

## Monday, October 19<sup>th</sup>

13.00	Registration (onwards)
14.15 - 14.30	Welcome & Introductory Remarks
<b>Session:</b>	<b>Dynamics of genomes and genetic variation I</b> Chairs: Rosanna Verde, Sandro Banfi
14.30 - 15.20	KN1 - <b>Peter Van Loo</b> (The Francis Crick Institute, UK) "Molecular Archaeology of Cancer"
15.20 - 15.35	01 - <b>Emanuel Weitschek</b> (IASI-CNR, Italy) "Extraction of multiple rule-based models to classify RNA-seq cancer data"
15.35 - 15.50	02 - <b>Leny Bravo</b> (Universidad Privada San Juan Bautista, Escuela de Medicina Humana, Peru) "Repeated observation of immune gene sets enrichment in women with non-small cell lung cancer"
15.50 - 16.30	Coffee break
<b>Session:</b>	<b>Dynamics of genomes and genetic variation II</b>
16.30 - 16.45	03 - <b>Marianna Cerasuolo</b> (University of Portsmouth, Department of Mathematics, UK) "Neuroendocrine Trans-differentiation in Human Prostate Cancer Cells: a Strange Case of Dr. Jekyll and Mr. Hyde"
16.45 - 17.00	04 - <b>Audrone Jakaitiene</b> (Department of Human and Medical Genetics, Vilnius University) "Detection of Rare Mutations using Beta-Binomial model in Next-Generation Sequencing Experiments"
17.00 - 17.15	05 - <b>Francesca Taranto</b> (CRA-ORT, Italy) "High throughput SNP discovery and population structure in Pepper (C.annuum) using genotype-by-sequencing"
17.15 - 17.30	06 - <b>Paolo Anagnostou</b> (Dipartimento di Biologia Ambientale, Sapienza University of Rome, Italy) "The emerging complexity of genomic architecture in human population isolates"
17.30 - 17.45	07 - <b>M.G. Notarangelo, E. Signori</b> IAC-CNR, IFT-CNR, Italy) "Biology and Mathematics for anti-tumoral vaccines"
17.45	Welcome reception at Aula Magna Partenope

