The presence of cyanotoxins, such as hepatotoxins, neurotoxins, and dermatotoxins, in water bodies due to eutrophication as a result of anthropogenic activities poses a significant threat to the environment and human health. These compounds can accumulate in aquatic organisms and enter the human food chain, causing severe health issues.

Using the unique capabilities of the University of Cincinnati Large Scale Test Facility (UCLSTF) and the Center Hill Research Center, Dr. Shahrooz and his research team have been conducting a wide range of research projects funded by the National Science Foundation, National Academy of Sciences, and the National Institute of Standards and Technology.

Using a unique design methodology developed by Dr. Shahrooz and his team, the Coupled core walls (Figure 1) with replaceable "fuses" are one of the recent projects. This new system will expedite construction and enhance structural performance. Figure 2 shows one of the many different test setups that have been developed for evaluating the performance of this novel type of shear reinforcement.

Dr. Raj M. Manglik is internationally acknowledged for his seminal and transformative research in the fields of heat transfer, fluid mechanics, and thermodynamics. His contributions have been widely recognized, and he has been the recipient of numerous prestigious awards and honours.

His work has made a lasting impact by his seminal contributions to heat/mass transfer, fluids engineering, and thermodynamics. Most notably, his seminal contributions to heat/mass transfer research are so acknowledged in the heat and mass transfer community, both nationally and worldwide. Reflecting this recognition, Prof. Manglik currently serves as the Editor-in-Chief of the ASME Journal of Heat Transfer and as the opening event of the 75th anniversary of the Heat Transfer Division of the ASME.

Reflecting his recognition, Prof. Manglik currently serves as the Editor-in-Chief of the ASME Journal of Heat Transfer and as technical editor of the ASME Heat and Mass Transfer Conference and the International Heat Transfer Conference. Additionally, he has served on the U.S. National Committee of the International Committee for Heat and Mass Transfer and as scientific representative in similar US Organization conferences. In 2004, he received the prestigious heating, ventilation, and air conditioning (HVAC) Technical Committee Excellence Award from the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE), as well as the ASME Fellow Award for distinguished contributions to the fields of engineering and as the opening event of the 75th anniversary of the Heat Transfer Division of the ASME.

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His innovative research and scholarship in this arena has produced over 220 publications, including books, monographs, book chapters, archival papers, and technical reports. His research demonstrates a deep understanding of complex scientific principles and interfacial processes, so as to address both the fundamental advancement of engineering science and design optimization in emerging applications, and development of novel thermal systems. Dr. Manglik has investigated diverse experimental, mathematical, and computational techniques and interfacial phenomena, so as to address both the fundamental advancement of engineering science and design optimization in emerging applications, and development of novel thermal systems. Dr. Manglik has investigated diverse experimental, mathematical, and computational techniques and interfacial phenomena, so as to address both the fundamental advancement of engineering science and design optimization in emerging applications, and development of novel thermal systems.