DANIEL J. EPSTEIN DEPARTMENT OF INDUSTRIAL AND SYSTEMS ENGINEERING

ISE SEMINAR

Modeling the Relationship Between Nutrition and Disease: The Case of Malaria

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ABSTRACT

We use mathematical modeling to explore the ramifications of targeting preventive disease measures to undernourished children. We consider a malaria model with superinfection and heterogeneous susceptibility, where a portion of this susceptibility is due to undernutrition (as measured by weight-for-age z scores). The portion of the total susceptibility that is due to undernutrition is estimated from a large randomized trial of supplementary feeding. We compute the malaria morbidity and mortality for a variety of policies involving supplementary food and insecticide treated nets.

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ANDRUS GERONTOLOGY CENTER (GER) ROOM 206
2:00 – 3:00 PM

SPEAKER BIO

Milinda Lakkam is a graduate student at the Institute of Computational and Mathematical Engineering, Stanford University advised by Prof. Lawrence Wein. Her research interests are mathematical and statistical modeling, decision science and health policy. Prior to PhD, she received her bachelor's degree in Electrical Engineering from Indian Institute of Technology, Madras, India in 2009.