

WIRN 2025 PROGRAM

Venue : Hotel "La Lucertola", via Cristoforo Colombo,29 84019 Vietri sul Mare – IT

DAY 1 – Wednesday June 4, 2025

8:30 Registration

9:00 Welcome by Mayor of Vietri sul Mare Giovanni De Simone

09:15 Welcome from the President and Organizers

09:30 – 10:15 "Maria Marinaro Lecture",
Professor Francesco Palmieri "Thinking Machines: myth or reality? A nearly agnostic perspective" Chair: Anna Esposito

10:15 – 10:45 Coffee break

10:45 – 12:45 (S1) Special Session on Dynamics of Signal Exchanges and Empathic Systems, part I. Organizers: Terry Amorese, Marialucia Cuciniello, Anna Esposito, Antonietta M. Esposito, Gennaro Cordasco, Antonio Perna, Carl Vogel. Chair: Marialucia Cuciniello

1. 10:45 – 11:00 Miriam Veneziano, Marialucia Cuciniello, Terry Amorese, Gennaro Cordasco, Antonio Perna and Anna Esposito: *The role of pleasure and utility in children's interaction with Virtual Agents and Robots. A pilot study*
2. 11:00 – 11:15 Nunzia Matascioli, Alessia Amabiletti, Francesca Mottola, Anna Pezzella, Luisa Almerico, Lucienne Perreca and Vincenzo Paolo Senese: *Avatar Identification and Interoceptive Awareness in MMOG Players: Validation of the Italian Avatar Identification Subscale*
3. 11:15 – 11:30 Luisa Almerico, Carla Nasti, Emanuela Manna, Anna Vicinanza, Nunzia Matascioli, Anna Pezzella, Roberto Marcone and Vincenzo Paolo Senese: *Assessment of Affective Signal Exchanges in Relational Memories: Psychometric Validation of the Italian Teacher Acceptance-Rejection Questionnaire (TARQ)*
4. 11:30 – 11:45 Margherita Stabile, Marco Scotto Rosato, Fabio Carraturo, Paolo Cotrufo and Stefania Cella: *Co-designing Wave Island: a serious game for emotion regulation abilities in early adolescence*
5. 11:45 – 12:00 Francesca Mottola, Augusto Gnisci, Marco Perugini and Ida Sergi: *Developmental changes of HEXACO personality traits and facets in middle school adolescents (10-14 years)*
6. 12:00 – 12:15 Roberta Esposito, Giacomo Fiacco, Adele Polito, Nunzia Landolfo, Gennaro Catone and Carla Nasti: *The Role of Explicit and Implicit Responses to Infant Faces in Caregiving Behaviour: A Preliminary Study Using an Infant Simulator*
7. 12:15 – 12:30 Fiammetta Marulli, Lelio Campanile and Michele Mastroianni: *Synthesizing Social Realism: Conditional Tabular GANs for Emotionally Intelligent ICT Interfaces*
8. 12:30 – 12:45 Lorenzo De Stefano: *From Presence to Trace The question of e-trust from a phenomenological perspective*

12:45 – 14:30 Lunch break

14:30 – 16:30 (S2) REGULAR Session. Chair: Francesco Prinzi

9. 14:30 – 14:45 Paolo Pagliuca, Giulia Tufo, Meriam Zribi and Francesca Pitolli: *Can ConvNet3_4 be a universal model? A preliminary investigation on the MNIST and CIFAR10 datasets*
10. 14:45 – 15:00 Paolo Pagliuca and Alessandra Vitanza: *Evolving effective neural networks in different domains with the OpenAI-ES algorithm*
11. 15:00 – 15:15 Alessandro Betti and Marco Gori: *The Principle of Least Causal Action*
12. 15:15 – 15:30 Claudio Pizzi: *A hybrid multi-scale model to forecast financial time series*
13. 15:30 – 15:45 Fabio Depaoli, Seyed Mohammad Mehdi Hosseini, Enrico Macii, Francesco Ponzio and Santa Di Cataldo: *Fixed Point-Aware Regularization of Physics-Informed Neural Networks*
14. 15:45 – 16:00 Jacopo Tevere, Gennaro Catone, Antonella Gritti, Angelo Matteo and Tiziana Salvati: *Hybrid Artificial Intelligence Approaches for Early ASD Diagnosis: A Critical Review and Clinical Applicability*
15. 16:00 – 16:15 Giovanna Apicella, Michele La Rocca, Cira Perna and Marilena Sibillo: *Forecasting the gender mortality gap through a neural network Lee-Carter model: what can we learn from Italian data?*
16. 16:15 – 16:30 Alessandro Rivetti, Francesco A. N. Palmieri, Giovanni Di Gennaro, Gianmarco Romano and Amedeo Buonanno: *Probing Information Distribution in Transformer Architectures through Entropy Analysis*

