctoral research at INPG, France, from 2002-2003. Joining as a Lecturer at CEG in 2001, I progressed to become an Assistant Professor in 2006, Associate Professor in 2009, and Professor in 2012. Since 2018, I have been heading the Soil Mechanics and Foundation Engineering division at CEG. In addition to my academic achievements, I extended geotechnical consultancy services to several projects and served as the secretary of the Indian Geotechnical Society Chennai Chapter for five years and Chairperson for two years. Last year, I was recognized by the National Accreditation Board for Testing and Calibration Laboratories (NABL) as a technical assessor for the soil and rock group.

Neelima Satyam

As a distinguished Professor at the Department of Civil Engineering at IIT Indore, my name is Prof. Neelima Satyam. Throughout my career, I've contributed significantly to geohazards research in India, effectively applying global best practices to our context. Leading the geohazards research laboratory at IIT Indore, my role encompasses teaching, research, and consultancy within geotechnical engineering. Being part of various international and national technical societies, I aim to inspire budding geotechnical engineers across India.

During my doctoral research, I developed seismic micro zonation methodologies, which led to the creation of Delhi's first probabilistic seismic hazard map, significantly impacting disaster preparedness. Over time, I've successfully completed 12 research projects sponsored by different governmental organizations in India.

My expertise extends to dynamic soil-structure interaction, particularly focusing on pile rafts and wharf structures. The methodologies I've developed in this domain have been widely adopted by fellow researchers. Besides research, I've designed crucial tools for geotechnical engineering applications, including a popular liquefaction assessment tool and a seismic design tool for monopiles in offshore wind structures.

Venturing into landslides, I implemented one of India's initial real-time landslide monitoring systems in Kalimpong, Darjeeling Himalayas. This endeavor showcased my proficiency in real-time field monitoring systems. Additionally, I work extensively on sustainable ground improvement methodologies, reflecting a futuristic vision in my work.

Apart from academia, I indulge in various interests. I'm a devoted mother to a 17-year-old daughter and pursue activities like painting, playing the violin, and collecting antiques, especially those related to traditional Indian architecture. My family has been an unwavering support system throughout my endeavors.

Motivating young students in Geotechnical Engineering is one of my passions. Serving as the Chairperson of the selection committee for MEXT Scholarships of Japan since 2015 and contributing as the nodal faculty from IIT Indore for enhancing Women in B.Tech at IITs since March 2018 have been fulfilling roles for me.

My career boasts several prestigious awards and recognitions, including the IEI Young Engineers Award, BRNS Young Scientist Research Award, AICTE Career Award, JSPS Fellowship, Young Woman Engineer Award from INWES, CIDC Vishwakarma Award, ISET Shamsher Prakash Mid-Career Research Award, SERB - POWER Fellowship, and JSPS - Bridge Fellowship.

Beyond geohazards research, my diverse interests and global impact, both in scientific and personal pursuits, reflect a life journey rich in experiences. I'm grateful for the support of my family while making meaningful contributions to science and enriching life's tapestry.

Neha Shrivastava

I graduated in Civil Engineering from G. B. Pant University of Agriculture and Technology, Pantnagar, in 2000. I pursued my Master's degree with a specialization in Geotechnical Engineering from IIT-Kanpur in 2002, where I worked on a project sponsored by the Central Building Research Institute (CBRI). From 2002 to 2005, I earned my doctorate in Japan through the prestigious Japanese Government (MONBUKAGAKUSHO) Scholarship. An active member of the Japanese Society of Civil Engineers and the Japanese Geotechnical Society, I received the Student Award of excellence from the Japanese Geotechnical Society.

I have collaborated with esteemed institutions for my research endeavors. My experiences in Japan were rich and diverse, including the warmth of Japanese culture, values, hard work, food, festivals, and onsen. The unique culture of Bousai-lab, fostering teamwork and celebration, left a lasting impression. After completing my Ph.D. in 2006, I joined Jaypee University of Engineering and Technology, Guna, Madhya Pradesh, as a senior lecturer, working alongside my husband. Following this, I relocated to the University of Florida, USA, supporting my husband during his Ph.D. while caring for our young kids. Returning to India, I served as an Associate Professor at the Department of Civil Engineering, Kautilya Institute of Technology and Engineering, Jaipur, from July 2013 to June 2016. Subsequently, I continued as an Associate Professor at Swami Keshvanand Institute of Technology, Management, and Gramothan, Jaipur, from June 2016 to Feb 2019.

Since February 2019, I have been contributing as an Assistant Professor of Civil Engineering at Malaviya National Institute of Technology, Jaipur, successfully balancing my professional and family life. My professional affiliations include the Indian Geotechnical Society, The Institution of Engineers (India), and the Indian Society for Technical Education. I also serve as a Paper Reviewer for reputed journals such as the International Journal of Geosynthetics and Ground Engineering, Geotechnical and Geological Engineering, and Indian Geotechnical Journal. My research interests span ground improvement techniques, recyclable materials in geotechnics, reinforced earth structures, and geosynthetics in pavements.

Nimisha Roy

My journey in the realm of Geotechnical Engineering, intertwined with lessons in humility and resilience, started in a middle-class family where education was revered. My parents, stretching their means for my schooling, instilled in me the value of hard work and perseverance.

I graduated as a gold medalist from my undergraduate college, a milestone that was less about personal glory and more about the fruition of collective dreams and sacrifices. This achievement was a stepping stone, leading me to secure an internship and a Master's degree at India's premier research institute, the Indian Institute of Science (IISc). The guidance I received there, especially from Prof. Madhavi Latha, was selfless and pivotal, encouraging me to explore opportunities beyond familiar horizons.

Pursuing a PhD abroad marked a new chapter in my life. With financial challenges looming, a scholarship and stipend facilitated my studies in Geotechnical Engineering at Georgia Tech, USA, making me the first in my extended family to pursue a graduate overseas. This achievement was a testament to my parents' unwavering support, defying societal expectations that prioritized marriage over academic ambitions.

My time at Georgia Tech was a period of remarkable growth and recognition under the guidance of my advisor, Prof David Frost. Each year of my four-year PhD journey was marked by receiving one of the prestigious awards offered at the institute's Annual Sowers Symposium. These awards, celebrating excellence in research at various stages of the PhD journey, were significant yet humbling, symbolizing the mentorship and collaborative spirit I experienced there. Graduating with a Ph.D. in 2021, my thesis, funded by the US National Science Foundation, focused on the 3D pore space architecture of particulate materials. This work, contributing to understanding geomaterials and bio-cemented sands under varied loading conditions, has garnered about 120 citations, reflecting its impact on the scientific community.

As a Lecturer in Computer Science at my alma mater, Georgia Tech, my passion for geotechnical engineering continues to thrive. With approximately 25 publications, my research now spans the exciting interface of Computer Science and Geotechnical Engineering. Additionally, serving as an Editorial Board Member for Scientific Reports is an honor that allows me to contribute further to the scientific discourse.

Meeting my PhD advisor at an IGS conference in Bangalore was a serendipitous moment, highlighting the role of IGS in shaping my career path. Therefore, being recognized by IGS as one of the top 75 Indian women in Geotechnical Engineering is an honor and a full-circle moment in my professional journey. This path from humble beginnings to this recognition in my field is a testament to the power of determination, support, and a relentless pursuit of knowledge. It is a journey that underscores the importance of embracing every challenge and celebrating each milestone along the way as I continue contributing to and evolving within this ever-changing field.

Nirmali Borthakur

I am Dr. Nirmali Borthakur, currently serving as an Assistant Professor at NIT Silchar. Born in 1976 in the Sibsagar district of Assam, I earned my BE degree in Civil Engineering from Jorhat Engineering College in 1998 under Dibrugarh University. Subsequently, I obtained my ME degree in Soil Mechanics from Assam Engineering College under Gauhati University in 2002. My academic journey commenced with a part-time lecturer role at Jorhat Engineering College in January 2002, and later, in August 2005, I joined NIT Silchar as a lecturer. Balancing the demands of a regular academic workload, administrative duties, and childcare, I pursued research as a part-time scholar. With limited resources, I conducted experimental investigations, culminating in the award of my Ph.D. degree in 2019 from NIT Silchar. My doctoral research focused on the "Vertical load carrying capacity of micropile groups in soft clayey soil."

As an educator, I teach Geotechnical Engineering in undergraduate courses, aiming to inspire students and address various aspects of the subject. Given the geotechnical challenges in North-Eastern India, I encourage students to delve into core problems, identify root causes, and explore potential solutions. Moreover, I emphasize the importance of sub-surface investigation before construction, motivating students to pursue higher studies in this field.

My commitment to fostering academic growth is evident through my involvement in organizing workshops and conferences. I successfully organized a workshop on "Geotechnical Earthquake Engineering," sponsored by TEQIP-II, and actively participated in organizing the 7th Indian Young Geotechnical Engineers Conference (7IYGEC 2019) at NIT Silchar. I hold life memberships in prestigious organizations like the Indian Geotechnical Society (IGS), Indian Road Congress (IRC), Institute of Engineers (India), Deep Foundation Institute of India, and the International Society of Soil Mechanics & Geotechnical Engineering. Additionally, I am a founder member of IGS Silchar chapter and contribute as a geotechnical consultant to various organizations. Beyond academics, I played a pivotal role in renovating the Geotechnical Engineering Laboratory at NIT Silchar, serving as the Faculty-in-charge of the Geotechnical Engineering Lab. Actively contributing to the establishment of the MTech course in Geotechnical Engineering at NIT Silchar, I also shouldered various administrative responsibilities, including mentoring students, managing the departmental library, serving as the Associate Warden of the Girl's hostel, and being a member of the internal complaint committee (ICC).

My research focus lies in the stabilization of peat and clay soil using various techniques, including locally available admixtures, lime and fly ash, rice husk ash and cement, cement and fiber, bamboo mat jute, and polypropylene geotextile. Conducting experimental and numerical studies on the behavior of different foundations, such as shallow, raft, pile, micropile, skirted, micropile-raft, and stone columns, under various loading conditions, is a significant aspect of my work. I also explore slope stability using different techniques and undertake slope stabilization projects. The application of artificial neural networks and machine learning in geotechnical applications constitutes some of the salient features of my research. Under my guidance, 29 scholars have completed their M Tech degree dissertations, and currently, three scholars are pursuing doctoral degrees, while two are pursuing Master's degrees. I have published eight papers in reputed national and international journals and presented 18 papers at national and international conferences.

Padmavathi V

I am Dr. Padmavathi V., currently serving as a Professor of Civil Engineering at Jawaharlal Nehru Technological University College of Engineering, Science and Technology in Hyderabad (JNTUH), specializing in Geotechnical Engineering. My journey as a Geotechnical Engineer began with my postgraduate degree in 1997, where I successfully navigated the academic realm and earned a Ph.D. in 2009, focusing on the topic of laterally loaded piles. Throughout this academic journey, I excelled as an Assistant Professor, skilfully balancing teaching, research, and family responsibilities.

With approximately 60 publications in reputed journals and conferences, I have also filed a patent published in the National Patent Journal of India. The patent is titled "G Shear Box Test to Determine Shear Stress – Displacement and Strength of Coarse Grained Soils at Low Normal Stresses." I have been an active participant in the Indian Geotechnical Society (IGS), New Delhi, serving as an Executive Committee member for the 2011-12 term. My association with IGS Hyderabad chapter spans from 2007 to the present, holding various office bearer positions.

I have made a mark through notable consultancy projects in Hyderabad and other states. I played a crucial role in soil investigation works and foundation design for government projects with a significant level difference. My involvement in the design of ground improvement techniques for the Krishna University building construction in Machilipatnam, Andhra Pradesh, stands out. Additionally, I have taken on challenging projects, such as plate load testing on granular piles at Paradeep, Orissa, and soil investigation and plate load tests for various irrigation and regulatory works, including the Sita Rama Lift Irrigation project. I was also part of the expert committee from the Telangana government investigating the Nanakramguda building failure. My involvement extends to slope stability works for South Central Railways, geotechnical-related projects for the Yadadri Thermal Power project, and Singareni Collieries Company Limited at different locations. Currently, I am associated with mining projects in Orissa, focusing on slope stability checks for pits and dumps. Furthermore, I contribute to the Hyderabad Waste Management project, ensuring the suitability quality control of liner systems and slope stability of landfills.

I have shared my expertise by delivering lectures at the Engineering Staff College of India and various engineering colleges across the country. I have chaired sessions at national and international conferences and attended conferences such as SLOPE 2015 in Bali, Indonesia; GEOMEAST 2018 in Cairo, Egypt; and SEE in 2019 in Bangkok, Thailand, among others. My professional journey reflects a commitment to excellence in academia, research, and consultancy projects within the field of geotechnical engineering.

