# CONFERENCE PROGRAM

## Thursday 27th May

14:00  **REGISTRATION** – IIASS Secretariat

14:45  **WELCOME ADDRESS**

G. SCARPETTA, President of IIASS

F. C. MORABITO, President of SIREN

15:00  *Eduardo R. CAIANIELLO Lecture (Invited)*

Pierre BALDI, University of California, Irvine, CA, USA

15:00-15:45 Computational Problems and Approaches for Understanding Gene Regulation

15:45-16:15 Deep Neural Architectures, Autoencoders, and Unsupervised Learning

16:15 *Caianiello Memorial Award for the Excellence in Neural Network Research*

16:30  **Coffee Break**

17:00  **Regular Session  (Chair: N.A. BORGHESE)**

17:00  S. ROVETTA, F. MASULLI, M. E. MONVILLE, G. RUSSO

Context analysis in microRNA data: A Rosetta Stone approach

17.15  S. FERRARI, F. BELLOCCHIO, V. PIURI, N.A. BORGHESE
Multi-scale Support Vector Regression

17:30  M. SCARPINITI, F. DI PALMA, R. PARISI, A. UNCINI

A Geometrically Constrained ICA Algorithm for Blind Separation in Convolutive Environments

17:45 Yibin YE, S. SQUARTINI, F. PIAZZA

A Group Selection Evolutionary Extreme Learning Machine Approach for Time-Variant Neural Networks

18:00 V. D'AMATO, G. PISCOPO, M. RUSSOLILLO

Iterative Algorithms for detecting mortality trends in the family of Lee Carter Models

18:15 M. ALAMIA, N. A. BORGHESE

Creating long gait animation sequences through Reinforcement Learning

18:30 E. FERRARI, M. MUSELLI

Switching Neural Network: An application to Regression Problems

18:45 M. ABDOLMALEKI, Amir Aboolfazi SURATGAR

Designing a MEMS-based Voltage Controlled Oscillator (VCO) and Compensation the Effect of Temperature Variations Using Neural Network

19:00 M. CACCIOLA, G. RIPEPI, Guang YANG, Gui Yun TIAN, F. C. MORABITO

Independent Component Analysis based Algorithms for Flaw Classification in Pulsed Eddy Current Data: A Study

19:15 M. N. POSTORINO, G. M. L. SARNE

A Neural Network Hybrid Recommender System

# Friday 28th May

9:00 **Special Session** *"THE DYNAMICS OF BIOLOGICAL NETWORKS"*

**Chairs: R. SERRA, M. VILLANI**

9:05 *Invited Lecture*

Barbara DROSSEL, Darmstadt University of Technology, Germany

Random Boolean Networks

9:45 A. BARBIERI, M. VILLANI, R. SERRA, S.A. KAUFFMAN, A. COLACCI

Cell differentiation in noisy random Boolean network

10:00 A. ROLI, S. BENEDETTINI, R. SERRA, M. VILLANI

Analysis of attractor distances in Random Boolean Networks

10:15 S. SCARPETTA, A. de CANDIA, F. GIACCO

Dynamics and storage capacity of cortical networks with small-world topology

10:30 A. FARINACCIO, L. VANNESCHI, P. PROVERO, G. MAURI, M. GIACOBINI

A Study on Gene Regulatory Network Reconstruction and Simulation

10:45 N. MAMMONE, F. LA FORESTA, F. C. MORABITO

Discovering network phenomena in the epileptic electroencephalography through permutation entropy mapping

11:00 A. FILISETTI, R. SERRA, M. VILLANI, R. M. FUSCHSLIN, N. PACKARD, S. A. KAUFMANN, I. POLI

A stochastic model of autocatalytic reaction networks

11:15 G. JURMAN, R. VISINTAINER, C. FURLANELLO

An introduction to spectral distances in networks

11:30 M. FIASCHÉ, M. CUZZOLA, R. FEDELE, P. IACOPINO, F. C. MORABITO

Machine Learning and Personalized Modeling for Diagnosis of Acute GvHD: an Integrated Approach


