

“Ettore Majorana” Centre for Scientific Culture  
International School of Mathematics “G. Stampacchia”

46th Workshop

**New Problems and Innovative Methods  
in Nonlinear Optimization**

July 31 – August 9, 2007

Erice, Italy

**PROGRAM**

## August 1, Wednesday

09.15-09.30 : *Opening*

Chair: G. Di Pillo

09.30-10.30 : **M. Pappalardo**, *Equilibrium problems of variational type: models, methods and algorithms*

— coffee break —

Chair: M. Roma

11.00-12.00 : **D. Sun**, *The role of metric projectors in nonlinear conic optimization problems*

12.00-12.30 : E. SACHS, *On the role of adjoints in finance*

---

Chair: W. Hager

15.00-15.30 : B. PANICUCCI, *Descent methods for generalized variational inequalities via gap functions*

15.30-16.00 : M. PASSACANTANDO, *Equivalent unconstrained optimization problems for generalized variational inequalities*

## August 2, Thursday

Chair:

09.00-10.00 : **C.A. Floudas**, *Deterministic global optimization: advances in convex underestimation methods and applications*

10.00-10.30 : A. CASSIOLI, *Dissimilarity measures for population-based global optimization algorithms*

— coffee break —

Chair: D. Sun

11.00-12.00 : **S. Lucidi**, *New DIRECT-type algorithms for global optimization*

12.00-12.30 : G. BIGI, *Outer approximation algorithms for canonical DC problems*

---

Chair : M. Pappalardo

15.00-16.00 : **F. Schoen**, *Large scale global optimization in practice*

16.00-16.30 : A. PELLICIONI, *Deterministic and neural network model: a successful application for the air dispersion model*

16.30-17.00 : A. RISI, *A class of decomposition methods for SVM training*

## August 3, Friday

Chair: C.A. Floudas

09.00-10.00 : **M. D'Apuzzo**, *Mutual impact of numerical linear algebra and large-scale optimization*

10.00-10.30 : V. DE SIMONE, *ESOPO: an Environment for Solving Optimization Problems Online*

— coffee break —

Chair: S. Lucidi

11.00-12.00 : **Y. Yuan**, *Subspace techniques for nonlinear optimization*

12.00-12.30 : M. ROMA, *Iterative computation of approximate inverse preconditioner for nonconvex unconstrained optimization*

---

Chair : F. Schoen

15.00-16.00 : **J.M. Martínez**, *Practical augmented Lagrangian methods*

16.00-16.30 : G. DI PILLO, *A truncated Newton method in an augmented Lagrangian framework for nonlinear programming*

16.30-17.00 : N. SUKHORUKOVA, *Uniform approximation by polynomial splines of highest defect: necessary and sufficient optimality conditions and their generalisation*

## August 4, Saturday

E X C U R S I O N

## August 5, Sunday

Chair: D. Ralph

9.00-10.00 : **Y. Ye**, *Semidefinite programming relaxation model for graph realization and sensor network localization*

10.00-10.30 : V. PICCIALLI, *An unconstrained minimization method for solving low rank SDP relaxations of the max cut problems*

— coffee break —

Chair: Y. Yuan

11.00-12.00 : **L.N. Vicente**, *A globally convergent primal-dual interior-point filter for nonlinear programming (ipfilter): new filter optimality measures and computational results*

12.00-12.30 : G. LIUZZI, *A derivative-free algorithm for inequality constrained optimization problems*

---

Chair : J.M. Martínez

15.00-16.00 : **I. Bomze**, *Recent development in copositive programming*

16.00-16.30 : M. LOCATELLI, *Improving the Lovasz-Schrijver bound by copositive cuts*

16.30-17.00 : J. UGON, *Optimisation approach to clustering: the choice of a similarity function*

---

20.30 : SOCIAL DINNER

## August 6, Monday

Chair: Y. Ye

09.00-10.00 : **P.M. Pardalos** , *Analysis of greedy approximation with non-submodular potential functions*

10.00-11.00 : **M. Teboulle**, *A convex optimization approach for a class of nonconvex quadratic estimation problems*

---

F R E E

## August 7, Tuesday

Chair: P.M. Pardalos

09.00-10.00 : **I.V. Konnov**, *Solution methods for multi-valued variational inequalities*

10.00-10.30 : G. PATRIZI, *Simultaneous estimation and optimization of empirical processes by generalized variational inequalities*

— coffee break —

Chair: M. Teboulle

11.00-12.00 : **J.-S. Pang**, *On the global solution of linear programs with linear complementarity constraints*

12.00-12.30 : F. FACCHINEL, *On a class of generalized Nash equilibrium problems*

---

Chair : J.S. Pang

15.00-16.00 : **D. Ralph**, *Revisiting convergence of SAA/SPO methods for two stage stochastic programs*

16.00-16.30 : G. EICHFELDER, *Multiobjective bilevel optimization*

16.30-17.00 : G. NICOSIA, *Multi-objective optimization for circuit design problem and protein structure prediction*

## August 8, Wednesday

Chair: I.V. Konnov

09.00-10.00 : **W. Hager**, *Multilevel quadratic programming techniques for graph partitioning*

10.00-10.30 : K. ALLALI, *Approximate subdifferentials of marginal functions: the Lipschitzian case*

— coffee break —

Chair: I. Bomze

11.00-11.30 : G. GIALLOMBARDO, *Incremental methods for nonsmooth convex optimality problems*

11.30-12.00 : P. ABSIL, *Vector transport on nonlinear manifolds*

11.30-11.45 : *Closing*