Paramita Bhattacharya

Paramita Bhattacharya

I always find myself blessed in my journey as a Geotechnical Engineer and researcher. In the twenty-first century, most girl children face different challenges in the family and outside. I am lucky to have caring parents who have always protected me from different challenges in my personal life. I am the only issue of my parents. They have imposed neither social restriction nor their desires on me. They have only wanted to see me as a self-dependent person. I completed my schooling in Kolkata, West Bengal. Since childhood, I have been fond of mathematics, and in most examinations, I have always scored well in this subject. So, it was natural for me to choose a career as a Mathematician but not as a Civil Engineer. In my paternal family, most of my cousins (brothers) are engineers; some graduated from IITs and NITs. Although I appeared for JEE, there was no pressure on me from my parent to study engineering. It was my destiny that pushed me to study Civil Engineering. I completed my Bachelor's in Civil Engineering from Jadavpur University, Kolkata. After that, I started to work as a Trainee Engineer in Kolkata. But to do something different than a routine job probably led me towards higher study. This time, it was not just a destiny but my desire to study MTech in Geotechnical Engineering. I have my M.Tech degree in Civil Engineering with a specialization in Geotechnical Engineering at IIT Kanpur. During my stay at IIT Kanpur, I learned to face different challenges, which helped me grow as a working woman. Immediately after MTech, I joined IISc Bangalore as a doctoral student and completed my Ph.D. in 2012. After PhD, I joined the BITS-Pilani Hyderabad campus as an Assistant Professor and then moved to IIT Kharagpur in 2013. Because of my parents' enormous support, I have faced very few challenges in my personal life. At the same time, I have seen several challenges in my professional life and outside the family. The mindset of society has not changed in the last two decades. While studying for a Bachelor's in Civil Engineering, I heard from one aunt that studying civil engineering for a female is nonsense because I would not work with my male colleagues at the site. Later, I heard that a female professional can't work late at night in her office if required, but a male can. When we visited the site as geotechnical engineers, it was noted that no general facilities like separate washrooms/toilets are made for the females at the remote site. If we go to a tourist place in a remote area, we can get all these facilities for males and females but not at the working site for the female workers and engineers. This kind of social arrangement makes our journey challenging but can't stop us.

Parvathi G S

My journey with Geotechnical Engineering started during my 2nd year of B.Tech in Civil Engineering at College of Engineering Trivandrum (CET) in 2006. Fortunately, my class had the privilege of being taught the introductory course in soil mechanics by Prof. Vinod P., who is renowned as one of the most exceptional teachers in the college. Since he made soil mechanics look easy, my interest in the subject also grew, along with my marks. One day during my 3rd year, Prof. Gireesh came to the class during lunch break and announced that in the coming years, there is going to be a scarcity of good geotechnical engineers in India. Even though he was canvasing students for his foundation engineering elective course, that struck me. Thereafter, subject selection never caused me any confusion, as Geotechnical Engineering remained my sole preference. Subsequently, I had the opportunity to learn more about the subject from Prof. Gireesh (CET), Prof. Unnikrishnan (CET), Prof. P. K. Basudhar (IIT Kanpur), Prof. Amit Prashant (IIT Kanpur), Prof. Manoj Dutta (IIT Delhi) and Prof. Ramana (IIT Delhi).

When I started my professional career in Geotechnical Engineering at Maccaferri, I had the opportunity to learn from colleagues and seniors, especially Ms Minimol Korulla, who inspired me a lot as a corporate woman leading technical marketing while managing the work-life balance successfully. After a brief tenure at Maccaferri, I shifted to an Italy-based tunneling consultancy firm, Geodata Engineering SpA. There, I learned the systematic project management consultancy works for the construction of underground metro stations, especially the design of temporary and permanent excavation supports from my colleagues Dr. Manoj Verman and Mr. Chrysanthos Alexandrou.

Once I left the industry and joined CSIR-CBRI, sadly, I lost the opportunity to learn geotechnical engineering from field-based applications. Nevertheless, I started the process of self-learning, albeit at a sluggish rate, owing to the alterations in my personal life, such as getting married and having a kid. However, when I joined CSIR-CRRI, I re-started the learning process, especially with my colleagues Dr Vasant Havanagi and Dr A. K. Sinha. I owe them a lot for the day-to-day help in technical and administrative matters to date.

In the past few years, I learned how to do thorough research on a subject during my PhD journey with Prof. G. V. Ramana (IIT Delhi). Last but not least, I owe my career and life to my husband, Sandeep Sahu, who is also a practicing Geotechnical Engineer. Through him, I always stay updated regarding the industry and market trends. From my professional experience thus far, I have come to understand that as a junior geotechnical engineer, the primary focus should be on continuous learning. This entails seeking knowledge from many sources, such as friends, coworkers, collaborators, and conferences. Now, when I have reached a mid-level Geotechnical Engineer, the mantras have changed to learning, guiding, networking, and collaborating. Gender and egotistical considerations shall be disregarded in our collective pursuit of the advancement of the nation, which shall be the ultimate goal of our endeavors.

Pinom Ering

I am an Assistant Professor in the Department of Civil Engineering at IIT Bombay. Belonging to the Northeast and having lived and bear witness to struggles due to treacherous terrain always instilled in me the will to pursue a career in science and engineering.

I spent the early years of my education in the North-East, much to the delight of my parents. On being offered admission to IISc, my parents were reluctant to let me join IISc. Firstly, they opined that a Master's degree in engineering was not worth pursuing as they were unaware of the opportunities that come with it. Secondly, the fact that I am a woman made them worried about my safety and well-being. The news of racial discrimination towards North-Eastern people in big cities aggravated their fears. Nevertheless, my parents believed in me and supported my decision. In Bangalore, I, too, was subjected to occasional racial discrimination outside IISc. I had never experienced something so despairing in my life till then. However, I also met people who understood the cultural differences and supported me; I am grateful to them. Arthur Eddington famously said, "Science helps us transcend national boundaries and brings the best in humans." For me, pursuing science has facilitated bridging cultural differences.

During my time at IISc, I was very fortunate to interact with brilliant professors. I am indebted to Prof. G L Sivakumar Babu, my Master's and PhD mentor. His research skills can only be superseded by his benevolent and humble nature. Prof. Madhavi Latha, the only female Professor in the Civil Engineering department, also inspired me. Unbeknownst to her, this brought consolation to my despair as I was also the only female student in the Master's program in Geotechnical Engineering. I am very grateful to all the professors who taught, guided, and nurtured me. I was the student who was shy most of the time and lacked the confidence to speak freely. I was the student you cared for and nurtured. You will be happy to know what became of me. Your teaching, guidance, and belief in me made a difference in my life and, I am sure, in the lives of many others.

After obtaining my Ph.D., I joined IIT Bombay in 2021. Presently, I am the only female faculty member in Geotechnical Engineering at IIT B. I recall during my time in IISc, there were many female researchers. However, we only see a few female researchers in academia. The most common reason for this is the conflict between personal and professional commitments. To the young ones pursuing research, I would say your contribution to science and engineering matters. But for that to be manifested, sometimes you may have to make difficult and uncomfortable decisions. On this note, I thank IGS and the organizing committee of IGC for this honor and opportunity.

Prathyusha Jayanthi

I am Prathyusha Jayanthi. Since childhood, I have aspired to be a doctor (cardiologist in specific). However, my dream had to be foregone after my tenth standard, when I had to opt for a specialization that led me toward engineering due to unavoidable circumstances. This has driven me to aim towards the highest level I can reach in the engineering discipline. Choosing civil as my engineering discipline was purely my choice. I have happily opted with my family's immense support by overcoming the societal pressure against civil engineering for girls. Right from day one, every course in the curriculum of Civil Engineering has brought out the passion within me, and on top of all was Geotechnical Engineering. I was curious to know the intricate behavior of soil as an engineering material that was once play material for every kid. Having four placement offers in hand by the end of my Bachelor's, I preferred to go for higher studies to dwell deeper into the soil. My first step towards this was to join IIT Bombay for a Master's program in Geotechnical Engineering, where I got to interact with a realm of top faculty and researchers in geotechnical engineering. The consistent efforts and knowledge shared by the experts in the specialization made me top my class, and I also earned a job offer from a very good company. One thing that pulled me back again to take over my job is nothing but research in geotechnical engineering. My guide and mentor, Prof. D.N. Singh, has identified my desire for research, motivated me, and convinced my family to make way for me to enter into the research domain. I have continued my Ph.D. at IIT Bombay as a dual degree with M.Tech. and have extended my association with soil through my research in Environmental Geotechnology. The opportunities that I have had during the journey of my Ph.D. to feel different soils and come across various challenges associated with soil have significantly impacted my opinion of what soil is. Prof. Singh and my colleague researchers have supported me as a notable researcher in Environmental Geotechnology. Post Ph.D. I joined as an ad hoc faculty member at NIT Andhra Pradesh in 2017 and was selected as Assistant Professor in 2019. NIT Andhra Pradesh has built my career and given me a supportive, motivating, and deserving life partner. During this tenure of teaching and research in my career, I enjoy sharing my experiences with soils and various geotechnical aspects that can motivate my students and scholars to know about and work with soil. I thank everyone who has been along with me through this journey and my future. I extend my gratitude to IGS for recognizing me and letting me share my story. I conclude by saying my dream of becoming a doctor has been fulfilled by becoming a (soil) Doctorate.

Premalatha K

The story of my personal and professional expedition…

I, Prof. K. Premalatha, hail from the remote village Pillayarkulam, nestled in AyyanurAkkaramangalam near the heritage town Chidambaram in the Cuddalore district of Tamil Nadu. Being a child of a high school teacher, We've shifted to different places in the Cuddalore region. I started my primary education at a Panchayat school in Parangipettai. We lived near the well-known Saint Maha-Avatar Babaji's birthplace. As a dedicated student, punctuality and commitment were my focus, earning the teachers' admiration for my devotion to studies and innocence. I continued schooling in Government High School, Bhuvanagiri, Saint Raghavendra's birthplace. My teacher Mrs.Komalavalli, has observed my sincerity towards my studies and consistently encouraged me as a good mentor. Daily, when I went to school, I used to cross the birth house of Saint Raghavendra, and I was blessed. Economic challenges led my family back to my birthplace, and I stayed in the government hostel affiliated with the Government Nandanar Girls Higher Secondary School in Chidambaram. Then, my medium of instruction changed from Tamil to English during higher secondary, and I faced many challenges due to the change of course language. But I consistently ranked in the top five.

Though my ambition was to become a Medico, the economic constraints and being the eldest among nine siblings led my father to secure an alternate option for my higher studies. Despite getting admission at the Perarignar Anna University of Technology, economic and gender factors led me to enroll in B.E. Civil and Structural Engineering at Annamalai University, Chidambaram. After graduation, I again faced economic challenges, gender issues, and disapproval from my father for not securing Government employment. Fortunately, my uncle helped to apply for a part-time M.E. programme at Anna University, involving teaching and assistance work—a unique initiative by the then Vice-Chancellor. I grabbed the chance to specialize in Soil Mechanics and Foundation Engineering from Anna University, the institute I missed in my undergraduate studies. Despite discouragement and challenges, I earned a high-grade postgraduate degree, securing a position as a lecturer. Prof.S.Boominathan's support at Anna University is invaluable. Presenting my appointment letter, Prof. A. Sargunan, Head of the Division, warmly welcomed me and graciously offered his chair. Later, he became my research supervisor, and I was awarded the "Achievement for Women in Research" for my PhD work. I've consistently adopted Prof. A. Sargunan's teaching approach, embodying bold, strict, sincere, and dedicated qualities with a touch of Indian emotion. Prof. S.V. Ramaswamy was instrumental in enrolment in all elegant professional bodies, taking leadership roles, and getting connected with consultancies and projects.

I've faced indescribable challenges with little support because I sought a work environment that values gender safety, dignity, respect, ethics, and moral values. Since childhood, I've been self-reliant, overcoming obstacles to be one among the Seventy-Five. My ability to surmount challenges is rooted in my spiritual devotion to Saint Baba and Vallallar. The thirst for women's well-being led me to become the Director of the PoSH cell and initiate a program for women in IGS. This journey wouldn't be complete without the love, affection, and support of my husband and my dear daughter, fulfilling my dream of becoming a doctor. Lastly, my gratitude goes to Prof.Madhavi Latha, a champion for the "Daughters of Indian Soil."

