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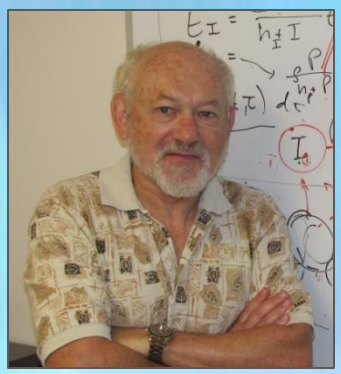
National Institute for Mathematical and Biological Synthesis



NIMBioS Interdisciplinary Seminar

3:30 p.m.**, Tuesday, February 12, 2013

Dr. David Gurarie

Mathematics, Case Western Reserve Univ.

NIMBioS Sabbatical Fellow

Hallam Auditorium, Room 206, Claxton Education Building, 1122 Volunteer Blvd.

"Agent-based approach to malaria: Immunology, population genetics and evolution of virulence"

Multiple factors determine the spread of parasites in host populations. They include within-host level (invasion, resource competition, immune regulation) and population level (transmission environment, parasite-vector interactions). The combined effect of these factors drives parasite evolution and selection. The talk will review some conventional theories of host-parasite evolution. Then I shall outline an agent-based approach that allows integration of multiple levels and processes. These models will be applied to study virulence selection for malaria-type parasites.

***Join us for refreshments at 3 p.m. in the 1st floor visitor breakroom.*

For more information about this and other NIMBioS Seminars, visit http://www.nimbios.org/seminars

The National Institute for Mathematical and Biological Synthesis (NIMBioS) brings together researchers from around the world to collaborate across disciplinary boundaries to investigate solutions to basic and applied problems in the life sciences. NIMBioS is sponsored by the National Science Foundation, the U.S. Department of Homeland Security, and the U.S. Department of Agriculture with additional support from The University of Tennessee, Knoxville.

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