AEG Member Spotlight

Full Name:
Nazrul I. Khandaker

How long have you been a member of AEG?
16 years.

How are you active in AEG? What committees have you joined? What events have you attended or volunteered for? How did you get involved with the committees?
I supported the AEG initiative titled Charter Cornerstone Fund: Supporting University And College Programs In Engineering Geology And Geological Engineering. Realizing University-level programs in engineering geology and geological engineering are disappearing and remaining programs are in jeopardy, AEG solicited comments from several members and practitioners including myself. My contributions included reviewing over a dozen research manuscripts on tunneling, geoengineering controls on characterizing ground conditions, regional geologic investigations, infrastructure maintenance and development, and reinforced materials for construction. AEG brought a plethora of professional involvements to the organization by allowing me to attend local-chapter sponsored monthly meetings in New Jersey. Several speakers from both home and abroad shared their case-study-based applied geology experiences on ground conditions as related to design and construction of bridges, buildings, roads and highways and underground facilities in mega cities where there is an extreme paucity of above ground real estate.

Give us some highlights from your professional background.
The major highlight of my career thus far was my direct involvement in the construction of New York City

Water Tunnel #3 - the most monumental capital construction project ever undertaken in the history of New York City around this time (2000-2010) - where I was a geotechnical consultant for close to ten years (2000-2010). Dr. Charles Alexander Baskerville (deceased in 2009) - the legendary engineering geologist and the then in-house geotechnical consultant - shared extremely valuable applied geotechnical information to me from the onset and accepted me as a teammate. The expansive expertise Dr. Baskerville let us on New York City bedrock helped me and my colleague Professor Stanley Schleifer to successfully log thousands of linear feet of cores (igneous and metamorphic) and soil samples (anthropogenic, glacial and saprolite). Cores and soil samples were retrieved from many closely-spaced shallow to deep exploratory boreholes located adjacent to the tunnel route. Geoengineering characterization and petrographic investigation of representative cores enabled me to compile reports for the New York City Environmental Protection (NYCDEP). The work I accomplished certainly triggered a new spark in my passion for my career and enabled me to appreciate the role engineering geology has in an urban setting, particularly the thriving metropolis like New York City. In addition, timely geotechnical assistance came from two of my Dhaka University geology classmates Masud Ahmed and Belal Sayeed - both of whom were already working as geotechnical personnel on the project. Originally from Bangladesh, I earned my undergraduate and graduate geology degree from Dhaka University, Bangladesh. In the US, I attended both the University of Rochester, New York and Iowa State University, Iowa and earned an MS and a PhD respectively. I began my academic career as a visiting geology faculty, teaching at Lafayette College, Pennsylvania; Montana State University, Montana; and King Fahd University of Petroleum and Minerals (KFUPM), Saudi Arabia. Upon my return to the States in 1998, I taught K9-12 high school students in Grover Cleveland High School (Ridgewood, Queens, NY). Currently, I am a tenured professor in the City University of New York (CUNY) –York College and a doctoral faculty at the CUNY Graduate Center. I hold a professional geologist (PG) license from the state of Wyoming, since 1992.In 2018, I was recognized for lifetime career service to GSA, particularly in GSA initiatives supporting international participants, women, minorities, and students. Currently I am a GSA Fellow.

What do you value most about your membership with AEG?
There are several benefits I enjoy by being an AEG member - these include receiving cutting edge engineering and environmental-related applied information through their publications, newsletters and webinars. Attending AEG's annual meetings in Las Vegas is also a major perk. Unlike AGU, a smaller gathering of engineering geologists provides ample opportunities to network, exchange disciplined-based information and form teams for future collaboration. Professional benefits during the COVID-19 pandemic are worth mentioning, as AEG stepped in to fill the knowledge gap by offering webinars on various geotechnical, geoengineering and environmental topics free of cost to its members. These were very useful educational forums where I was able to listen to experts and augment my background in applied geology. Blog postings also greatly helped to reach out to many as part of the Citizen Science concept and spread the value of engineering geology in societal and infrastructure development. I had the opportunity to comment on several blog posts (Communicating Geoscience to Non-Scientist, How Important is Field Work to my Career as an Applied Geologist, and How Geology Affects Your Everyday Life) and felt a sense of belonging to the organization. Useful comments on my blog responses by Cynthia Palomares (AEG's Past President) are highly encouraging and endorse one of AEG's key objectives dealing with the continual professional growth of its members. I was honored in Pittsburgh on September 24, 2015 with the Association of Environmental and Engineering Geologist's (AEEG's) prestigious Claire P. Holdredge Publication Award. In my acceptance speech, I noted, "recent work involving geotechnical constraints on foundations, particularly dealing with urban settings such as New York City, reminded all of us to utilize prior geological knowledge as part of geoengineering design before any construction phase is contemplated."Lastly, I would like to mention Dr. Allen Hatheway (past AEG chair) who piqued my interest to get involved with compiling a manuscript to be added to the Engineering Geology of the Cities where New York City will be represented. Dr. Hatheway along with his collaborators Ajit Shah, Joe Lifrieri, Stanley Schleifer, and Masud Ahmed bring forth many decades of engineering geology knowledge of the city and are always there to add to my background.
Fun Facts

What character trait do you most admire?
I admire and respect an individual who is open to constructive criticism - there is always room to grow and hone your craft or field of knowledge. To provide the best quality services with integrity and value.

What has been your way to practice self-care over the past year?
Given the COVID-19 pandemic, living close to the hotspot, and witnessing perilous conditions, I was forced to accept the New Normal; I have spent my time appreciating each day with family members and friends. I have been mindful about the way I conduct day-to-day activities and secured time to connect with friends and colleagues and listen to each other.

What book are you currently reading, or last book you read?
Basin and Range by John McPhee. He brings panoramic western interior landscapes to a heightened position. The book validates that geoscience information is the pivotal component in terms of understanding the changing scenario over the years.
Organization Highlights

If you could describe your organization values in one word, what would it be?
Creative.

What is your organization's mission and vision?
My workplace is CUNY York College, located in Queens, New York City; Queens is one of the most diverse boroughs in the States. The mission of York College is to foster an engaging and effective educational environment that promotes the pursuit of outstanding teaching and learning; research, scholarship, and other creative endeavors; and service.

What advice would give a professional interested in working for your organization?
Individuals coming to work are expected to uphold the overarching goals related to teaching and learning, research, and service to the college. Being in an urban setting with exemplary diverse ethnic groups, one needs to demonstrate amicable collegiality, respect for cultural differences, establish good rapport with the student body and lend promises to establish One York (President Eanes), where everyone feels valued for their contribution to the academic enterprise.