## Tuesday, October 20<sup>th</sup>

<b>Session:</b>	<b>Dynamics of motifs</b> Chair: Lucia Maddalena	15.20 - 15.35	015 - <b>Alberto Maria Bersani</b> (Sapienza University of Rome, Italy) "Theoretical foundations of the total quasi-steady state approximation in enzyme kinetics"
09.30 - 10.20	KN2 - <b>Sebastiaan H. Meijzing</b> (Max Planck Institute for Molecular Genetics, Germany) "Transcriptional regulation: When $1 + 1 \neq 2$ "	15.35 - 15.50	016 - <b>Maria Pia Saccomani</b> (University of Padova, Italy) "Parameter Identifiability of ODE Models in Systems Biology"
10.20 - 10.35	08 - <b>Adane Mamuye</b> (University of Camerino, Italy) "Characterization of RNA interaction network with persistent homology and group theory"	15.50 - 16.30	Coffee Break
10.35 - 10.50	09 - <b>Marco Salvemini</b> (University of Naples Federico II, Italy) "Bioinformatics and transcriptomics to uncover the sex determination in the sand fly species Phlebotomus perniciosus, a major Old World vector of Leishmania infantum"	16.30 - 16.45	<b>Session:</b> <b>Dynamics of biological networks III</b> Chair: Antonio Irpino
10.50 - 11.05	010 - <b>Kumar Parijat Tripathi</b> (ICAR-CNR, Italy) "A simple computational protocol to detect and functionally interpret circular RNA in RNA-seq experiments"	16.45 - 17.00	017 - <b>Elijah Lowe</b> (Stazione Zoologica Anton Dohrn, Naples, Italy) "A transcriptomic approach to developmental Gene Regulatory Networks"
11.05 - 11.45	Coffee break	17.00 - 17.15	018 - <b>Marina Piccirillo</b> (ICAR-CNR, Italy) "Reconstructing a Genetic Network from Gene Perturbations in Secretory Pathway of Cancer Cell Lines"
<b>Session:</b>	<b>Dynamics of biological networks I</b> Chair: Paola Festa	17.15 - 17.30	019 - <b>Daniele Ferone</b> (University of Naples Federico II, Italy) "Combinatorial optimization approaches for biclustering of gene expression data"
11.45 - 12.35	KN3 - <b>Giuseppe Jurman</b> (Fondazione Bruno Kessler, Italy) "Differential network analysis and graph classification: a glocal approach"	17.30 - 17.45	020 - <b>Jennifer Dodd</b> (University of Sheffield, UK) "Identifying translatomes for defining neuroprotective therapies against widespread RNA dysregulation in neurodegeneration"
12.35 - 12.50	011 - <b>Alessandro Zandonà</b> (Fondazione Bruno Kessler, Italy) "Complex networks for the analysis of microbiome structures"	17.45 - 18.00	021 - <b>Sara Mancinelli</b> (IGB-CNR, Italy) "Design of Experiments implementation in a transfection protocol fine-tuning: Design of Transfections (DoT)"
12.50 - 13.05	012 - <b>Ettore Mosca</b> (ITB-CNR, Italy) "Network analysis of genetic variations in Autism Spectrum Disorders"	20.00	022 - <b>Roberto Croce</b> (ETH Zürich, Switzerland) "A quantitative Turing model validation for the simulation of lung branching morphogenesis"
13.05 - 13.20	013 - <b>Seetharaman Parashuraman</b> (IBP-CNR, Italy) "Unravelling druggable signalling networks that control F508del-CFTR proteostasis"		<i>Social Dinner</i>
13.20 - 14.15	Lunch		
<b>Session:</b>	<b>Dynamics of biological networks II</b> Chair: Gerardo Toraldo		
14.15 - 15.05	KN4 - <b>Panos M. Pardalos</b> (University of Florida, USA) "Optimization-Based Data Mining Approaches in Neuroscience Research"		
15.05 - 15.20	014 - <b>Elisabeth Remy</b> (I2M/AMU/CNRS, France) "Discrete dynamics of embedded regulatory circuits"		

**Wednesday, October 21<sup>st</sup>**

**Session:** **Dynamics of pattern recognition**

Chair: **Angelo Facchiano**

- 09.30 - 10.20 KN5 - **Morgane Thomas-Chollier** (Ecole Normale Supérieure, France)  
"Motifs search and discovery from genome scale experiments"

- 10.20 - 10.35 023 - **Giulia Fiscon** (Sapienza University of Rome, Italy)  
"Searching for equivalent compact solutions to classification problems for genomic sequences"

- 10.35 - 10.50 024 - **Ilaria Granata** (ICAR-CNR, Italy)  
"DecontaMiner: a pipeline for the detection and analysis of contaminating sequences in human NGS sequencing data"

- 10.50 - 11.05 025 - **Sonali Chavan** (IBP-CNR, Italy)  
"Dissecting the functions of secretory pathway by transcriptional profiling"

11.05 - 11.45 *Coffee break*

**Session:** **Dynamics of genomes and genetic variation**

Chair: **Marco Salvemini**

- 11.45 - 12.35 KN6 - **Marco Cosentino Lagomarsino** (Université Pierre et Marie Curie, France)  
"Quantitative laws in gene-family evolution"

- 12.35 - 12.50 026 - **Mariella Ferrante** (Stazione Zoologica Anton Dohrn, Italy)  
"Genome-enabled exploration of a toxic marine diatom"

- 12.50 - 13.05 027 - **Mariano Avino** (ICAR-CNR, Italy)  
"A web resource on skeletal muscle tissue specific transcriptome of Primates order"

- 13.05 - 13.20 028 - **Irma Terracciano** (CRA-ORT, Italy)  
"Sequence capture and target re-sequencing approaches to dissect naturally occurring allelic variation at candidate genes controlling carotenoid biosynthesis in tomato"

13.20 *Concluding Ceremony*

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Bringing Maths



Aula Magna Partenope  
Centro Congressi Federico II

Naples (Italy)  
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PROGRAM