



Modern Aspects of Submodularity

March 19-22, 2012 : Klaus 1116

ORGANIZING COMMITTEE: **Shabbir Ahmed** (School of ISyE, GaTech), **Nina Balcan** (School of CS, GaTech), **Satoru Iwata** (RIMS, Kyoto University), and **Prasad Tetali** (School of Math and School of CS, GaTech)

Workshop Theme:

Submodular functions are discrete analogues of convex functions, arising in various fields of computer science and operations research. Since the seminal work of Jack Edmonds (1970), submodularity has long been recognized as a common structure of many efficiently solvable combinatorial optimization problems. Recent algorithmic developments in the past decade include combinatorial strongly polynomial algorithm for minimization, constant factor approximation algorithms for maximization, and efficient methods for learning submodular functions. In addition, submodular functions find novel applications in combinatorial auctions, machine learning, and social networks. This workshop aims at providing a forum for researchers from a variety of backgrounds for exchanging results, ideas, and problems on submodular optimization and its applications. The first day will be devoted to tutorial-style lectures!

Confirmed Speakers: **Jeff Bilmes** (University of Washington), **Chandra Chekuri** (UIUC), **Satoru Fujishige** (Kyoto University), **Gagan Goel** (Google Research), **Michel Goemans** (MIT), **Carlos Guestrin** (CMU), **Satoru Iwata** (Kyoto University), **Kamal Jain** (e-Bay), **Andreas Krause** (ETH), **Andrei Krokhin** (Durham University, UK), **Jon Lee** (U. Michigan), **Tom McCormick** (UBC), **Aranyak Mehta** (Google Research), **Vahab Mirrokni** (Google Research), **Kazuo Murota** (University of Tokyo), **Kiyohito Nagano** (University of Tokyo), **Maurice Queyranne** (UBC), **Amin Saberi** (Stanford), **Akiyoshi Shioura** (Tohoku University), **Maxim Sviridenko** (IBM), **Zoya Svitkina** (Google), **Jan Vondrak** (IBM), **Laszlo Vegh** (Georgia Tech).

Day 1 (3/19) : Tutorial Lectures by **A. Krause, K. Murota, and J. Vondrak**

For additional information, please visit the ARC website:

<http://www.arc.gatech.edu/events/arc-submodularity-workshop>

Sponsors: Algorithms & Randomness Center, ACO Ph.D. Program, School of ISYE, School of Math, IMA (Minnesota), Google Corp., Microsoft Corp., Yandex Corp. (Russia)