

# GRADUATE STUDENT SEMINAR

4:00 pm, Monday, February 11, 2002

Martin M-105

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## A Gentle Introduction to Multicriteria Optimization

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### **Abstract**

Many problems involve finding a preferred solution in the presence of multiple objective functions or criteria. Most often some (or possibly all) of these criteria are in conflict with each other, especially as the number of criteria increases. A solution that is very good with respect to one criterion may be poor with respect to one or more of the other criteria. The presence of this conflict makes it impossible to find an optimal solution that optimizes all objective functions simultaneously. This requires introducing the concept of a nondominated solution. In this talk, nondominated solutions will be defined and solution methodologies for finding the nondominated solution set will be discussed. Examples will be presented for bi-criteria problems for ease of graphical representation. Preference cones and the role they play in multicriteria optimization problems will also be discussed.

**All graduate students are strongly encouraged to attend. Pizza and discussion afterwards!**

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For further information see our website at [www.ces.clemson.edu/~agorka/seminar/main.html](http://www.ces.clemson.edu/~agorka/seminar/main.html)