16:30 – 17:00 Coffee break

17:00 – 18:45 (S3) REGULAR Session. Chair: Amedeo Buonanno

17. **17:00 – 17:15** Luca Anzilli, Marta Cardin and Silvio Giove: *Towards Fairer Sanction Systems: Income-Based Models with Aggregation Functions*
18. **17:15 – 17:30** Luca Anzilli, Marta Cardin and Silvio Giove: *Multidimensional aggregation operators and measurement of Social Well-Being*
19. **17:30 – 17:45** Sandra Mitrović, Arsenii Bryndin and Francesco Flammini: *Assessing different strategies for augmenting data using LLMs for model performance improvement*
20. **17:45 – 18:00** Riccardo Cavallaro, Alessandro Carollo, Andrea Bizzego, Mengyu Lim and Gianluca Esposito: *Decreased Functional Connectivity in the Prefrontal Cortex during Role-Play Interactions*
21. **18:00 – 18:15** Carlo Aironi, Emanuele Principi, Leonardo Gabrielli and Stefano Squartini: *Reprogramming Pretrained Vision Models for Audio Classification: A Dual-Domain Approach*
22. **18:15 – 18:30** Muhammad Affan Khan, Giulia Tanoni, Paolo Vitulli, Emanuele Principi and Stefano Squartini: *An Adaptive Appliance-Incremental and Photovoltaic-Aware Load Disaggregation Framework for Smart Energy Management*
23. **18:30 – 18:45** Davide Lillini, Lucia Migliorelli, Carlo Aironi, Laura Ferretti, Alessandra D'Anna, Leonardo Gabrielli and Stefano Squartini: *Mitigating Label Noise in Sleep Apnea Detection via Co-Teaching and Siamese Learning*

DAY 2 – Thursday June 5, 2025

8:30 Registration

8:45 – 9:30 “Eduardo Renato Caianiello Lecture”

Professor Alessandro Vinciarelli “Is there a role for AI in psychiatric practice?” Chair: Francesco Carlo Morabito

9:30 – 10:00 Coffee break

10:00 – 11:30 (S4) REGULAR session. Chair: Michele Scarpiniti

24. **10:00 – 10:15** Muhammad Suffian, Cosimo Ieracitano, Francesco Carlo Morabito and Nadia Mammone: *Graph Neural Networks for EEG Classification in Brain Computer Interface Applications*
25. **10:15 – 10:30** Hicham Bouchana, Cosimo Ieracitano, Nadia Mammone, Gabriele Berardi, Piergiorgio Lanza and Francesco Carlo Morabito: *Comparative Evaluation of Deep Learning Models for Synthetic Mars Surface Classification*
26. **10:30 – 10:45** Marcel Musuamba Mukandila, Nadia Mammone, Cosimo Ieracitano, Vincenzo Mazzullo, Arcangelo R. Bruna, Valeria Tomaselli and Francesco C. Morabito: *A Deep Neural Model for embedded Brain Computer Interfaces controlled via QVAR sensor – based system*
27. **10:45 – 11:00** Michele Lo Giudice, Francesca Mariani, Giosuè Caliano, Francesco Carlo Morabito and Alessandro Salvini: *AI-generated image recognition using frequency analysis*
28. **11:00 – 11:15** Vincenzo Randazzo, Giorgia Ghione, Francesco Onori, Marco Di Benedetto, Giulia Di Nezio, Alessandro Lidozzi, Giansalvo Cirrincione and Eros Pasero: *Estimation of the passive components of a three-phase AC-DC boost rectifier using a Physics-Informed Neural Network*
29. **11:15 – 11:30** Pasquale Cantiello, Roberta Esposito, Alessandro Di Filippo and Rosario Peluso: *Improving Seismic Monitoring in Volcanic Regions: Near Real-Time Seismic Phases Recognition Using Deep Neural Networks in Campi Flegrei area*