**Coffee Break**


12:00 **Regular Session (Chair: F. PALMIERI)**

12:00 F. PALMIERI, D. CIUONZO

Data Fusion with Entropic Priors

12:15 U. MANISCALCO, G. PILATO, G. VASSALLO

Soft Sensor based on E-αNETs

12:30 D. CHICCO, M. RESTA

An intraday trading model based on Artificial Immune Systems

12:45 A. BERTONI, M. FRASCA, G. GROSSI, G. VALENTINI
Learning functional linkage networks with a cost-sensitive approach



13:00 **Lunch Break**



14:30 **Invited Lecture**

Panos PARDALOS, University of Florida, Gainesville, USA

Connectivity Transition from Interictal to Ictal States on Neocortical Epilepsy

**15:15 Regular Session (Chair: A. UNCINI)**

15:15 M. SCARPINITI, G. BUNKHEILA, R. PARISI, A. UNCINI

A Pre-Filtering and Post-Filtering Approach to Blind Source Separation

15:30 A. M. ESPOSITO, F. GIUDICEPIETRO, L. D'AURIA, R. PELUSO, M. MARTINI

A Neural-based Algorithm for Landslide Detection at Stromboli Volcano: Preliminary Results

15:45 M. GORI

Ill-posittionioning in machine learning and automated reasoning

16:00 E. PASERO
Non Linear Correlations between Meteo Data and Pollution

16:15 F. GIACCO, S. COLELLA, L. PUGLIESE, S. SCARPETTA

Application of Self Organizing Maps to multi-temporal and multi-spectral satellite images: classification and change detection

16:30 B. APOLLONI, S. BASSIS

IPRA: Regressing Data with Independent Parameters

16:45 D. LABATE, F. LA FORESTA, G. INUSO, F. C. MORABITO

Remarks about Wavelet Analysis in the EEG Artifacts Detection

17:00 E. NOSOVA, G. RAICONI, R. TAGLIAFERRI
A Combinatoric biclustering algorithm

17:15 P. BURRASCANO, M. CACCIOLA, F. C. MORABITO, M. RICCI
Evolutionary image deconvolution in electromagnetic non destructive evaluation of metallic materials

*Coffee Break*

17:30 PREMIO CAIANIELLO PER LA MIGLIORE TESI DI DOTTORATO NEGLI AMBITI DI RICERCA DELLE RETI NEURALI

18:30  **SIREN Society Meeting**

20:30  **Social Dinner**

# Saturday 29<sup>th</sup> May

**Special Session  *COST 2102***
*"NONLINEAR SYSTEMS FOR MULTIMODAL HUMAN-MACHINE INTERACTION"*
**Chairs: Anna ESPOSITO and Stefano SQUARTINI**

*M. MARINARO* **Lecture (Invited)**

9:30 G. RIGOLL,  TU Munchen, Munich, Germany

Multimodal Interaction: Methods and Applications for Joint Cooperation Between Humans and Cognitive Systems

10:00 S.SQUARTINI, M.FAGIANI, E.PRINCIPI, F.PIAZZA

Multichannel Cepstral Domain Feature Warping for Robust Speech Recognition

10:20 M. GRINBERG, V. HALTAKOV, H. STEFANOV

Spreading Activation Machanisms for Efficent Knowledge Retrieval form Large Datasets

10:40 M. GRASSI, M. FAUNDEZ-ZANUY

Template protection for security enhancement of a biometric face authentication system

11:00 J. ROURE and D. RODRIGUEZ

Demonstration based Policy Learning in a Reduced Driving Environment


11:20 A. ESPOSITO and M. T. RIVIELLO

On the perception of facial emotional expression in children


11:40 E. HRISTOVA

Biosignals and decision making.


12:00 **Conference Closing**