Prishati Raychowdhury

Prishati Raychowdhury

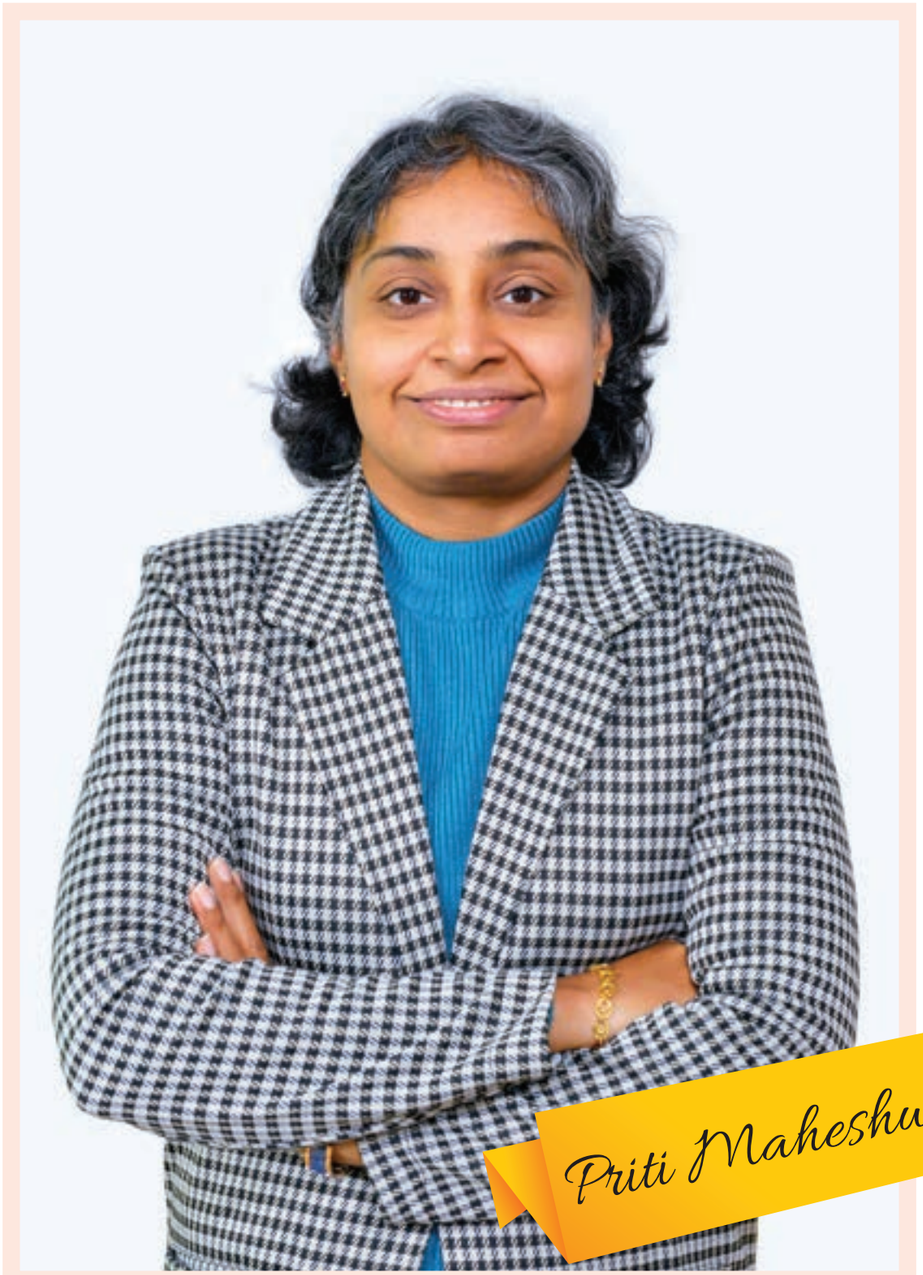
I grew up in Berhampore, West Bengal, in a middle-class Bengali family. Following my schooling, I pursued Civil Engineering at Bengal Engineering College, now known as IIEST Shibpur. After completing my B. Tech, I ventured into a Kolkata-based design consultancy firm focusing on urban infrastructure. However, realizing the need for higher education, I pursued Geotechnical Engineering for my postgraduate studies at IIT Kanpur after two years in the industry.

In 2008, I obtained my PhD from the University of California, San Diego, focusing on the seismic response analysis of rocking shallow foundations. To diversify my experience, I briefly joined Earth Mechanics, Inc., a geotechnical consultancy firm in Southern California, engaging in seismic vulnerability assessment projects for the Port of Los Angeles and Long Beach. Subsequently, I returned to India, joining IIT Kanpur as an Assistant Professor in Civil Engineering.

My work at IIT Kanpur revolves around diverse research areas such as dynamic soil-structure interaction, geotechnical earthquake engineering, railway geotechnics, and health monitoring of critical infrastructure. Alongside my teaching responsibilities, I lead a vibrant research group comprising dedicated MTech and PhD students. With numerous funded projects, we've established testing facilities like the large laminar soil box facility for shake table studies, facilitating cutting-edge research.

On a personal front, I got married during my PhD and became a mother to my daughter in 2008, right before my thesis submission. The challenges of balancing thesis writing with parenting were formidable. In 2011, I had my son while already a faculty member at IIT Kanpur, presenting another set of challenges in juggling family duties and professional commitments. These experiences have bolstered my resilience and contributed significantly to shaping who I am today.

I firmly believe that perseverance conquers all, and these challenges have only strengthened my resolve and character.



Priti Maheshwari

I am Priti Maheshwari, a Professor in the Department of Civil Engineering at IIT Roorkee. My professional journey began in 2005 after completing my PhD from IIT Kanpur in 2004. I earned my BE in 1999 from REC Durgapur (now NIT) and ME in 2001 from MNREC Allahabad (now MNNIT) with academic excellence, securing first rank in the batch both during my BE and ME.

My work primarily focuses on Computational Geomechanics. I have contributed extensively to areas such as soil-structure interaction, probabilistic approaches in geomechanics, machine foundations, especially in blast loadings, and rock mechanics. When delving into relatively new areas of research, I absorb all the essential features from existing literature and use my expertise in computational geotechnics to relook at classical problems and make a mark in those domains.

My ongoing work in the area of rock mechanics has far-reaching consequences in terms of making the required connections between mechanical properties at the macroscopic scale and mineralogy at the microstructural level. Such investigations are missing not only within the Indian context but also in the entire rock mechanics literature internationally. I am involved in guiding doctoral students in varied domains of Geotechnical Engineering, apart from my involvement with undergraduate and postgraduate projects.

I have always been passionate about teaching since my school days. Probably the only thing that was very clear to me was that I wanted to become a teacher! My teaching skills have been widely recognised, evidenced by the popularity of my NPTEL courses on Rock Engineering and Underground Space Technology. The student community at IIT Roorkee has benefitted a lot from my lucid teaching style. I am an editorial member of the International Journal of Geotechnical Engineering and the Indian Geotechnical Journal. I am also actively involved in the review of papers for various journals and am currently working as one of the guest editors for a special volume on Women in Geotechnical Engineering for the Indian Geotechnical Journal. I try that my reviews are never delayed, are precise and, most importantly, guide the authors in improving their manuscripts. I have significantly contributed to various field problems through numerous consultancy projects. Currently, I am handling two research projects sponsored by NDMA and DST. I am also involved in BIS committees to develop guidelines for using micropiles for landslide mitigation and slope stabilisation.

In 2008, I was selected as one of less than fifteen young faculty members from India for the second Indo-American Frontiers of Engineering Symposium (IAFOE) and National Academy of Engineering Meeting in the USA, fully sponsored by INDOUSSTF. I am the recipient of the IGS-Z-Tech. Biennial Award (2010), IGS-Shri B. N. Gupta Biennial Prize (2017), and IGS-HEICO Biennial Prize (2019). I have also served IGS as a member of NEC for two terms. Notably, I am the first woman to earn a PhD in Geotechnical Engineering from IIT Kanpur and the first woman faculty member of Geotechnical Engineering at an IIT.

Rajyalakshmi Kurapati

I am Dr. Rajyalakshmi Kurapati, and I now work at the Civil Engineering Department of the Department of Technical Education, Government of Andhra Pradesh, India. I am delighted to have earned the State Best Teacher Award for 2013-14 from the Government of Andhra Pradesh.

Born into a family of educators in Hyderabad in 1968, I attribute my upbringing to learning crucial life lessons from my parents, Smt Mallampalli Nagaraja Kumari and Late Sri Kurapati Venkata Rao. Leading the family through challenging times during my formative years shaped my empathy towards those in need. Interestingly, my initial interaction with civil work happened when I was just twelve, constructing roads in my community with my brother using felled trees and locally available earth after storm waters washed them away. Little did I know then that this practice would align with geotechnical engineering in the future.

Opting for Civil Engineering, especially specializing in Geotechnical Engineering, during the mid-80s as a woman was unconventional. However, my deep-rooted respect for the soil, stemming from ancient Vedas recognizing it as the basis of survival, propelled my interest. A significant moment in my academic journey was obtaining a Master's in Soil Mechanics and Foundation Engineering from Andhra University, Waltair, despite challenges, thanks to my family's unwavering support.

Meeting Prof. Madhav, an authority in Geotechnical Engineering at IIT Kanpur, was pivotal. This encounter shaped my academic trajectory, enabling me to contribute significantly to the global field of Geotechnical Engineering and earn a Doctoral degree from JNTUK, Kakinada. It demanded immense hard work and resilience, leading to the publication of 33 papers across various international/national journals and conferences.

My professional journey involved collaborating extensively with diverse sectors (Government, Public, and Private) to execute projects focusing on industrial problem-solving, student engagement, and educational value. I conducted geotechnical investigations and material testing for significant projects, including the implementation of the Underground drainage system for the Greater Visakha Municipal Corporation, sewage treatment plants, and various key infrastructure projects.

Continuously striving for self-development and skill enhancement has been a priority. I am deeply invested in mentoring and guiding students, aiding their personality development, and supporting them in industrial training and placements. Spirituality has been a guiding force for me over the past two decades, allowing me to strike a harmonious work-life balance and find contentment in life. As a practicing Kriya Yogi, it has profoundly influenced my approach to life and work.

Renjitha Mary Varghese

I, Dr. Renjitha Mary Varghese, am currently working as an Assistant Professor at the National Institute of Technology Calicut. I started my journey in a small village in Kerala, and I landed in the field of civil engineering, which was one of the male-dominated industries during those days, in the early years of this century. Later, I could pursue my dreams in Geotechnical Engineering, specifically geotechnical earthquake engineering, at the National Institute of Technology, Surathkal, Karnataka. After that, I joined the Indian Institute of Science (IISc), Bangalore, for my research studies under the guidance of Prof. G Madhavi Latha. Traveling from NIT Surathkal to IISc Bangalore has improved my self-confidence in the field of civil engineering. The PhD life at IISc Bangalore has taught me lessons and shown me many phases of life. As a strong lady of Geotechnical Engineering at IISc Bangalore, Dr. G Madhavi Latha has provided a safe zone for female researchers like me. I began my academic career as an Assistant Professor at the National Institute of Technology, Calicut, in 2018. The first few years of my career were a real struggle to balance my personal and professional life. However, the support received from my mentors, family, friends, and students has helped me a lot to overcome the situation. The current data shows that despite many government policies being made to bridge the gap between men and women, gender inequality still persists in the geotechnical industry. However, interactions with a strong senior mentor in this profession can help you to overcome many problems. We should also realize that societal factors mainly generate the obstacles, and we have the power to choose our path. We should also need to encourage more female participation in academics as well as in the industry by providing a women-friendly environment. I have always believed that patience is the art of hoping and that our resilience can eliminate any barriers.

Resmi Sebastian

I am Resmi, the youngest of four daughters, hailing from Bharananganam, a charming town in Kottayam, Kerala. My academic journey began with a B.Tech in Civil Engineering from Govt. Rajiv Gandhi Institute of Technology, Kerala, which I completed in 2006. After a year of working in the construction industry, I pursued my M. Tech in Geotechnical Engineering at the National Institute of Technology, Surathkal, Karnataka, earning a gold medal for academic excellence.

In 2010, I embarked on my Ph.D. at the Indian Institute of Science, Bangalore, focusing on the dynamic properties of jointed rocks. My research resulted in six international journal papers, with one in the International Journal of Rock Mechanics and Mining Sciences earning me the 2015 Young Geotechnical Engineer Best Paper Award in Rock Mechanics and Rock Engineering from the Indian Geotechnical Society. I also participated in the student exchange program between the European Union and foreign universities, conducting research on numerical simulation of rock falls at the University of Milan, Bicocca, Italy. Despite personal challenges, including my own physical ailments and my mother's terminal illness, I submitted my Ph.D. thesis in 2015 when my daughter was just six months old. Following my Ph.D., I continued as a research associate at IISc, working on vibration isolation of buildings for one and a half years. In 2016, after my mother's passing, I pursued a post-doctoral fellowship for six months at West Virginia University, USA, focusing on numerical analysis of longwall mining in Pittsburgh coal seams.

