



安全工程學院
School OF Safety Engineering

题 目： Challenges of Excavating Rock in Deep Sea Mining Operations

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地 点： 矿业科学中心 A200

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With the global push for electrification as a response to climate changes, there is increased demand on various minerals and metals. On-shore mining activities are going to continue to grow but may not need the demands for raw materials. Off-shore and deep sea mining is surely a strong possibility for complementing our normal production of minerals and raw materials. Oil & Gas industries started the off-shore activities decades ago and gradually went deeper, à more mature than mining in off-shore and deep sea activities. Extraterrestrial or Space Mining has also become viable and very active in recent years, and there are many parallels between Space Mining and Deep Sea Mining. This presentation will discuss the status of the deep sea mining and some of the challenges that are ahead in this field.

Dr. Rostami is the Hadden/Alacer Gold Endowed Chair and Director of the Excavation Engineering and Earth Mechanics Institute (EMI), and professor of the dept. of Mining Engineering at Colorado School of Mines. He has a BSc in mining engineering from Univ. of Tehran, Iran and MSc and PhD in mining engineering in 92 and 97 from CSM, respectively. He has been a faculty at Univ. of Tehran from 1988 through 2002, a full time consultant with major A&E companies from 2002 till 2007 when he joined the Pennsylvania State University (PSU), as Centennial Chair of Carrier Development in Mining. He has over 32 years of experience in design, management, research, and teaching in the field of mining, tunneling, and underground construction. Dr. Rostami is a registered Professional Engineering (PE) in Maryland. He has published over 100 peer reviewed journal publication and 170 conference papers and many technical reports. He is a member of SME, ASCE, ARMA, ISEE, and TRB AFF-60 tunneling committee. He is the editor in chief of the “Tunneling and Underground Space Technology”, member of editorial board of several rock mechanics and mining journals. He is also the Vice president of the “International Tunneling Association” or ITA. Dr. Rostami was named the recipient 2014 of the Pittsburgh Coal Mining Institute of America (PCMIA) 2014 Stephen McCann Memorial Educational Excellence Award and 2022 recipient of UCA of SME excellence in education award. He is the author of the drilling and excavation chapters for SME mining engineering, surface mining, and underground mining handbooks. He is active in the field of Space Mining, with track record of research in the field of excavation and drilling on the moon.

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