



DipMat



## Tbilisi State University

### First Salerno-Tbilisi Workshop On Modeling in Mathematics

Salerno, February 24-26 2014

#### Steering Committee:

**A. Di Nola, R. Grigolia, I. Tavkhelidze, M. Transirico**

**February 24, 9.30 Opening : A. Di Nola, R. Grigolia, M. Transirico**

Session 1. (Chair: M. Transirico)

10.00-10.20 **Ilia Tavkhelidze** : One mathematical method of modelling of wide class of complex displacements

10.20-10.40 **Sara Monsurrò**:  $L^p$  and  $W^{2,p}$  -estimates for solutions of elliptic equations in unbounded domains

10.40-11.10 Coffee Break

Session 2. (Chair: M. Transirico)

11.10-11.30 **Roman Koplataдзе**: Oscillation criteria for differential and discrete equation with several delays.

11.30-11.50 **Tamaz Tadumadze**: Optimization of dynamical systems with delay.

11.50-12.10 **Carlo Cattani**: A generalized hybrid kinetic model for cells immune system competition

12.10-13.00 Informal discussion

Lunch

Session 3. (Chair: R. Grigolia)

15.00-15.20 **Serena Spina**: A Gompertz model with jumps for an intermittent treatment in cancer growth

15.20-15.40 **Barbara Martinucci** : Some results and applications of finite-velocity random motions

15.40-16.10 Coffee Break

Round table (Chair I.Tavkhelidze)

16.10-18.00 – Round table on responded models in the framework of Laboratory project.

**Tuesday, February 25,**

Session 1. (Chair: I.Tavkhelidze)

10.00-10.20 **Farman Mamedov**: On some a priori estimates for parabolic equations

10.20-10.40 **Ramaz Botchorishvili** High order numerical schemes for linear advection equation.

10.40-11.00 **Omar Glonti**: Some Mathematical Models of Stochastic Dynamical Systems. Filtering, Forecasting, Applications.

11.00-11.30: Coffe Break

Session 2. (Chair: I.Tavkhelidze)

11.30-11.50 **Antonio Di Crescenzo** : Analysis of birth-death processes and some applications in biomathematics

11.50-12.10 **Beatrice Paternoster** : Structure preserving numerical methods for Hamiltonian and oscillatory evolutionary problems

**12.10-12.30 Antonio Di Nola, Revaz Grigolia and Nunu Mitskevich: Multi Modal Epistemic Lukasiewicz logic and Fuzzy (T-cell) Multiagents**

Lunch

Session 3. (Chair: R.Cerulli)

14.30-14.50 **Manlio Gaudio** : Classification methods and numerical optimization.

14.50-15.10 **Giovanni Felici** : Data mining methods for the identification of relevant gene-set: data sources and methods of analysis.

15.10-15.30 **Raffaele D'Ambrosio**: Numerical modelling of some evolutionary processes in Immunology

15.30- 16.00 Coffee Break

Round table (Chair A. Di Nola)

Round table on proposed models in the framework of Laboratory project

20.00 **Social dinner**

**Wednesday, February 26,**

10.00 Excursion: Paestum ruins.