

Statement of interest

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Background

I completed a B.S degree in Mathematics with a concentration in Applied Mathematics and significant coursework in Biology at Millersville University in 2005. I have been involved in NSF-funded REU programs at the University of Tennessee (Mathematical Ecology) and Florida State University (Computational Oceanography), and workshops in mathematical biology at the University of Alberta and the Park City Mathematics Institute. I am currently a second year graduate student in Mathematical Biology within the Mathematics Department at the University of Utah.

Interests

I am broadly interested in mathematical ecology and epidemiology, and have interests in the following areas of biology (human or animal): tropical diseases, vector-borne disease, host-parasite systems, diseases in structured populations, wildlife disease, and disease spill-over between livestock and wildlife. Mathematically I am interested in ordinary and partial differential equation (age and/or space) models, stochastic models, and optimal control applied to disease models. In addition to mathematical modelling I have experience and interest in biological fieldwork and labwork.

Motivations

I am preparing to begin research in mathematical ecology/epidemiology and feel that this workshop offers exposure to interesting content and exciting opportunities for new collaboration. I have found participation in similar programs to be rewarding academically and socially, and have enjoyed opportunities to learn from and interact with leaders in these fields and other students.

Plans for the future and commitment to continue research

I am finishing the last semester of my Masters Degree and beginning to think of future directions for my research in the pursuit of a Ph.D. in Mathematics at the University of Utah. I am currently interested in stochastic epidemics and emerging disease in humans and wildlife and feel that this workshop would provide exposure to current problems in both of these research areas which could be continued as part of my thesis research.