



CHALLENGES OF BIG DATA FOR ECONOMIC MODELING AND MANAGEMENT: TOOLS FROM EFFICIENCY ANALYSIS, SENSITIVITY ANALYSIS, SENSITIVITY AUDITING AND PHYSICS OF COMPLEX SYSTEMS

DIAG Aula Magna -Via Ariosto, 25 Roma

Tuesday, 10 November 2015

9:00 -9:30 Arrival and registration

9:30 -9:45 Welcome

Alberto Marchetti Spaccamela, Head of DIAG,
Sapienza University of Rome

9:45 -10:00 Opening

Marco Listanti, Dean of I3S Faculty, Sapienza
University of Rome

Session 1: Introduction and TOOLS

Chair: *Giuseppe Catalano*, DIAG, Sapienza University of Rome

10:00-10:20 Productivity and Efficiency, Physics of Complex
Systems, Sensitivity Analysis and Sensitivity Auditing, Data: what is
the guiding thread?

Cinzia Daraio, DIAG, Sapienza University of Rome

10:20-13:10 EFFICIENCY ANALYSIS. FROM PARAMETRIC TO
NONPARAMETRIC FRONTIER MODELS: THE STATE OF THE ART

Léopold Simar, Université catholique de Louvain, Belgium

14:10- 17:20 SENSITIVITY ANALYSIS AND SENSITIVITY AUDITING
(Part I and Part II)

Andrea Saltelli, Centre for the Study of the Sciences and the
Humanities (SVT) - University of Bergen (UIB), and Institut de
Ciència i Tecnologia Ambientals (ICTA) - Universitat Autònoma de
Barcelona (UAB)

Stefano Tarantola, Joint Research Center, European
Commission, Ispra

17:20-19:00 PANEL “Big Data Era: challenges, tools
and experiences in an interdisciplinary and dynamic
world” (Part I)

Chair: *Camil Demetrescu*, DIAG, Sapienza University of Rome

17:20-17:40 Big Data and Health Engineering

Paolo Cappa, Department of Mechanical and Aerospace
Engineering, Sapienza University of Rome
Edwin Morley Fletcher, Lynkeus, Italy

17:40-18:00 Challenges of Big data for Visual Analytics

Marco Angelini, DIAG, Sapienza University of Rome
Giuseppe Santucci, DIAG, Sapienza University of Rome

18:00-18:20 Big Crisis Data: Social Media in Disasters and Time-
Critical Situations

Carlos Castillo, Qatar Computing Research Institute

18:20-18:40 New and effective techniques for classification

Renato Bruni, DIAG, Sapienza University of Rome

18:40-19:00 Algorithmic challenges in large scale on-line markets

Stefano Leonardi, DIAG, Sapienza University of Rome

Wednesday, 11 November 2015

Session 2: TOOLS

Chair: *Alberto Nastasi*, DIAG Sapienza University of Rome

9:30- 12:45: SENSITIVITY ANALYSIS AND SENSITIVITY AUDITING
(Part III and Part IV)

Andrea Saltelli, Centre for the Study of the Sciences and the
Humanities (SVT) - University of Bergen (UIB), and Institut de
Ciència i Tecnologia Ambientals (ICTA) - Universitat Autònoma de
Barcelona (UAB)

Stefano Tarantola, Joint Research Center, European
Commission, Ispra

13:45-15:45 STATISTICAL TOOLS FROM THE PHYSICS OF
COMPLEX SYSTEMS

Luca Leuzzi, Soft and Living Matter Laboratory, Institute of
Nanotechnology, CNR, Italy

16:00-17:20 PANEL “Big Data Era: challenges, tools
and experiences in an interdisciplinary and dynamic
world” (Part II)

Chair: *Tiziana Catarci*, DIAG, Sapienza University of Rome

16:00-16:20 Interdisciplinarity and Convergence: an example
from the Center for Life Nanoscience IIT@Sapienza

Giancarlo Ruocco, Physics Department, Sapienza University of
Rome and IIT@Sapienza

16:20-16:40 Something new about reading and readers with Big
Data

Chiara Faggiolani, DOLIFIGE, Sapienza University of Rome
Giovanni Solimine, DOLIFIGE, Sapienza University of Rome

16:40-17:00 Organization and Competences: challenges for
Management Engineering

Gian Carlo Cainarca, DIST and DOGE, University of Genoa

17:00-17:20 Households' demand for connectivity and economic
development. Challenges and new empirical evidence for Italy

Cosimo Dolente, DIAG, Sapienza University of Rome
Claudio Leporelli, DIAG, Sapienza University of Rome

Session 3: Knowledge representation and data integration

Chair: *Claudio Leporelli*, DIAG, Sapienza University of Rome

17:20-17:30 Introduction: *Marco Schaerf*, DIAG, Sapienza
University

17:30-18:20 Challenges for knowledge representation and data
integration: Ontology-based Data Management and the case of
Sapientia

Maurizio Lenzerini, DIAG, Sapienza University of Rome

18:20-18:30 Closure

Giorgio Alleva, President of the National Institute
of Statistics (ISTAT) and Sapienza University of Rome