A Personal View of Interdisciplinary Training and Research, Why it is Difficult, and How it Should Be Done

Distinguished Research Seminar Series

Wednesday, April 20, 2:15 – 3:30 pm
213 Butler-Carlton Hall

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Abstract: We begin with a short presentation of the long history of interdisciplinary training and research in the sciences and engineering, ending with a discussion of where we stand today in these regards. We then move on to discuss the barriers that exist at universities and funding agencies that make it difficult to provide students with meaningful interdisciplinary training and which also make it difficult for faculty and students to do meaningful interdisciplinary research. We conclude with a discussion of a particular area of training and research, namely computational science, that, although being obviously of an interdisciplinary nature, has suffered because of the aforementioned barriers; we also suggest a model for how training and research in computational science should be done.

Biographical Sketch: Max Gunzburger is the Frances Eppes Eminent Professor and Chair of the Department of Scientific Computing at Florida State University. He has held several other academic and laboratory positions, has served as a consultant for several national laboratories and in an advisory capacity for SAMSI as well as several other domestic and international departments, programs, and institutes, and serves as a distinguished visiting professor at Yonsei University in Korea and has previously served in that capacity at Peking University. Max Gunzburger has been awarded several honors, including the W.T. and Idelia Reid Prize in Mathematics from the Society of Industrial and Applied Mathematics; that society also named him to its charter class of fellows. His current research interests focus on climate modeling, nonlocal problems in diffusion and mechanics, numerical methods for uncertainty quantification of systems governed by partial differential equations having random inputs, control and optimization problems for such equations, and superconductivity.

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