Northwestern | McCORMICK SCHOOL OF ENGINEERING

Center for Engineering and Health

CEH SEMINAR: DR. QIUSHI CHEN

Modeling and Optimization for Population Health Screening Policies

HOST: DR. SANJAY MEHROTRA

Population health screening can be an effective approach for identifying diseases at early stages to enable timely treatment and to improve long-term health outcomes. The rationale is simple, but how to develop efficient screening policies at the population level while considering limited resources is nontrivial. This talk will discuss several studies we have conducted in modeling and optimizing screening policies in a variety of clinical contexts across infectious diseases, chronic diseases, and developmental disabilities. We will discuss the policy insights for screening—either common or unique to these clinical contexts—that are drawn from our modeling analyses and future research opportunities in the emerging era of big healthcare data.

BIOGRAPHY

Qiushi Chen is an Assistant Professor in the Harold and Inge Marcus Department of Industrial and Manufacturing Engineering at the Pennsylvania State University. He earned his PhD degree in Operations Research from the Georgia Institute of Technology in 2016 and completed his post-doctoral training at Massachusetts General Hospital and Harvard Medical School. His research has focused on utilizing innovative mathematical modeling, optimization, and data analytics tools, integrated with real-world healthcare datasets, to better inform clinical decisions and policy makings in broad healthcare settings. He has been collaborating closely with researchers from medicine, health policy, health economics, and social sciences in multidisciplinary research projects on modeling for chronic diseases, behavioral and mental health, and opioid and substance use. His work has been supported by research grants from the National Institutes of Health. He is currently serving on the Council of INFORMS Health Applications Society.

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🕐 11 a.m. - 12 p.m. CST

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📍 Virtual
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