Returning to India, I joined IIT Ropar in February 2018, where I have been actively involved in various research projects funded by organizations like the National Highway Authority of India, Science and Engineering Research Board, Sutlej Jal Vidyut Nigam Limited, and Punjab State Council of Science and Technology. My research interests encompass wave propagation in jointed rocks, dynamic properties of geomaterials, detection of microcracks in rocks, and the utilization of waste materials in soil stabilization. In 2019, I received the Early Career Research award from the Science and Engineering Research Board for my research on shear wave propagation across jointed rocks. Currently, I guide numerous doctoral, master's, and Bachelor's students in their research projects. Additionally, I hold administrative roles, such as serving on the Academic Committee for Research and Post Graduate Studies and the Complaints Committee for Sexual Harassment at the workplace at IIT Ropar. Alongside my professional commitments, I manage my home and raise two daughters, aged nine and five, as my husband works in Bangalore.

Riya Bhowmik

I am Dr. Riya Bhowmik, an Assistant Professor of Geotechnical Engineering at the Indian Institute of Technology (IIT) Jammu. My journey began in Bondamunda, a small town near Rourkela in Orissa. Born to Mr. Nitai Charan Bhowmik, a government employee in the Railways, and Mrs. Jaya Bhowmik, my early exposure to education and science was shaped by my elder sister, Mrs. Rumpa Pal, who instilled the dream in me to become a scientist. Financial challenges surfaced during my father's retirement, but my family steadfastly encouraged my pursuit of my dreams. Despite difficulties, I sought scholarships and internships to overcome financial constraints during my higher education.

My dream of becoming a scientist came true at CSIR-Central Building Research Institute (CBRI), Roorkee. Here, I closely interacted with scientists and researchers working on problems with real-life impact, deepening my interest in solutions to geo-hazards, especially in geotechnical engineering. This experience laid the foundation for my future endeavors.

Pursuing doctoral studies at IIT Delhi under the guidance of Prof. J. T. Shahu and Prof. Manoj Datta expanded my exposure to impactful research. I interacted with global leaders in geotechnical and geoenvironmental engineering, inspiring deeper exploration of my chosen research topic on landfill closure systems using geosynthetics. My work led to publications in high-quality journals and the patenting of an innovatively inclined pullout machine. Recognitions followed, with awards from the Indian Geotechnical Society and the International Geosynthetics Society (India Chapter). I was also honored with the Distinction in Doctoral Research for 2019 by IIT Delhi. At IIT Delhi, I gained firsthand experience working on field problems and witnessed formulated solutions working in real life.

Upon completing my PhD during the pandemic, limited employment opportunities emerged. However, my supervisors at IIT Delhi offered me the chance to continue my work, sustaining my aspirations. Subsequently, I secured a faculty position at IIT Jammu, marking the next step in my professional journey.

Being near the National Highway connecting Jammu to Srinagar, I experienced the impact of rockfalls and landslides on people's lives. This motivated me to focus my research on finding geosynthetics-based solutions to such geo-hazards and improve sustainability in mountain infrastructure. IIT Jammu provides the platform to pursue this research actively. The continued efforts of geotechnical engineering researchers, including mine, will improve lives across our country.

Roshan R S V

I was born in 1985 and raised in Thiruvananthapuram, Kerala. As a toddler, playing in the loose alluvium soils and drawing houses as a kid, little did I realise that one day I would be designing foundations for structures and pursuing a career in Geotechnical Engineering after two decades. Here is my journey so far…….

I've always been inclined toward creativity, and I decided to become an engineer after learning about flow charts in high school. The greatest gift I received from my parents was that they made me the decision-maker as a teenager, starting from the subjects to choose for 11th standard, which directly impacted my studies and career trajectory later on.

In 2003, I selected Civil Engineering as my preferred stream and graduated with a BTech in Civil Engineering in 2007 from TKM College of Engineering, Kollam, Kerala. I became a Civil Engineer by choice! I was still pursuing my studies when the Indian Ocean Tsunami occurred in December 2004, and the Kollam coastal area saw a devastating aftermath. I did a group project on the vulnerability assessment of the Kollam urban area for natural hazards such as the Tsunami in 2006-2007, which involved collecting in situ soil samples from various locations to perform sieve size analysis. This activity solidified my interest in geotechnical engineering, which was already my favorite subject.

I completed post-graduation (MTech) in Environmental Geotechnology in 2009 from NIT Calicut, Kerala, and studied environmental and geotechnical engineering subjects. During an interactive session, one of the professors mentioned that 'an engineer is someone who can solve problems and not just formulae,' and it resonated with me. I follow the pledge taken during convocation in October 2009, i.e., "in thought, word, and deed endeavor to be scrupulously honest in the discharge of our duties…and utilize our knowledge of Engineering, Technology, and Science in the service of our motherland and humanity ultimately."

I got campus placement in Larsen and Toubro (L&T) and was involved in various conventional geotechnical engineering designs in projects of cement plants, thermal power plants, wet effluent treatment plants, sewage treatment plants, etc., from 2009-2013. I secured an MBA in technology management from Anna University, Chennai, during 2010-2012. The second chapter in my Geotechnical Engineering career started in 2013 and is ongoing with Maccaferri, where I work as an Assistant General Manager (Technical) now. I have experience in specialized geotechnical engineering applications such as landslide mitigation, rockfall mitigation, erosion control, reinforced soil systems, and avalanche protection. I have been associated with several prestigious and complex projects in India and abroad, delivered over 50 technical presentations, and published more than 10 papers during my 14.5-year career.

I attribute my success to my ever-encouraging family, husband, great teachers, and professional mentors. I swear by consistency, preparation, continuous learning, and skill development for my professional and personal growth and strive to nurture and develop team members through training.

Rupali S

My academic journey began with a Bachelor of Engineering in Civil Engineering from the University of Pune. Further, I pursued a Master of Technology in Soil Mechanics and Foundation Engineering from NIT Surat and worked on rock fall analysis and protection design as my MTech dissertation topic. Motivated by an unyielding desire for knowledge, I embarked on a doctoral journey at IIT Roorkee, specializing in developing a mesh-free numerical model for simulating contaminant migration in porous media.

My academic pursuits were complemented by practical experience gained through my tenure as an engineer at Geo Test House, an NABL Accredited Laboratory. I was exposed to the real-world challenges faced in geotechnical engineering practices, from visual identification, soil testing, and analysis to foundation design.

2016 I joined Dr B R Ambedkar National Institute of Technology Jalandhar as an Assistant Professor. This role has allowed me to combine my academic expertise with my passion for teaching and mentoring aspiring geotechnical engineers. I have guided 24 MTech students and one research scholar, fostering their curiosity and nurturing their growth as future professionals.

Everyone faces different challenges in their personal and professional career, and I had many other challenges, but I experienced the biggest and the most motivating one in 2012. Just before the PhD interview at IIT Roorkee, I was diagnosed with stones in my gallbladder, and I was critically ill and had to be operated on immediately. I had expressed my concerns about attending the interview to my surgeon, and he was very positive; he gave me confidence that I could attend the interview comfortably after the operation. I was operated on 11th June 2012 and was discharged on 13th June 2012. I had a week before I went to Roorkee for the interview from my hometown. I was so dedicated to attending and cracking the interview for my PhD admissions that I recovered quickly. Also, I had the support of my family and my doctor. This incident gave me a different confidence; thankfully, I did well in the interview and was selected for the prestigious IIT Roorkee. I often share this experience with my students that the challenges coming your way are always smaller than your will to overcome the situation.

My most significant accomplishment is earning a PhD and joining NIT Jalandhar. In my role, I have inspired numerous students, particularly two young women under my supervision, to pursue PhDs, leading them to join prestigious institutions such as IITs and NITs. My dream is to motivate all my students to appreciate and understand geotechnical engineering, encouraging them to pursue a career in Geotechnical Engineering. I aspire them to comprehend complex geotechnical problems and contribute solutions to society's most challenging problems.

Sayantani Ghosh

As a Principal Engineer at Langan's London office, I, Sayantani Ghosh, being involved in major projects that are located in the Middle East, the UK, and the New York metropolitan region. Originally from India, I completed my Bachelor's degree in Civil Engineering at the National Institute of Technology, Durgapur, in 2011. Commencing my career as a structural engineer, I later pursued a Master's degree in Geotechnical Engineering from Virginia Polytechnic Institute and State University in 2014, following which I joined Langan in New York.

My role at Langan encompasses diverse responsibilities, including conducting subsurface investigations, designing excavation support systems, performing foundation analyses, and overseeing construction inspections. I've been involved in projects involving deep excavations near subways and landmarked buildings in New York City, as well as working in varied terrains within the KSA region.

Apart from my professional engagements, I actively participate in various organizations. Currently, I serve on the CREW UK Board and have previously held the role of Chair for Technical Lecture in the ASCE Metropolitan Section's Younger Member Forum. Additionally, I contribute significantly to the Women in Deep Foundations Institute, organizing networking events, facilitating career development opportunities, and participating in technical events. I hold a Professional Engineer license in the US and am in the process of attaining Chartered Engineer status in the UK.

Shabana Khan

As the Assistant Vice President of Strata Geosystems (India) Pvt. Ltd., I am now steering the technical team in the exploration of novel areas for development. I graduated with a BE in Civil Engineering from Mumbai University, an M-Tech in Geotechnical Engineering from IIT Bombay (CGPA: 9.13), and an MBA in Finance from the Indian School of Business (CGPA: 3.54).

My professional identity is defined by my enthusiasm for Geotechnical Engineering, although I hold an MBA. I take great pride in my work and tackle every assignment with professionalism. I had a modest childhood and experienced my father's death at an early age. My mother's steadfast perseverance allowed me to get a top-notch education. I faced several difficulties as a female geotechnical engineer, including long trips to isolated areas of India for work.

My career commenced in 2002 as a structural design engineer, where I gained valuable experience at M/s Maccaferri Environmental Solution Pvt. Ltd. Over time, I evolved into a seasoned geotechnical engineer, significantly contributing to the modification of IRC Codes, particularly IRC SP 42 and IRC 34 guidelines, serving on the IRC H4 committee. Transitioning to Business Development, I collaborated on major landslide mitigation projects with renowned consultants and government officials. Post the devastating 2013 Uttarakhand floods, I was involved in landslide mitigation for the Char Dham yatra project, facing challenges in implementing innovative technology. Later, I led a team for Canal lining and slope protection work, learning essential project management lessons in challenging conditions. During my tenure as Vice President at Z-Tech India, I managed the entire organization's operations, spanning finance to project deliveries.

Outside of work, I find joy in running, trekking, and delving into non-fiction, biographies, and self-help books. Running, particularly marathons and Ultra runs, holds a special place in my heart. Recently, I accomplished the formidable Khardung-La marathon, which greatly enhanced my self-motivation and bolstered my mental resilience.

Sharada Bai H

I am Prof. H. Sharada Bai, an academic figure in Civil Engineering. My academic journey began at University Visveswaraya College of Engineering, Bangalore University, where I obtained my B.E. in Civil Engineering in 1973 and M.E. in Structural Engineering in 1975. My quest for knowledge led me to complete my Ph.D. from the Indian Institute of Science, Bangalore, in 1983, focusing on 'Structure-Soil Interaction Analysis of Elastic-Plastic Frames' under the guidance of Prof. B.V. Ranganathan and Prof. K.S. Subba Rao.

Starting as an Assistant Professor in the Department of Civil Engineering at University Visveswaraya College of Engineering in 1981, I progressed through the ranks, becoming an Associate Professor in 1994 and eventually a Professor of Civil Engineering in 2001. My dedicated tenure spanned 34 years at Bangalore University, where I served until my superannuation in May 2015. Throughout my career, I focused on teaching, supervised 10 Ph.D. students, guided 85 Master's Dissertations, and mentored numerous BE final year projects. My contributions include approximately 90 technical papers presented at various seminars, conferences, and international venues in the USA, South Africa, and Japan.

I am an active Life Member of professional bodies such as ICI, IGS, ACCE, and ISET, participating actively in their events and initiatives. Additionally, I served as the Staff Coordinator of the ICI students Chapter-UVCE, organizing expert lectures and facilitating field visits for students.

My research interests primarily revolve around soil-structure interaction. I explore the utilization of industrial byproducts like flyash, pondash, crushed rock powder, and M-sand as substitutes for cement and aggregates in concrete formulations, self-compacting concrete, and structural analysis and design. I also served as a Structural Consultant, conducting proof checking for numerous structures through the Civil Engineering Department at Bangalore University.

My contributions have been acknowledged with several accolades, including Best Paper Awards at conferences, distinctions as an outstanding educator with two Best Teacher Awards, the 'Eminent Award' by ACCE, and the 'Outstanding Concrete Engineer-2021' ICI-Ultratech Award in Bangalore, recognizing my significant contributions to the field.

