

Distinguished Lecture in Mathematical Biology

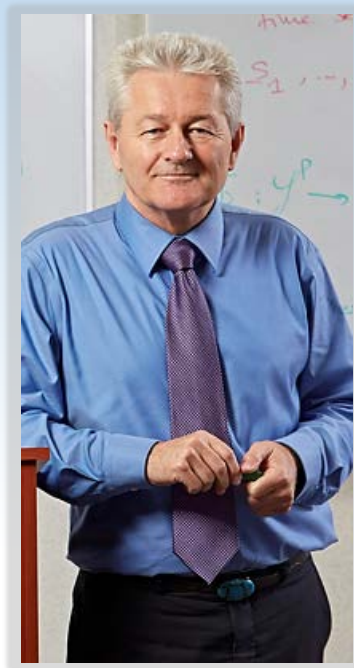
November 12th, 2019

Skye Hall 284

Coffee/Tea & Fruit/Pastries Served: 3:30 p.m.

Lecture: 4:00 - 4:50 p.m.

Dr. Reinhard C. Laubenbacher



Professor of the Department of Cell Biology
Director of the Center for Quantitative Medicine
University of Connecticut

Multi-scale Computational Models of Disease

Many disease processes involve events and mechanisms at different spatial and temporal scales. These are often connected in a non-hierarchical fashion through feedback loops, and contain heterogeneous spatial components, leading to complex aggregate dynamics. Multi-scale computational models form a key technology to elucidate disease mechanisms and explore novel therapeutic approaches. This talk will discuss some of the challenges and opportunities that come with this technology, using examples related to diabetes, the immune response to infections, and cancer.

Bio: Dr. Laubenbacher joined the University of Connecticut School of Medicine in May 2013 as professor in the Department of Cell Biology and director of the Center for Quantitative Medicine. He also holds an appointment as Professor of Computational Biology at the Jackson Laboratory for Genomic Medicine. Prior to these appointments, he served as a professor at the Virginia Bioinformatics Institute and the Department of Mathematics at Virginia Tech since 2001. He has held visiting positions at the Los Alamos National Laboratory, the Mathematical Sciences Research Institute in Berkeley, CA, and Cornell University. Current interests in Dr. Laubenbacher's research group include the development of multi-scale computational models of disease processes, in particular the immune response to respiratory fungal pathogens, the role of iron in tumor growth, and the control of heterogeneous biofilms.