11:30 – 11:45 Break

11:45 – 13:00 (S5) REGULAR session. Chair: Marcos Faundez-Zanuy

30. **11:45 – 12:00** Michele Scarpiniti, Giacomo Vittori and Aurelio Uncini: *Deep Learning-Based Drone Classification Using Radar Micro-Doppler Images*
31. **12:00 – 12:15** Federico Delrio, Vincenzo Randazzo, Eros Pasero and Giansalvo Cirrincione: *Hybrid Physics Informed Neural Network for Cuffless Non-Invasive Arterial Blood Pressure Estimation*
32. **12:15 – 12:30** Massimiliano Giordano Orsini, Alessio Ferone, Laura Inno, Angelo Casolaro and Antonio Maratea: *Flow Matching for Simulation-based Atmospheric Retrieval of Exoplanets*
33. **12:30 – 12:45** Sabina Greco, Francesco Prinzi, Carmelo Militello, Giovanni Cicceri, Orazio Gambino, Ludovico La Grutta and Salvatore Vitabile: *Hemodynamic Biomarkers from Coronary CT Imaging for Cardiovascular Risk Prediction: A Shallow Learning Approach*
34. **12:45 – 13:00** Vincenzo Randazzo, Alessandro Casella, Carla Giustetto, Fiorenzo Gaita and Eros Pasero: *Improving Brugada Syndrome Detection in ECG Recordings through Semi-Supervised Contrastive Learning*

13:00 – 14:30 Lunch break

14:30 – 15:15 BEST PhD THESIS “CAIANIELLO’S AWARD” Chairs Anna Esposito, Francesco Carlo Morabito, Eros Pasero, Gennaro Cordasco

15:15 – 16:15 (S7) Special Session on Machine Learning and Artificial Intelligence Applications for Civil Engineering Advancements organized by Marco Martino Rosso, Jonathan Melchiorre, Giuseppe Carlo Marano, Giansalvo Cirrincione, Giuseppe Quaranta, Amedeo Manuello Bertetto. Chair: Marco Martino Rosso

35. **15:15 – 15:30** Simone Saquella, Michele Scarpiniti, Wangyi Pu and Aurelio Uncini: *Post-earthquake Building Damage Level Classification based on a Vision Transformer Model*
36. **15:30 – 15:45** Jonathan Melchiorre, Amedeo Manuello Bertetto, Sigrid Adriaenssens and Giuseppe Carlo Marano: *Human-in-the-Loop Optimization for Creative Structural and Architectural Design*
37. **15:45 – 16:00** Marco Martino Rosso, Giansalvo Cirrincione, Giuseppe Quaranta and Giuseppe Carlo Marano: *Generating Synthetic Seismic Records Using Deep Learning*
38. **16:00 – 16:15** Mattia Siviero, Jonathan Melchiorre, Marco Martino Rosso, Giansalvo Cirrincione and Giuseppe Carlo Marano: *Evaluation of a Gaussian Mixture-based Estimation of Distribution Algorithm on structural engineering case studies*

16:15 – 16:45 Coffee break

16:45 – 18:00 (S8) Special Session on Dynamics of Signal Exchanges and Empathic Systems, part II. Organizers: Terry Amorese, Marialucia Cuciniello, Anna Esposito, Antonietta M. Esposito, Gennaro Cordasco, Antonio Perna, Carl Vogel. Chair: Terry Amorese

39. **16:45 – 17:00** Marialucia Cuciniello, Terry Amorese, Rosa Milo, Somdatta Chakraborty, Antonio Perna, Gennaro Cordasco and Anna Esposito: *The Role of Stimulus Gender and Rankings on Emotion Recognition: A Comparative Study on Participants’ Conformity*
40. **17:00 – 17:15** Flavia Morfini, Maria Cira Avvinto, Stefania Giordano, Sebastian Giuseppe Diego Cesarano, Manuel Maddaluno, Enrico Moretto, Valeria Cioffi, Angela Ammendola, Roberta Stanzione, Ottavio Ragozzino, Lucia Luciana Mosca, Natascia De Lucia, Benedetta Muzii, Nelson Mauro Maldonato and Raffaele Sperandeo: *The Autism Open Clinical Model (A.O.C.M.) and the Contribution of Home Automation: Design and Training of a Random Forest Classifier*
41. **17:15 – 17:30** Maria Sarno, Marialucia Cuciniello, Terry Amorese, Gennaro Cordasco, Vasco D’Agnese and Anna Esposito: *Exploring students’ acceptance of Pedagogical Agents: A pilot study on Hedonic Qualities*
42. **17:30 – 17:45** Somdatta Chakraborty, Terry Amorese, Marialucia Cuciniello, Rosa Milo, Antonio Perna, Gennaro Cordasco and Anna Esposito: *The Impact of Gender and Cultural Differences on Emotion Recognition*
43. **17:45 – 18:00** Tiziana Currieri, Francesco Prinzi, Gennaro Cordasco, Anna Esposito and Salvatore Vitabile: *Interpretable Speech-Based Classification of Alzheimer’s and Mild Cognitive Impairment: A Comparative Study on Acoustic Features and Explainable Machine Learning*