Shilpi Mahapatra

My journey in the realm of Geotechnical Engineering has been a thrilling blend of academic rigor and real-world challenges. Born in Jabalpur, my fascination with civil engineering developed during my formative years. This passion propelled me to pursue a Bachelor's in Civil Engineering at Jabalpur Engineering College, where I graduated with distinction in 2009. Armed with a solid foundation, I sought further academic enrichment at the Indian Institute of Technology (BHU) Varanasi, earning a Master's in Geotechnical Engineering. The years spent honing my skills laid the groundwork for my doctoral pursuit at the Indian Institute of Technology Delhi, where my Ph.D. research focused on the Optimum design of reinforced soil walls for the vertical expansion of municipal solid waste landfills – A reliability-based approach.

The academic journey, while intellectually rewarding, was not devoid of challenges. Balancing the demands of research, coursework, and personal life required resilience and time management. However, these challenges served as crucibles, forging my determination and instilling in me the discipline needed to thrive in the competitive world of academia. Upon completing my Ph.D. in 2018, I embarked on a multifaceted professional journey. In academia, my role as an Assistant Professor at JSS Academy of Technical Education, Noida, allowed me to shape young minds and foster a passion for civil engineering in the next generation.

I spent over two years as an Engineer (Ground Engineering) in Ramboll. The experience was a crucible of growth, with each project presenting unique challenges. Here, my responsibilities ranged from digitizing pile locations using Civil 3D to mass displacement calculations during piling. Joining the esteemed ranks of AFRY in May 2023 marked a significant milestone. As a Geotechnical Engineer in the Hydro Division, I embraced diverse projects that demanded a fusion of theoretical knowledge and practical expertise. However, the transition from academia to industry posed its own set of challenges. Adapting to the fast-paced and dynamic nature of the professional landscape required a paradigm shift, necessitating a quick grasp of industry-specific tools and methodologies.

My academic and professional journey has been punctuated by numerous successes, each a testament to perseverance and dedication. The publication of research papers in esteemed journals and participation in international conferences, such as the 14th International Conference of the International Association for Computer Methods and Advances in Geomechanics, stand as milestones. In addition to professional accomplishments, my commitment to the field is reflected in my involvement with the Indian Geotechnical Society, where I am a proud life member. Organizing and participating in conferences, including being a student member of the organizing committee for the Indian Geotechnical Conference 2012, has added a community dimension to my professional journey.

Reflecting on my journey reveals a continuous evolution, marked by met challenges and celebrated successes with humility. My passion for geotechnical engineering propels me forward, fuelling a commitment to excellence and boundless curiosity. The road ahead promises more challenges, successes, and an unwavering dedication to pushing geotechnical engineering boundaries.

Shobha K Bhatia

I am Shobha K. Bhatia, and I am currently holding the position of Laura J. and L. Douglas Meredith Professor of Teaching Excellence in Civil and Environmental Engineering (CEE) at Syracuse University in New York. My career spans over four decades, starting at the Indian Institute of Technology (IIT) in Roorkee, India, where I obtained my BE and MS degrees, specializing in the dynamic behavior of piles. Following my time at IIT Roorkee, I continued earthquake engineering research before pursuing my PhD in soil liquefaction studies through a Commonwealth Scholarship at the University of British Columbia (UBC), Canada.

Upon completing my doctorate, I joined the CEE faculty at Syracuse University. Rapidly advancing through the ranks, I became a Professor and served as CEE chair for six years. Initially, my research focused on understanding soil behavior during earthquakes, leading to extensive investigations aimed at mitigating earthquake damage in various structures. This work expanded into soil imaging, simulation techniques, and the application of geosynthetic materials to improve safety and longevity in engineering projects.

I pioneered soil erosion mitigation using natural fibers and explored the utilization of geotextile tubes for dewatering and containment systems, along with their effectiveness as filters for sediments, fly ashes, and mine tailing slurries. Presently, my research involves the use of biological and synthetic polymers to stabilize mining waste, studying rheological behavior and flow of mine tailing slurries amended with biopolymers to prevent environmental damage and enhance safety measures.

Acknowledged as a "GeoLegend" by the American Society of Civil Engineering and honored with the International Network for Engineering Education and Research (iNEER) Recognition Award for my exceptional collaborations in international research and education, my contributions span 120 peer-reviewed technical publications. I've been recognized for my commitment to teaching excellence, receiving accolades such as the Woman in Engineering Proactive Network (WEPAN) University Agent Award for advocating for women and underrepresented groups.

My fascination with geotechnical engineering dates back to a middle school visit to a significant dam site in central India, igniting my passion and shaping my illustrious career. Even after four decades in the field, I am deeply passionate about geotechnical engineering, sustainability, and the critical role of water in our future. I advocate for the pivotal role of geotechnical engineers in devising solutions to preserve water, emphasizing the need for enthusiasm and dedication to bring about lasting global change. It's an honor for me to be recognized among the 75 "Daughters of Indian soil."

Shruti Shukla

I am an Assistant Professor at the National Institute of Technology (NIT) Surat for 13 years. I earned my doctorate in Geotechnical Engineering from NIT Surat. During my M. Tech, I was pregnant with my first daughter during the 2006 floods in Surat city. Despite facing these dual challenges, I successfully completed my M.Tech with a 9.38 CGPA. Throughout my Ph.D. journey, I was pregnant with my second daughter, who had some initial complications. Nevertheless, I remained steadfast in my pursuit of a doctorate. Despite my joint family responsibilities and roles as a mother, wife, and daughter-in-law, I've achieved remarkable milestones in my career. It's a testament to the multitasking skills that females possess. When determined to achieve something, women can indeed accomplish it.

My research interests include the piled raft foundation, laterally loaded piles in horizontal and sloping ground, soil stabilization, liquefaction, and site improvement techniques. I have authored over 50 journal and conference publications. Additionally, I've supervised 7 Ph.D. students, 3 of whom have completed their degrees, while four are currently pursuing theirs. Moreover, I've overseen more than 30 M.Tech theses. In 2021, I filed a patent for a compaction mold that facilitates fiber placement at various angles in clay.

I am actively involved in teaching core subjects of geotechnical engineering, Soil Dynamics, and machine foundation. Recently, I and my Ph.D. student received the Best Paper Presentation Award sponsored by Springer Nature at the 7th International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics (7ICRAGEE 2021) and the Best Paper Presentation Award at the 1st International Symposium on Construction Resources for environmentally sustainable technology.

I've presented research papers at various international conferences held in Dubai, Australia, Malaysia, and more. Additionally, I serve as a reviewer for various national and international conferences like the Indian Geotechnical Conference. I'm also a reviewer for (EGRWSE-2023) Environmental Terotechnology, Recycled Waste Materials, and Sustainable Engineering, organized by Dr. B R Ambedkar NIT Jalandhar.

Furthermore, I am an Editorial member in academy proceedings in engineering sciences published by the Indian Academy of Sciences (Springer publication), an Editorial member of Case Studies in Construction Materials, and a Reviewer of the Indian Geotechnical Journal. I am actively involved in various civil engineering consultancies at SVNIT's Civil Engineering Department."

Shubhada S Jagtap

I spent my childhood in the vibrant city of Kalyan in the Thane district of Maharashtra. Excelling in my studies, I secured the first position in my school during the SSC board exams and earned distinction in the HSC exams in the science faculty. During the third year of BE Civil, I discovered my passion for Geotechnical Engineering, thanks to the introduction of Soil Mechanics.

In 2002, I achieved 8th place in the Mumbai University Merit list by completing BE-Civil in First Class with Distinction. This laid the foundation for my pursuit of knowledge, leading me to a 2-year full-time ME degree in Geotech from MSU Baroda, Gujarat, where I earned recognition as the top student in my department and graduated with Distinction.

Upon graduating, I secured a position as a Design Engineer in an MNC through campus placement, working on overseas projects and receiving valuable on-the-job training abroad. Seeking diverse experiences on Indian projects, I transitioned to a prominent Mumbai-based company, starting as an Assistant Manager and eventually reaching the position of Sr. Manager. I actively contributed to various Reinforced Earth Wall Design projects across India, including the Surat-Dahisar and Ahmedabad-Vadodara stretch of NH-8, where I successfully designed approach ramps for fifty-three bridges in record time.

To broaden my expertise in Geotechnical Engineering, I embraced the role of a Freelance Design Engineer for several years. During this period, I collaborated with different companies on projects like designing a 15.0m deep Anchored Diaphragm Wall, Gabion Retaining Walls, Slope Stability analyses, and preparing and interpreting Soil Investigation and pile load test reports.

In 2018, I took a bold step and founded MRUDA Geotech Consultants, a Design and Consultancy firm based in Thane. MRUDA has grown significantly in five years, with a branch in Satara since May 2023. Serving as a key design engineer and consultant, I've played a crucial role in projects such as Ground Improvement for constructing RE walls in Assam and bridge approaches on CH-type soil in West Bengal. MRUDA has also contributed to the Mumbai-Metro project, delivering a detailed investigation report, recommendations, and foundation design for an elevated Metro stretch.

With almost fifty-plus projects under our belt, including numerous geotechnical investigation works, I am dedicated in making MRUDA a leading design-consultancy organization contributing to the nation's infrastructural growth and sustainable development. Throughout this journey, I am grateful to my parents for providing me with higher education, my supportive family, and my teachers, mentors, and guides, who have played a pivotal role in my professional journey.

Sima Ghosh

Ad Astra per Aspera…..!!!

I am a village girl by birth. Growing up in the heart of a farmer's family, where the notion of higher education often succumbs to the prevailing idea of early marriage, my life would have taken a different trajectory if not for my elder brother. His persistence, contrary to my family's wishes, propelled me to step into the world of education. My school became my sanctuary, where dedicated teachers instilled in me the moral and academic principles that guide me to this day. After completing my schooling, I earned my Bachelor's degree from Tripura Engineering College in 1994, securing the Department Gold Medal. Financial hardships were a constant companion during this period. To make ends meet, I juggled back-to-back tuitions in the evening and burnt the midnight oil to complete my college tasks and prepare for the state Public Services Commission examination.

In 1996, I was appointed as a Junior Engineer at the Rural Development Department, Government of Tripura. I diligently served for three years, but I realized that my true calling was elsewhere. I decided to pursue higher education and began preparing for GATE'99. Qualifying with an AIR of 265, I secured a 1 and 1/2 year non-paid study leave and enrolled in the prestigious IIT Roorkee (then University of Roorkee) for my Master's in Geotechnical Engineering—a pivotal moment in my life. Under the guidance of Professor Swami Saran, I completed my M. Tech dissertation and discovered my fascination for soil dynamics, which laid the foundation for my research background. Honored with the department gold medal and the best M.Tech thesis award, I resigned from my previous job and joined the National Institute of Technology Agartala (NIT-A) in 2006 as a lecturer. By this time, I was already married with a daughter and a son, both in their infancy.

Despite my familial responsibilities, I enrolled in the Ph.D. program at NIT-A in 2008. The journey towards my Ph.D. began amidst the challenges of our institution's nascent stage, lacking access to necessary literature. Seeking assistance from four eminent professors, but only Professor Deepankar Choudhury (Professor, IIT Bombay) responded, providing me with all the essential texts. His support paved the way for my research.

Balancing between my young children and my role as a faculty at NIT-A, I persevered in my research. I completed my Ph.D. within three years and six months, securing ten publications, including one ASCE and one SCIE-indexed journal. Grateful for the almighty's blessings, my research journey continues with the dedication of my team of motivated research scholars and the occasional guidance of Professor Deepankar Choudhury and Professor J.R. Kayal (Ex-DG, GSI). Finally, I express my gratitude to every faculty and staff member at NIT-A. Without their support, I could not have achieved whatever little bit of success I have in my name.

Smrutirekha Sahoo

I am Dr Smrutirekha Sahoo, currently working as an Assistant Professor in the Department of Civil Engineering at NIT Meghalaya since 2015, and also a mother of two lovely children (a 7-year-old Son, Master Shivansh Sasmal, and a 4-year-old daughter, Miss Saanvi Sasmal).

