

International Marine Minerals Society



MOORE MEDAL 2019 CITATION

The International Marine Minerals Society (IMMS) presents Dr. Yang Ning with the 2019 Moore Medal. This award is given in the name of Professor J. Robert (Robby) Moore to professionals who exhibit very special distinction in the study and development of marine minerals.

Robby Moore conducted extensive marine minerals geological research for more than 35 years, based at Cardiff University in Wales, Great Britain and Harvard University, the University of Wisconsin, the University of Alaska, and the University Texas, USA. Robby was committed to the effective integration of government, industry and academia in the effort to develop marine mineral resources. He initiated the annual Underwater Mining Conference (UMC) in 1970 (initially called the Underwater Mining Institute) to facilitate the integration of these three basic stakeholder groups to meet and deliberate the current policy, commercial, and scientific issues of marine minerals development.

In 1987, in coordination with several like-minded colleagues, Robby established IMMS as a nonprofit professional society, dedicated to the prudent development of marine minerals. IMMS was designed to be the primary advisory body to oversee the long-term stability and maintenance of high standards for the UMC. In 1998, shortly after the death of Robby, the IMMS inaugurated the Moore Medal award. This award is given at the sole discretion of the IMMS President and does not have to be awarded every year or any year.

**Robert W. Cooke earns a living designing and making monumental sculptures for many customers, mostly in the Northwest. Before becoming a full-time artist, Bob was the Exploration Manager for the International Nickel deep seabed mining consortium. He attended many UMIs and became a good friend of the Institute and many of its participants. He designed and made the Moore medal when IMMS decided to initiate the award.*



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YANG NING

*The Moore Medal Award for his Excellence in Engineering
for the Advancement of Marine Minerals*

Dr. Yang has devoted almost all his professional career to the development of marine minerals, starting with a solid engineering education. After receiving his Bachelor's degree in Electrical and Mechanical Engineering at the Central South University in Changsha, Yang continued his professional development there, culminating in 1988 with a Master's Degree in Mining Engineering. He was a visiting scholar during the mid-1990s at the Versuchsanstalt für Wasserbau und Schiffbau in Berlin, Germany, where he focused all his efforts on deep-sea mining technology. Yang completed his formal education in 2000 at the Beijing Campus of the China University of Mining and Technology, with a PhD in Mechanics and Structural Engineering.

During his graduate student years and after until 2014, Dr. Yang served as an engineer, a senior engineer, and Professor at the Changsha Mining and Metallurgy Research Institute. He was the Director of the Key State Laboratory of Deep-sea Mineral Resources development, and participated in and oversaw major developments of the Chinese test-scale and pilot-scale seabed miner developments, including the chief designer of the 1,000 meter offshore test project, and the leader of the Chinese Deep-Sea Ninth, Tenth and Eleventh Five-Year Plans. He has published nearly 50 peer-reviewed papers and holds 7 patents related to deep-seabed developments in China and internationally.

In 2014 Dr. Yang accepted the post of Deputy Director of the Institute of Deep-Sea Science and Engineering (IDSSE), his current position. This new Institute is well equipped with state-of-the-art facilities and a staff of highly qualified professionals who are helping China to become a world leader in the development of seabed mining technology. Dr. Yang has participated several times in technical deliberations at the International Seabed Authority and has for many years been a very productive participant at the annual UMC. He is most certainly well qualified and deserving to receive the 2019 Moore Award.

Gregory Stemm
IMMS President