We are very pleased to announce a

CIME-EMS Summer School in applied mathematics on

Centralized and Distributed Multi-agent Optimization: Models and Algorithms

June 23–June 28, 2014

Directors of the School
Francisco Facchinei, University of Rome La Sapienza, Italy
Jong-Shi Pang, University of Southern California, U.S.A

Multi-agent optimization is at the forefront of modern optimization theory and has recently undergone a dramatic development, stimulated by new applications in a host of diverse disciplines. Multi-agent optimization, including new modelling paradigms and both centralized and distributed solution algorithms, lies at the intersection of classical optimization, game theory, and variational inequality theory. Since the area has undergone such an explosive growth in recent years, this summer school aims at providing an overview that describes in detail ongoing research and important trends, with emphasis on the mathematical problems arising in telecommunications. The school is organized around 4 series of lectures that will be delivered by well-known world experts:

• Differential Variational Inequalities:
Jong-Shi Pang, University of Southern California, Los Angeles, USA

• Optimization Methods for Resource Management: Complexity, Duality and Approximation:
Zhi-Quan Luo, University of Minnesota, Minneapolis, USA

• Distributed Optimization over Networks:
Angelia Nedich, University of Illinois at Urbana-Champaign, Illinois, USA

• Advanced Decomposition Algorithms for Multi-agent Systems:
Gesualdo Scutari, University of Buffalo, New York, USA.

The course, will appeal to mathematically oriented engineers, mathematicians, and computer scientists interested in optimization, game theory, operations research, communication, and signal processing. It will serve both as a state-of-the-art report of current research and a source of inspiration for Ph.D. students and junior researchers.

Practical Information. This is a residential school, taking place in Grand Hotel S. Michele in Cetraro (Calabria, Italy). Grand Hotel S. Michele is a very beautiful and secluded place which favors interaction among students and professors. There will be around 18 hours of formal lectures plus ample opportunity for interaction and discussion.

The school is free. Participants only have to pay for their accommodation (and travel to the site). The hotel provides a very convenient full-board fee that can be found, along with additional information, at `http://php.math.unifi.it/users/cime/Cetraro/Cetraro.html`. A very limited number of grants covering local expenses, mainly intended for participants coming from financially-weak countries, is available. Registration is open until May 15, 2014, but early application is strongly advised. You may register online from the official web-page of the course `http://php.math.unifi.it/users/cime/Courses/2014/course.php?codice=20143`.