I was born in a small town in Keonjhar, Odisha, on 27th April 1988. Since my parents worked in different towns, I stayed with my mother till I was five years old and then stayed with my father to have my schooling at Jhadeswar Nodal U.P. School, Odisha. When I was in Class 5, I got selected through the Jawahar Navodaya Vidyalaya Selection Test (JNVST) conducted by CBSE to have my further studies from class 6 to 12 in Jawahar Navodaya Vidyalaya Hadagarh (JNV Hadagarh), which is a free of cost and fully boarding school. Then, I did my BTech in Civil Engineering from BIET under BPUT Rourkela, Odisha, in 2009. As I qualified in GATE 2009 and had Geotechnical Engineering as my favorite subject during BTech, I decided to join MTech in Geotechnical Engineering at NIT Rourkela, Odisha. Immediately after my MTech in 2011, I joined for PhD in Geotechnical Engineering in July 2011 at IIT Delhi under the guidance of Prof Bappaditya Manna and Prof K G Sharma to strengthen my knowledge and get better career opportunities. On 2 November 2015, I joined NIT Meghalaya after finishing the experimental and numerical works and while writing my PhD thesis. There were a few ups and downs on my personal and professional fronts since then for a few years, and finally, I got my PhD on 22nd June 2017 (i.e., thesis titled "Seismic response of steep nailed soil slopes – shaking table tests and analysis").

At NIT Meghalaya, I have been associated with several academic and administrative responsibilities assigned to me from time to time and extended contributions to various outreach activities whenever I got an opportunity to do so. I have completed three sponsored R&D projects amounting to 38 lakhs (approx.), including the prestigious Early Career Research Award from SERB, DST and 13 consultancy projects amounting to 39 lakhs (approx.). I have received several awards and recognitions from various agencies and organizations and delivered several invited talks at various Institutes. I have guided 11 BTech and MTech projects to date and am currently guiding 3 Ph.D. scholars, one of whom is about to submit her thesis. I have published 26 research articles in various reputed national and international Journals, book chapters, and conferences. I have been the reviewer of various national and international Journals. I have also attended and participated in various national and international conferences, workshops, and short-term courses to enhance my knowledge and broaden my expertise in interdisciplinary research.

For the young girls of India: Nothing can stop you from achieving something great if you believe in yourself and give your sincerest effort. And don't forget to take care of yourself.

A woman's real success and happiness is having a good career-family balance, which is only possible if she can have a supportive environment from her family.

Soundara B

I am Dr Soundara Balu; I was born and raised in Keeramangalam, Pudukkottai District, Tamilnadu. I studied in a government school from Keeramangalam (up to middle school) and Pattukottai. My parents were school teachers, and my mother is my moral support and a role model for her hard work and persistence. I was the top student in my school life, and my mother had a great dream for me to become a doctor. However, due to a small dip in my medical cutoff, I entered the engineering field in 1998 by reluctantly choosing Civil Engineering at Alagappa Chettiar College of Engg & Tech, Karaikudi, Tamilnadu. However, over the course of time, I became fond of Civil Engineering due to my great professors, especially Mr Panneer Selvam and Dr Subramanian. I am the only student from our department who secured a GATE score in the final year and joined ME Soil Mechanics and Foundation Engineering at the College of Engineering Guindy, Anna University in 2002. With the highly potential guidance of my ME Project supervisor, Dr V K Stalin, I have developed a passion for experimental aspects of geotechnical engineering. My research interest includes studying the behavior of problematic soils, various ground improvement methods, and the physical modeling of geostructures. My drive and passion landed me at IIT Madras, and I registered for my PhD under the guidance of Dr R G Robinson, who needs no introduction. I honed my experimental skills, fundamentals, and numerous attributes of research with him. I got married a year before I completed my PhD. I went to UAE to live with my husband after my thesis submission. During my stay in UAE, I joined the teaching faculty at Manipal University Dubai campus for a semester and was on the family way.

My husband greatly supported my career growth; he got himself transferred to Chennai in 2012. I joined as an Assistant Professor and head in a nearby private engineering college and was relieved from there in 2015 with our second son in hand. That time, I had great support from my mother-in-law, who cared for my sons during my service at Bannari Amman Institute of Technology (BIT) from 2015 to 2022. My service at BIT was challenging, with greater responsibilities and opportunities to explore. As the Department Head and Institute level coordinator, I had multiple roles to play. During that tenure, I resumed my research interests with a funded project from DST-SERB under the ECR scheme, produced four PhD scholars under Anna University, and published three patents and around 70 technical papers. In addition, I have received several grants from various government funding agencies like AICTE, DST NIMAT, and TNSCST to organize more than 15 skill development programs. I conducted the ASCE India Region student conference in 2020 before the COVID period and served as Secretary in the ASCE India Section from 2021 to 2023. I had a very good association with the IGS Coimbatore chapter and successfully organized the 8th National Conference on Recent Advances in Geotechnical Engineering in 2021. Since March 2023, I have been a Technical Assessor for NABL accreditation for testing laboratories. After 12 years of professional service, in May 2023, I joined as the Assistant Professor of the Division of Soil Mechanics and Foundation Engineering at the College of Engineering Guindy, my Alma mater. At this juncture, I feel fulfilled with my profession and will serve the university to the best of my ability.

Sowmiya Chawla

I graduated in 2005 from St. Xavier's College of Engineering at Anna University, Chennai, Tamil Nadu. Subsequently, I pursued my M.E in Soil Mechanics and Foundation Engineering in 2007 from the College of Engineering, Guindy, Anna University, Chennai, and earned my Ph.D. degree from IIT Delhi in 2013. Following my Master's degree, I worked as a Sr. Graduate Engineer (Projects) at DLF Projects Ltd., Gurgaon, until 2008. Post my Ph.D., I served as a Research Associate in the Department of Civil Engineering at IIT Delhi. In 2014, I joined IIT (ISM) Dhanbad as an Assistant Professor and have been an Associate Professor since 2022.

My research interests revolve around geotechnology for roads and railway tracks, ground improvement techniques, numerical modeling of soil behaviour, discrete element methods, and geosynthetic applications. My doctoral thesis addressed the challenges faced by Indian Railways, particularly the economic losses due to constant maintenance of railroad tracks caused by subgrade shear failures and mud pumping problems on clayey subgrades. This work was industry-oriented and aimed to enhance transportation efficiency for Indian railways by enabling the operation of heavier, longer, and faster trains. It was part of a Department of Science and Technology (DST) Project titled "Experimental Investigations and Analysis of Geosynthetics Reinforced Railway Tracks Laid on Clayey Subgrade." I have authored more than 60 papers published in reputed Journals and international and national conferences, including ten papers published as Book Chapters. Additionally, I have guided twelve M.Tech. and four Ph.D. theses and completed six sponsored projects.

My contributions to geotechnical and railway engineering have been recognized through various national and international awards, such as the 'IEI Young Engineers Award (Civil Engineering)' from the Institution of Engineers, India, and the 'Young Geotechnical Engineer Award for the best paper on Solutions of Problematic Soils from the Indian Geotechnical Society-Chennai Chapter, India. Notably, my research group has received several prestigious awards, including the Best Paper Award from the International Symposium on Lowland Technology, Japan, and the Best Paper Award in the field of Ground Improvement in Transportation Infrastructure from the Australian Research Council's Centre of Excellence for Geotechnical Science and Engineering, Australia.

I am an honorary secretary of the Indian Geotechnical Society, Dhanbad Chapter, and an associate member of the American Society of Civil Engineers. I am also a Member of the International Geosynthetics Society and a Life Member of the Indian Geotechnical Society.

Beyond my professional pursuits, I am a Geotechnical Engineer, a mother to an 8-year-old daughter, and I have a deep passion for gardening and exploring the natural world. I believe that planting a garden signifies having faith in the future.

Sridevi Guda

I am Sridevi, and I received my B.Tech degree from Kakatiya University in 1990, followed by an M.Tech from REC Warangal in 1992 and a Ph.D. from Jawaharlal Nehru Technological University Kakinada (JNTUK), Kakinada. Over the past 30 years, I have dedicated myself to teaching and research, contributing significantly to institutions like R.V.R. & J.C. College of Engineering, Guntur (1993-2011), and B. V. Raju Institute of Technology, Narsapur (8 years). Currently, I serve as a Professor of Civil and Environmental Engineering at C.V. Raman Global University, Bhubaneswar.

My educational journey began at Fatima Girls' High School in Kazipet, a missionary school that instilled in me the importance of discipline in education. Influenced by teachers and my family, especially my father, I developed a passion for continuous learning and a commitment to make a positive impact. Prof. V. SaiKrishna, Prof. D. Rama Seshu, and Prof. S. Raghava Chary played crucial roles in shaping my character and guiding my career choices.

My research focuses on soil stabilization using industrial wastes and pavement geotechniques. With a publication record of over 50 papers in national/international journals and conferences, I have actively participated in the Indian Geotechnical Society (IGS). I played a key role in organizing local chapter events in Guntur and served on the organizing committee for the Indian Geotechnical Conference (IGC) 2009 and 2014. Additionally, I have organized seminars, conferences, and workshops for students and Field Engineers, assuming roles such as organizing committee member and Organizing Secretary. I have been an Executive committee member of the National Executive Committee of IGS, New Delhi, for the terms 2019-2020 and 2021-2022, and I am currently serving for the term 2023-2024. Actively contributing to the Sub-committee of IGS, I play a key role in conducting student competitions.

Navigating the delicate balance between personal and professional life, particularly as a woman, poses unique challenges. Making thoughtful choices is paramount in building a successful career while maintaining a fulfilling personal life. I strongly advocate that every woman should learn to prioritize, delegate, and set boundaries to achieve a harmonious blend of both aspects.

Sridevi Jade

Accidental geotechnical engineer!!!!!

My Choice of Geotechnical Engineer was accidental and not meant to be!!!. For my Bachelor's degree, I chose Civil Engineering as I was the only girl among the first 50 ranks of the state common eligibility test. All the Boys were choosing civil engineering, and my daddy said I must choose ECE as I was a girl, which was not acceptable to me!!!. I got a GATE score of 99+ percentile and was eligible to join M.E. Computer Science in the College of Engineering, Osmania University. I was denied admission as I did not sign the attendance register for counseling, which I was not informed. Note that I was the only girl in the room and still was not asked to sign the attendance register. Hence, I accidentally landed in IISc, Bangalore, for a Masters in Geotechnical Engineering. Thus began my journey as a Geotechnical Engineer.

After my IISc Master's, I joined CSIR-CBRI, Roorkee, as a Fellow Scientist, though I could have joined as a scientist, a regular position for which I was called. I was intimidated to go alone to such a far location as a girl. By the time I gathered the courage to do so, the moment has passed, and I was taken as Fellow Scientist, a purely Adhoc position I was unaware of. After a year, I got a chance to attend the scientist interview at my 7-month pregnancy. I got selected but could not join as I was not able to clear mandatory medical tests as I was advised to complete bed rest. After eight months, I could join as a scientist, thus losing seniority due to the above two incidences, which had heavy repercussions later on in my career progression, which I was not aware of at that time. The most painful thing was I had to leave my 3-month-old son at Hyderabad as Roorkee did not have state-of-the-art medical facilities, which my son needed at that time.

Then, I registered as an external candidate for PhD at IISc, Bangalore. It was the most difficult time of my life as I had to attend to office work from 9 to 5 and also work for a doctorate beyond working hours and holidays. I had my second child, i.e., a daughter, during that time. I barely slept for 4 hours a day throughout the tenure of my Ph.D.

I always got a yearly grade of 9 and above as a CSIR regular scientist and was awarded both state and national level awards. However, I was denied promotion twice in my tenure just to lower my seniority compared to my male contemporaries, which I attribute to the invisible glass ceiling that strongly exists in our country.

I had a very rewarding and fulfilling career as a research scientist as I could achieve 100% of the goals set for myself in GNSS-based Geosciences. However, I must admit that it was not so at a personal level as a mother and professional level in my career progression and milestones. This is my story of "Woman Cannot Have It All…….".

Sujatha Evangelin Ramani

I completed my B.E. in Civil Engineering from Madras University in 1997 and earned an M.E. in Soil Mechanics and Foundation Engineering from the College of Engineering, Guindy, Anna University in 1999. Notably, I was honored with the Dr. Kancheepuram Natarajan Gunalan Award for outstanding performance during my postgraduate studies. My academic journey continued with a Ph.D. from SASTRA Deemed University, Thanjavur.

Distinguished by my exemplary achievements, I have seamlessly balanced academia and fieldwork, overcoming the challenge of time management between teaching responsibilities and extensive research in Geotechnical Engineering. I received the Fast Track Fellowship from DST-SERB for my project on the "Development of a Spatial Decision Support System for Slopes along Traffic Corridors – Along Palani to Kodaikanal Hill Road" (2012-2015).

My commitment extends to government-funded projects, including those by DST-NRDMS, TNSCST - GoTN, and IGCAR, GoI. My expertise in geotechnical engineering consultancies since 2006 encompasses soil testing, foundation design, and geotechnical reports for heritage temples around Thanjavur.

