



SHELL SEMINAR SERIES

CHEMICAL & BIOLOGICAL ENGINEERING

Transport Phenomena Research at the National Science Foundation

William Olbricht
National Science Foundation

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ABSTRACT NSF supports research in transport phenomena through various standing programs as well as through timely special initiatives. Opportunities for research funding in transport phenomena and other current initiatives will be discussed. Some examples of recently funded research will be described, especially research inspired by biological and physiological problems. Results from one such project involving transport of material in the interstitial space of the brain will be discussed. The results, which use fluid dynamics to characterize structural aspects of the interstitium, could be useful for circumventing the blood-brain barrier and could help guide therapies for brain disorders, including glioblastoma.

BIO Bill Olbricht is a program director in Engineering at the National Science Foundation in Alexandria, Virginia. He directs the Particulate and Multiphase Processes program in the Chemical, Bioengineering, Environmental, and Transport (CBET) Division. He has also been a professor in the School of Chemical and Biomolecular Engineering and the Department of Biomedical Engineering at Cornell University for more than 30 years. He has served as Director of the School and interim chair of the biomedical engineering department. His research at Cornell involves the application of fluid dynamics to a variety of problems, most recently addressing issues associated with drug delivery to the brain.

