

# Infectious Disease Modeling and Evaluating the Impact of Interventions

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**Talk will take place from 11:15AM - 12:05PM in Freeman Auditorium  
(and also through Zoom).**

**Abstract:** Infectious diseases continue to affect millions of people around the world, despite the significant advances in science and medicine that helped our understanding of their causes, transmission, prevention, and treatment. In this presentation we will discuss examples on how modeling and quantitative methods can be used in decision-making and resource allocation for infectious disease prevention and control and have a positive impact on health outcomes.

**Bio:** Dr. Keskinocak is the William W. George Chair and Professor in the School of Industrial and Systems Engineering and the co-founder and Director of the Center for Health and Humanitarian Systems at Georgia Institute of Technology.

In their research and projects, she and her team apply quantitative methods and analytics to have a positive impact in society, addressing a broad range of topics such as disease modeling (including malaria, polio, Guinea Worm, Covid-19, pandemic flu, depression, asthma), evaluating intervention strategies, and resource allocation; catch-up scheduling for vaccinations; decision-support for organ transplant; hospital operations management and process improvement; and disaster preparedness and response. She has collaborated on projects with a variety of governmental and non-governmental organizations, healthcare providers, and the private sector, including American Red Cross, CARE, Carter Center, CDC, Children's Healthcare of Atlanta, Emory Healthcare, Grady Hospital, Intel Corp., and Task Force for Global Health.

Dr. Keskinocak is a Fellow of INFORMS and served as the society's president in 2020, in addition to her many other service roles over the years, including INFORMS Secretary, INFORMS Vice President for Membership and Professional Recognition,

President of the Women on OR/MS Forum, President of the Public Sector OR Section, and Department Editor for Operations Research and Service Science. She is also an active member of IISE and served as Department Editor for the IISE Transactions of Healthcare Systems Engineering.