In the realm of academia, I have left an indelible mark, guiding two Ph.D. scholars and numerous postgraduate and undergraduate students in Geotechnical Engineering. My research interests span susceptibility and hazard mapping for landslides, sustainable soil stabilizers, erosion mapping and control, and disaster management. I played a pivotal role in shaping the syllabi of various geotechnical courses at SASTRA Deemed University and developed online modules for the courses on foundation engineering and ground improvement techniques for SASTRA Deemed University. Recognizing my outstanding contributions, I received the Best Faculty Award from SASTRA University for three consecutive years (2021, 2022, and 2023). I am also the Honorary Secretary of the IGS Thanjavur Chapter since 2016.

I am an active member of various prestigious societies, including Life membership in the Indian Institute of Geomorphology, the Indian Geotechnical Society, the Indian Geological Congress, the Indian Society of Remote Sensing, and the Indian Society of Systems for Science and Engineering. I am also a Member of the Institution of Engineering and Technology.

I have showcased my commitment to education and research by publishing two edited books, 18 book chapters, 34 presentations at national and international conferences, and 59 articles in peer-reviewed journals. Adding to my repertoire, I have published two patents and am awaiting the patent grant, both related to the application of biopolymers for geotechnical applications. This innovative work underlines my commitment to advancing practical solutions in the field.

Sujatha Manoj

I currently serve as the Geotechnical Services Leader Australia for Beca, a distinguished employee-owned professional services consultancy firm in Asia-Pacific. As the Technical Director of Beca, I lead a dynamic geotechnical team spread across Australia, overseeing a range of projects. With a career spanning 31 years, I have made substantial contributions in various regions, including Australia, Singapore, Dubai, Abu Dhabi, and India.

My academic background includes a Ph.D. and Master's degree from the Indian Institute of Technology, Mumbai. I am honored to be recognized as a Fellow of Engineers Australia and hold the esteemed title of a Chartered Engineer. Additionally, I contribute to the field as a member of the editorial board of the Indian Geotechnical Journal and serve on the Standards Australia Committee as a representative of Engineers Australia. My involvement extends to the tunneling advisory board of the University of Technology Sydney, and I have served as an external member of the Board of Studies at my alma mater, TKM Engineering College.

My journey in Geotechnical Engineering commenced at ITD Cementation in Mumbai, where I emerged as one of the pioneering female geotechnical engineers in the company. The invaluable experience gained there laid the foundation for my subsequent professional trajectory. I continued my career with CES and Wilbur Smith Associates (WSA), holding roles such as Senior Manager and Deputy Head of State-level Operations. Notable achievements during this phase include leading design and project teams for major undertakings such as the widening of the Eastern Express Highway and the Dubai Fujairah Link Road.

In 2006, I assumed the role of Engineering Manager at Parsons International in Abu Dhabi, overseeing the geotechnical aspects of the Abu Dhabi Airport Expansion program. Responsibilities included managing consultants and contractors for critical components like runways, taxiways, and the Midfield terminal complex. My tenure at Parsons International was marked by successfully navigating the challenges of a new multicultural and multinational environment in a foreign country. Subsequent roles included positions at Nakheel and Fugro, where I led the geo consulting team as UAE Consulting Manager.

Following my tenure in the Middle East, I joined Mott MacDonald in Singapore as Technical Director, delivering projects of national importance, such as the North-South Corridor and Bangkok Metro. Demonstrating adaptability, I relocated to Australia and worked as the geotechnical lead representing Sydney Metro for the Sydney Metro West project valued at about 6 billion AUD.

Throughout my illustrious career, I have consistently demonstrated technical prowess and leadership acumen, leaving an indelible mark on the geotechnical engineering landscape across multiple continents. My journey reflects a commitment to excellence, with each role contributing to my diverse skill set and global perspective within the field. My dynamic career trajectory positions me as a seasoned professional capable of navigating complex engineering challenges with finesse.

Suman Jain

Coming from a middle-class Agarwal family, I ventured into Engineering, a first for my family. Despite no familial precedent in Engineering, my parents supported my decision, and in 1989, I enrolled in the Government Engineering College, Pune. Putting post-graduation plans on hold, I struggled to secure a job. Luck favored me, and I landed the role of Jr. Engineer at Shapoorji Pallonji. After a year in the office as a Billing Engineer, I found myself at the Batching Plant (BP) at Telco Pimpri, a place other engineers avoided. Despite warnings, I embraced the challenge and undertook the charge of BP. Coordinating concrete requirements for Telco Pimpri, including a new Mercedes Benz assembly block, demanded meticulous planning. Day at the BP would start with the GM meeting with all Sites in charge and prioritizing concrete requirements at different blocks. Despite production challenges, I successfully resolved issues for two years at BP.

I got admitted for a PG in Geotechnical Engineering at COEP in 1995. I completed my course with flying colors, supported by HOD Sir, my guide, Prof. D R Phatak, and all faculty members. Seeking further learning, in 1997, I joined JMC Projects (I) Ltd. as an assistant—engineer (Contracts), overseeing various aspects of construction projects. Despite getting married, I continued working, breaking stereotypes. After gaining diverse experiences, including quality control, project scheduling, and monitoring at JMC with projects near Pune at Bajaj Auto, Infosys Phase I, and Asian Paints, Bhandup, Mumbai, I decided to switch to academics. In 1999, I joined Sinhgad Institute as an Assistant Professor. My industry experience of 6 years enriched my teaching, covering a range of civil engineering subjects.

In 2001, I faced the challenge of managing work and family after delivering twins, but strong family support made it feasible. Engaging with the IGS Pune Chapter since 2004, I served in various capacities, from EC Member Treasurer to Chairperson. Attending IGCs since 2007 with the 13th ARC at Kolkata, I contributed to organizing IGC 2015 in Pune. I established the first student chapter of IGS at Sinhgad Institute and organized the first-ever 2-day GEOFEST in 2019 with the support of the student chapter at PCCOE.

During my 24-year academic stint, I attended numerous workshops, conferences, and FDPs, sometimes as a resource person. I guided several students to their Master's thesis. I authored 45 research papers and two books on Geotechnical and Foundation Engineering. I mentored and motivated many female students to work at the site and specialize in Geotechnical Engineering.

Over time, as my interest in teaching waned, I decided to transition to freelance consulting. Reflecting on my journey as a Geotechnical Engineer, I have embraced challenges as opportunities for growth, cherishing every moment in my professional life. Civil engineering is a cradle of infinite possibilities; I suggest female students learn to take challenges as opportunities to prove their mettle. As a 20-something teenager, I chose to make a career in Civil Engineering, and after almost three decades, I proudly stand by my decision.

Sunita Kumari

I am currently working as a Professor in the Department of Civil Engineering at the National Institute of Technology Patna. I was born in a small village in Sitamarhi, Bihar, which unfortunately lacked opportunities for female education and employment. From my childhood, I have been a hardworking and bright individual, strongly believing that if you have found a path worth walking, never complain about walking, as a path doesn't appear on its own. I graduated in Civil Engineering from a State Government University in Bihar, even though it wasn't my initial choice. Life gradually directed me towards civil engineering, and I discovered my true passion in Geotechnical Engineering during my M. Tech. at IIT (BHU) Varanasi and Ph.D. at IIT Roorkee. Throughout my Ph.D., I focused on studying the effect of earthquakes on soil, particularly soil liquefaction. My goal was to comprehend the impact of seismic shakes on soils before an earthquake occurs, contributing to the development of more sustainable infrastructure and preventing failure or collapse.

My primary areas of interest include Geotechnical engineering, Soil dynamics, Liquefaction, Numerical Modelling, Utilization of waste products, and Machine learning. I have published over 100 research articles in various reputable journals and conferences. I have also guided 7 Ph.D. students and 24 M. Tech theses, with 10 Ph.D. students and 3 M. Tech students currently under my supervision. Teaching and interacting with students on a regular basis have been enlightening and inspiring experiences for me. Students tend to question everything and think outside the box to find solutions, and I take pride in being a part of the Civil Engineering specialty. I actively participate in the Indian Geotechnical Society (IGS) Patna Chapter and the Indian Water Work Association (IWWA) Patna Chapter.

Given that the majority of Bihar falls into Seismic zones IV and V, with a history of frequent floods and high-magnitude earthquakes, my current work focuses on the liquefaction behavior of alluvial soil deposits. This addresses a crucial issue in the present scenario, ensuring the economical and safe design of high-rise buildings and other infrastructures, ultimately striving to find solutions to help people avert disasters.

Multi-tasking has become second nature to me, both in managing my personal and professional life smoothly. Whether it's in science, technology, or engineering, we all have the same capabilities and should recognize ourselves as human beings first, irrespective of gender. We don't need to wait for acknowledgment from others; we must start with ourselves and believe that we are equal.

Supriya Mohanty

The opportunity to teach and interact with students is one of my primary reasons for seeking an academic career. My journey began with an insatiable curiosity for Geotechnical Engineering, which led me to pursue both my Master's and Ph.D. at IIT Kanpur. The academic rigor, world-class faculty, and state-of-the-art research facilities at IIT Kanpur laid the foundation for my passion and commitment to advancing knowledge in Geotechnical Engineering. I also navigated through the challenges often faced by young women aspiring to pursue careers in Science & Engineering. The encouragement from my family and mentors played a pivotal role in shaping my determination to overcome the obstacles and pursue my passion for research in the geotechnical engineering field.

Inspired by the rich academic environment at IIT Kanpur, I transitioned into a faculty role with the goal of continuing my research and contributing to the academic community. I have been working as an Assistant Professor in the Department of Civil Engineering at the Indian Institute of Technology (BHU), Varanasi, India, since July 2017. Before joining IIT(BHU), Varanasi, I worked as a lecturer and Assistant Professor at RGUKT-IIIT Basar (July-Sept. 2014), and IIIT Hyderabad (Sept. 2014-July 2017), respectively. As a woman faculty member, I am committed to fostering an inclusive and supportive environment within the department.

I have been working in the area of material characterization of waste materials with a special focus on MSW (municipal solid waste), coal ash, and problematic soils. My research interests include waste utilization, static and dynamic characterization of waste materials, liquefaction potential evaluation of waste materials, and nonlinear dynamic response analysis of waste deposits.

I have 9.5 years of teaching and research experience. Currently, I am guiding Six Ph.D. students (Completed: 03, Progress: 03). I have guided several M. Tech and B.Tech students. I have produced over 64 publications in peer-reviewed journals and conferences. I am associated with many International Journals as a Reviewer. I have successfully completed one SERB-funded and two Institute-funded projects. Currently working on one Industry funded and one Institute funded project. I have also organized several Hands-on Training Programs, Workshops, Short-Term Courses, etc., in the Institute. In addition, I have been involved in various administrative activities like being a Professor-In-Charge of the Geotechnical Engineering Laboratory, convener, and member of various committees at the institute and department levels, etc. Additionally, I actively engage in mentoring students, particularly aspiring women engineers, guiding them toward successful careers.

My honors include the "ISET Shamsher Prakash Early Career Research Award" by ISET, Roorkee; the "Early Career Research Award" by SERB, DST; "Best Researcher Award" by VDGOOD Professional Association; the Young Scientist in Civil Engineering Award by Venus International Foundation. I have received the University Gold Medal, Achyutananda Pujari Memorial Gold Medal, and University Silver Medal during my B.Tech.

In conclusion, my personal and professional journey, deeply rooted in the academic environment at IIT(BHU), has shaped my identity as a Geotechnical Engineering researcher and educator. I am grateful for the support provided by IIT(BHU) and am eager to contribute further to its legacy of excellence.

Sushma B V

I have over 19 years of professional experience and currently hold the position of Deputy General Manager - Civil at Tata Consulting Engineers Limited (TCE) in Bangalore. I joined TCE as a trainee engineer after completing my post-graduation in Geo-Technical engineering. Since then, I have gained expertise in providing innovative foundation solutions for a diverse range of projects.

My responsibilities at TCE include designing, reviewing, and specifying foundation systems, earth-retaining structures (such as reservoirs and ash ponds), riverfront development structures, ground improvement schemes, slope stability analysis, slope retention, etc., in accordance with various international standards. I have contributed significantly to challenging domestic and international projects, including the Shri Ram Mandir project in Ayodhya, Mumbai to Ahmedabad High-Speed Rail, Riau Combined cycle power plant in Indonesia, Agartala & Hubli smart city, 4000 MW Ultra mega Power plant in Mundra, Kais 1200 MW Combined Cycle Power Plant in Algeria, and IOCL refinery projects in Mangalore and Vallur, among others.

As part of my responsibilities, I regularly visit project sites for site assessment, resolve issues, and attend meetings with customers, vendors, and contractors. Over the course of my career, I have faced challenges, especially in the initial phase, where there was a biased view about the limited practical site experience of lady engineers. However, with time and gaining practical field experience, I have successfully overcome such biases. My technical expertise, combined with practical knowledge and organizational support, has enabled me to resolve challenging situations while dealing with contractors.

