

SEMINAR SERIES

**Department of Quantitative Analysis and Operations Management
University of Cincinnati**

A Survey of Search Problems on Networks

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****RESCHEDULED****

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Abstract: The problem of deploying and controlling a set of searchers on a network to locate a hidden target is referred to as a search game. There are countless variations of this game, depending on, e.g., whether or not the target is mobile, and the searchers' communication and control capabilities. This talk will examine classical results in this field, discuss contemporary search literature, and explore research directions in this field as driven by future security challenges. In particular, we will explore recent game theoretic and mathematical programming techniques that have been employed to solve such problems, and applications of contemporary interest to researchers and practitioners worldwide.

Bio: Cole Smith is a Professor of Industrial and Systems Engineering at the University of Florida, and specializes in integer programming and combinatorial optimization research. He currently serves on the editorial board of seven journals, and was the program co-chair of the 2009 Industrial Engineering Research Conference. His teaching and research have separately been recognized by awards from the Institute of Industrial Engineers, having won two awards for outstanding publications in 2008, an award for excellence in teaching operations research in 2009, and an award as the outstanding young industrial engineer in education in 2010.

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