

**Numerical methods for PDEs: optimal control, games and image processing**  
**Rome, December 4-5, 2014**

*Conference on the occasion of Maurizio Falcone's 60th birthday*

**Program**

**Thursday, December 4, 2014**

13:00 Registration

14:00 Italo Capuzzo Dolcetta  
*Semidiscrete and finite differences approximation of mean field games*

14:25 Antonio Siconolfi  
*Weak KAM techniques for singularly perturbed control problems*

14:50 Mini Break

15:05 M60 Stories

15:20 Franco Rampazzo  
*Costly asymptotic controllability (Si ad metam gratuitus non est accessus)*

15:45 Nicola Guglielmi  
*Most unstable switching laws for switched linear systems*

16:10 Olivier Bokanowski  
*A high order numerical method for a nonlinear diffusion + obstacle equation*

16:35 Coffee break

17:00 Giovanni Russo  
*Semilagrangian schemes for kinetic equations*

17:25 Jean-Denis Durou  
*Photometric stereo: A photographic technique for 3D-scanning*

17:50 Yves Achdou  
*Two-domains Hamilton Jacobi equations with an oscillating interface: effective transmission conditions*

18:15 Stefano Finzi Vita  
*Similarity solutions for the silo filling problem in granular matter theory: a numerical study*

18:40 Maurizio Falcone

20:00 Dinner

## Friday, December 5, 2014

- 9:00 Hasnaa Zidani  
*Optimal control problems on generalized networks*
- 9:25 Isabeau Birindelli  
*A variational approach to fully nonlinear operators*
- 9:50 Tiziana Giorgi  
*Field-induced smectic phases in liquid crystals*
- 10:15 Martino Bardi  
*A Dijkstra-type algorithm for dynamic games*
- 10:40 Coffee Break
- 11:10 Roberto Mecca  
*A Different(ial) Approach to the Photometric Stereo Problem*
- 11:25 Adriano Festa  
*Independent sub-domains reconstruction and parallel computing*
- 11:40 Dante Kalise  
*Local optimization in semi-Lagrangian schemes for Hamilton-Jacobi equations*
- 11:55 Alessandro Alla  
*On the coupling between MPC and DP methods for optimal control problems*
- 12:10 Mini Break
- 12:25 Athena Picarelli  
*State-constrained stochastic optimal control problems via reachability approach*
- 12:40 Silvia Tozza  
*A unified approach to Shape-from-Shading models for non-Lambertian surfaces*
- 12:55 Smita Sahu  
*An efficient filtered scheme for some first order Hamilton-Jacobi Bellman equations*
- 13:10 Lunch
- 14:30 Luca Bonaventura  
*A domain decomposition approach to exponential time integration of PDEs*
- 14:55 Fabio Camilli  
*Eikonal equations on the Sierpinski gasket*
- 15:20 Lars Grüne  
*Stabilization with discounted optimal control*
- 15:45 Roberto Ferretti  
*Some issues in the semi-Lagrangian treatment of second-order balance laws*
- 16:10 Auguri!