In addition to my design work, I am actively involved in geotechnical society activities, participating in conferences and seminars. I have presented and published nearly ten technical papers at national and regional conferences and one technical paper at an international conference. The organization recognized me for consistently publishing high-quality technical papers, and in December 2022, I received the "TCE Value Award" in the "Technical excellence with professional ethics" category as recognition for my excellent contribution to work.

My constant endeavor to stay abreast of the latest developments in the field has allowed me to render professional services in challenging technical situations.

Susmita Sharma

I am Dr. Susmita Sharma, currently serving as an Assistant Professor in the Department of Civil Engineering at NIT Meghalaya. As the daughter of a Civil Engineer with 40 years of experience in the field, I was exposed to civil engineering from an early age. The unwavering support and encouragement from my parents have played a crucial role in shaping my educational and professional journey. I completed my early education in Guwahati, Assam, India, and went on to graduate from Assam Engineering College. Subsequently, I pursued my post-graduation degree at IIT Bombay.

My time at IIT Bombay was truly inspiring. Mentoring by Prof. DN Singh and receiving care from Ritu Maam from the very beginning were memorable experiences that significantly influenced my life. The initiation of my Ph.D. in the ENVGEO lab marked a turning point when Prof. DN Singh posed intriguing questions about the philosophy behind soil characterization and its response to anthropogenic influences. This led me to specialize in geoenvironmental engineering, exploring the impact of activities like waste disposal and leaching on soil properties. The experience broadened my understanding of the physical, chemical, mechanical, and durability changes in soil, posing challenges to engineering applications. An unexpected opportunity to investigate the impact of microbes on soil properties and engage in DNA extraction from soil came through a Fellowship from the European Commission via the Marie Curie IRSES GREAT at the University of Strathclyde Glasgow.

Transitioning to NIT Meghalaya brought about a unique experience. The state, adorned with majestic rivers and lush hills, also faced challenges, notably landslides and the impact of waste dumps on soil and water. My work involved examining changes in the land surface due to rapid urbanization, revealing that each landslide case is unique. The quality of waste disposal is a particular challenge due to seasonal tourism and the socio-economic conditions of the local population. Engaging in research, consulting, and teaching, I've worked in Meghalaya, Assam, and Manipur. My primary areas of interest in geotechnical engineering include bio-cemented soil characteristics, soil-water-pollutant interaction, and valorization of waste.

As a consultant/technical member, I was appointed by the Central Pollution Board to review environmental reports related to waste management and groundwater quality evaluations of SPCBs. Additionally, I serve as the Vice Chair of the Technical Oversight Committee (TOC) of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE).

Swapnil Mishra

A woman is the full circle. Within her is the power to create, nurture, and transform.
- Diane Mariechild

I am Swapnil Mishra, a girl from a small city with a very simple and humble background of schooling and initial college days to the place of conducting and completing higher studies (Ph.D.) in Geotechnical Engineering with a premier institute and institute of Eminence IIT Delhi. I got an offer for a postdoctoral fellowship from South Korea after my Ph.D., but I joined IIT Dhanbad as an Assistant Professor and left that opportunity due to COVID-19 travel restrictions.

What I personally feel is making an impact through your contributions when you are born genius and giving excellent performances in each and every step is inspiring, but when you are a mediocre student from the beginning and thereby pushing your limits every day and raising your quality and capability every hour is far more inspiring. It is okay to be confused, to be imperfect, to be clumsy, to be less productive in your thoughts sometimes. What is actually required is that drive from self, your inner voice to do better in your day-to-day life, and, of course, the choices that you make in your life. Starting from choosing your sweet dish out of a number of available sweet dishes to choosing your friends, career, life partner, research topic, and many more. My personal life at some stage and at the peak of my career is a roller coaster ride with lots of ups and downs emotionally and practically, but like thixotropy property of soils, I regained my strength again, and that too with full of courage and perseverance. Today, I am a confident geotechnical engineer, Assistant Professor, and mother of a toddler, trying to maintain work-life balance and peace in my life.

My daily challenge to myself is to be part of the solution, to be a joyful warrior in the battle to come.
- Kamala Harris

I graduated in Civil Engineering from Government Engineering College Rewa (presently REC) in 2010. Obtained Master of Technology in Geotechnical Engineering from Delhi College of Engineering (Presently DTU) in 2013 with distinction and topper of the class. I completed my doctorate in the field of rock mechanics (geotechnical engineering) from the Indian Institute of Technology Delhi in 2019. My research interest includes underground structures subjected to dynamic loading conditions, Blast loading, Fracture propagation, High strain rate testing, Physical Modeling, and FEM analysis. I established a state-of-the-art Impact Testing Facility (ITF) in the Department of Civil Engineering IIT Delhi during my Ph.D. research work for modeling and testing rock-tunnel models under high strain rate impact loading. The importance of my work lies in the unique methodology where I have combined empirical as well as theoretical aspects to conduct experiments and validate the result. The probable outcome of the research will be useful for the design of the lining of underground urban tunnels subjected to blast and impact loads. I have to my credits 26 research papers in refereed journals and conferences. I have also been awarded with some prestigious national and international accolades as a testimony of my work. The soil behavior is very similar to us women, which imparts strength to the superstructure, even in a disturbed state, when treated well.

A strong woman looks a challenge in the eye and gives it a wink.
- Gina Carey

Swetha Veeraraghavan

I am Swetha Veeraraghavan, presently serving as an Assistant Professor in the Department of Civil Engineering at the Indian Institute of Science (IISc) Bangalore. My current research focuses on two directions – exploring structure-specific wave mechanics under seismic loading and designing metamaterials to shield critical infrastructures from earthquakes.

My professional journey began with a keen interest in mathematics and physics during high school, leading me to prepare for the Joint Entrance Exam for the IITs. Despite the prevalent notion that engineering is a male-dominated field and sciences are a better career option for girls, my family consistently supported my pursuit of dreams. With their encouragement, I joined IIT Madras for my B.Tech in Naval Architecture and Ocean Engineering, where I was the only woman in a batch of around 25 students. Although it was initially daunting to be the sole woman in the class, the inclusive nature of my batchmates and professors helped me overcome the initial challenges and focus on the academic program. Excelling in the program, I received the American Bureau of Shipping award for the best overall academic performance and the Class NK-100 award for the second-best B.Tech thesis in Naval Architecture. My time at IIT Madras instilled the confidence that with hard work and determination, I could excel in any field of interest.

During my B. Tech, I developed an interest in earthquakes and tsunamis, prompting me to pursue the Master's and Ph.D. program in the Mechanical and Civil Engineering Department at the California Institute of Technology (Caltech), USA. Fortunate to receive the Civil Engineering fellowship during the first year of the Master's program at Caltech, I conducted doctoral research on a contact dynamics-based 3D rigid body dynamics framework. This framework simulated rocking, sliding, coupled rocking-sliding, and uplift of precariously balanced rocks under seismic excitation. The simulated toppling ground motion provided an upper bound to the seismic risk in the region, crucial for designing sensitive infrastructure requiring information on long-return period earthquakes.

After completing my Ph.D., I joined Idaho National Laboratory (INL), USA, initially as a postdoctoral researcher and later as a computational research scientist. At INL, I spearheaded the development of an open-source parallel finite element tool, MASTODON, assessing the seismic structural integrity of critical buildings through the analysis of their nonlinear response to earthquake ground motion. My contributions at INL were recognized with the Nuclear Science and Technology Recognition Award and the Exceptional Contributions Program Award. MASTODON also stood among the finalists for the prestigious R&D award in 2018.

These diverse research experiences deepened my interest in the nuances of wave propagation through soils. This interest propels my current research at IISc, focusing on exploiting wave interaction mechanics to achieve safe and economical designs for critical infrastructure in earthquake-prone zones.

Tanusree Chakraborty

I am Professor Tanusree Chakraborty, a Professor of Civil engineering who is serving as the Associate Dean of student welfare at IIT Delhi. My journey led me to IIT Delhi in 2010 after completing my Ph.D. at Purdue University and gaining professional experience at DS Simulia, RI. In 2019, I was honored to receive the Alexander von Humboldt Experienced Researcher Award, leading me to conduct extensive work in renewable energy development at TU Berlin and LU Hanover. Along the way, I've also contributed as a Visiting Professor at NTNU Norway and UniBW Munich.

Throughout my academic career, I've guided numerous Ph.D. and Master's students, and my research endeavors have resulted in the publication of over 100 papers in various journals and conferences. My dedication extends beyond research as I take on the role of an Associate Dean of Student Welfare, helping to address challenges and foster a positive environment for the 13,000-student community at IIT Delhi. Additionally, I am a certified yoga and meditation instructor, contributing to my multifaceted role in student welfare.

My research revolves around two key areas: geomechanics of blast and renewable energy. In response to the escalating threat of terror attacks over the last two decades, my team is actively engaged in blast analysis of both above and underground structures. Understanding the response of structures subjected to blast loading is crucial for safeguarding civil and military infrastructure and, most importantly, saving lives. We employ a combination of experimental modeling and numerical analyses, characterizing geological and structural materials under high loading rates. Our efforts involve split Hopkinson pressure bar (SHPB) tests, shock tube tests, and the development of high-strain rate constitutive models. These models are then implemented in finite element codes to propose blast-resistant design guidelines for civil and military infrastructure.

On the renewable energy front, my team focuses on shallow geothermal energy, a vital resource for combating pollution, climate change, and greenhouse gas emissions. Specifically, we explore geothermal energy pile foundations, serving the dual role of supporting building loads and transmitting thermal energy cost-effectively. Our research investigates the feasibility of using energy piles in India, considering mechanical stability, thermal efficiency, and cost. Analytical and numerical modeling and field experimentation provide insights into the mechanical and thermal aspects of energy piles. Additionally, a cost-benefit analysis is conducted to assess the performance of these piles for different building configurations.

Yogini Deshpande

I am Prof. Dr. Yogini Deshpande, serving as the Technical Director of Renuka Consultants with a Ph.D. in Civil Engineering from Purdue University, USA. My academic journey includes a Bachelor's Degree in Civil Engineering and a Master's Degree in Geotechnical Engineering from Mumbai University. Before my Ph.D., I worked as a Senior Research Fellow at the Atomic Energy Regulatory Board, Department of Defence, India, contributing to the development of India's first Nuclear Power Plants using High-Performance concrete. I am honored to have received the 2006 Fellow of the International Road Federation, the Best Teaching Award, and the Best Research Award at Purdue University for the years 2005 and 2006. Teaching at Michigan Technological University and the University of South Alabama in the USA from 2007 to 2012 was a privilege. Over the years, I have published 40+ research papers and delivered over 150 talks on Civil Engineering at various international and national conferences. In 2016, Ambuja Cements Ltd felicitated me for my contribution to the construction industry, and I have recently been appointed as a Chair Professor in the Department of Civil Engineering at O P Jindal University.

Returning to India in 2012, I led Renuka Consultants in providing geotechnical consulting for notable projects like Mumbai Coastal Road, Mumbai Trans Harbour, Mumbai Metro 3, 2A and Metro 5, Iconic Mandovi Panaji Bridge (Atal Setu), and Naval Dockyard. Today, as the CEO and Technical Director of Renuka Consultants, I am a well-known consultant, practicing engineer, and educator in the field of construction and infrastructure engineering. Under my leadership, the company has become a leading cutting-edge assessment service provider to the construction industry in India and abroad. Pioneering the development of specialized geophysical tools for multi-active surface wave analysis and electrical resistivity imaging, I created bespoke assessment solutions for foundations and geotechnical problems. Additionally, I devised integrated geotechnical and geophysical investigation programs for various offshore structures, such as the mid-sea Shivaji Statue off the coast of Mumbai and the design and construction of monopiles for the Mumbai Coastal Road Project, a first in India. Recognizing the industry's needs, Renuka Consultants, under my leadership, opened India's first Material Testing Laboratory in PPP mode with Mira Bhayander Municipal Corporation, enhancing quality construction at the last mile of construction activities.

In addition to my professional work, I am actively involved in social work and serve as the Honorary Secretary of the India Chapter of the American Concrete Institute. I am on the Board of Directors of the Indian Concrete Institute, Mumbai Chapter, and a core member of the Women in Deep Foundation Institute, India Chapter. Continually conducting training programs for colleges and working professionals, I contribute to the Construction industry's growth.

Beyond my professional endeavors, I am the Co-Founder of Indica Today (www.indicatoday.com), a web media portal dedicated to disseminating Indic Knowledge Systems and developing a narrative of ancient Indic knowledge. The portal publishes articles in English, Hindi, Kannada, Telugu, and Sanskrit, actively engaging with more than 300 prominent research scholars and training young research scholars from academic and non-academic backgrounds to develop an extensive knowledge domain.

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