

Networks: An International Journal

Call for Papers: Special Issue on Game Theory, Competition, and Interdiction Problems on Networks

Guest Editor: Dr. J. Cole Smith

Submission Deadline: August 1, 2005

This special issue of Networks solicits current research efforts that apply Operations Research and Management Sciences (OR/MS) principles to multi-player problems arising in networks. This area of research has long been an important consideration in military, telecommunications, and transportation scenarios. Modern challenges involving the fortification of network infrastructures against modern terrorism threats, mitigating computer virus attacks against critical systems, and fairly and effectively moderating increased competition for limited telecommunication and transportation systems, have only increased the importance of OR/MS study on game theoretic topics related to networks.

This special issue will focus on theoretical, methodological, and application-based papers that employ OR/MS techniques on network scenarios involving multiple players. While comprehensive surveys of the literature related to this topic are welcome, we particularly encourage the submission of novel research papers on emerging areas of study in this field. Specific focus areas of this call include but are not limited to:

- Two-player Stackelberg games on network design or flow problems, including network interdiction strategies or fortification against enemy interdiction,
- Robust or survivable network design problems,
- Multi-agent telecommunication flow problems over shared networks, perhaps including implications on Quality of Service,
- Multi-modal transportation networks with centralized control in next-generation networks,
- Design of non-cooperative transportation networks, including problems involving node and arc construction, toll-pricing on arcs, and so on, and
- Combinatorial auctions related to network problems, such as in supply chain, transportation, and telecommunications applications.

Submissions must be original works that are not published or under review in other journals or conference proceedings. The refereeing process for this special issue will be the same as that for regular issues of Networks. If an outstanding paper is deemed to be publishable in Networks, but is not appropriate for this special issue, we may consider the paper for publication in a regular Networks issue instead. All manuscripts should be submitted electronically in PS or PDF format to the guest editor at cole@sie.arizona.edu by August 1, 2005.