18:00 – 19:00 SIREN ANNUAL MEETING

20:00 – SOCIAL DINNER “Ristorante Il Pescatore”

DAY 3 – Friday June 6, 2025

8:30 – Registration

09:00 – 10:15 (S9) Special Session on Industrial and Business Applications of Artificial Intelligence, organized by Maurizio Fiasché and Francesco Timpano. Chairs: Maurizio Fiasché and Francesco Timpano

44. **09:00 – 09:15** Maurizio Fiasché and Stefano Gusinu: *Quantum Neural Networks: revolutionizing manufacturing and energy efficiency in a factory 5.0*
45. **09:15 – 09:30** Valentina Meroni, Giovanni De Maria and Renato Erba: *Personalized Forecasting of Insurance Sales for Subagents: Integrating Global Statistical Data and Local Historical Trends*
46. **09:30 – 09:45** Claudio Miotti, Maurizio Fiasché, Davide Giovannini, Barbara Maffei and Federico Maffei: *Definition of a new language for the optimization of Sales Force Automation: “Grammaticale” in SW4R*
47. **09:45 – 10:00** Nicole Sal, Federico Longobardi, Cristina Dore and Alberto Serra: *Autocalibrating Mathematical Models for Agronomic Decision Support Systems Using pyABC*
48. **10:00 – 10:15** Claudio Miotti, Maurizio Fiasché, Davide Giovannini, Barbara Maffei and Federico Maffei: *Ensemble Neural Networks for Natural Language Processing in a chatbot of sales force automation SW4R*

10:15 – 10:30 Coffee break

10:30 – 11:30 (S10) Special Session on Human-Centred Approaches Towards Responsible AI organized by Stefano Marrone and Lidia Marassi. Chairs: Stefano Marrone and Lidia Marassi

- 49. **10:30 – 10:45** Giuseppe Della Corte, Simone Cioffi, Gennaro Mellone, Emanuel Di Nardo and Angelo Ciaramella: *xAI for Marine Litter with Graph Convolutional Networks*
- 50. **10:45 – 11:00** Emanuela Palomba: *Empowering Democracy: a Human-Centred Approach to AI in Legislative Procedure*
- 51. **11:00 – 11:15** Michela Parente: *Content Moderation and Generative AI: How Current Legal Frameworks Struggle to Govern LLM Outputs*
- 52. **11:15 – 11:30** Piercosma Bisconti Lucidi and Federico Pierucci: *Prompting Won't Save Us: Why AI Needs Social Structures*

11:30 – 11:45 Break

11:45 – 13:30 (S11) Regular Session Chair Anna Esposito

- 53. **11:45 – 12:00** Ugo Fiore, Francesco Palmieri, and Francesco Giuseppe Zammarrelli: *LLM-based automatic traffic flow generation for assessing intrusion detection models*
- 54. **12:00 – 12:15** Gennaro Junior Pezzullo, Salvatore Venticinque and Beniamino Di Martino: *Machine Learning for User Profiling: a Comparative Analysis of Metadata and Textual Style in Social Comments*
- 55. **12:15 – 12:30** Gennaro Junior Pezzullo, Salvatore Venticinque and Beniamino Di Martino: *Detecting Misinformation and Disinformation with Large Language Models: A Comparative Evaluation across Performance Metrics and Computational Resources*
- 56. **12:30 – 12:45** Michele Scarpiniti, Wangyi Pu and Aurelio Uncini: *Investigation of Multiple ECG Representations for Arrhythmia Detection*
- 57. **12:45 – 13:00** Antonietta M. Esposito, Walter De Cesare, Giovanni Macedonio, Pierfrancesco Calabria and Flora Giudicepietro: *Stromboli's eruptive style changing identified using the MLP neural network*
- 58. **13:00 – 13:15** Mariangela Graziano, Luigi Colucci Cante, Beniamino Di Martino and Simonetta Ceglie: *Evaluating the Quality of the Generative Power of LLMs in Historical Research: Accuracy and Reliability of Responses on Central State Archive Sources*
- 59. **13:15 – 13:30** Mariangela Graziano, Luigi Colucci Cante, Beniamino Di Martino and Antonio Esposito: *Design Pattern Recognition in UML Sequence Diagram: Implementation of an Approach Based on Semantic Web Technologies and Hypergraphic Matching*

13:30 Conference Closing. Chair: Anna Esposito and Eros Pasero

Chair: Anna Esposito
Co-Chair: Eros Pasero

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