ADVANCES AND CHALLENGES OF AI

IITIS PAN & Polish Academy of Sciences Scientific Centre in Paris
Academia Europaea & LINCS (IMT)

PROGRAMME
27 OCTOBER

9:30 - 10:00 am   **Welcome coffee**

10:00 - 12:00 pm   **AI: The Bigger Picture**

Dr Bertrand Braunschweig, Science Coordinator of Confiance.ai,
AI Ecolsystem Expert at IRT SystemX, FR
AI: Trustworthiness and other matters not to run into the wall

Prof. Iryna Gurevych, MAE, Fellow of Leopoldina, TU Darmstadt, DE
*Please meet AI, our dear new colleague. In other words, can scientists
and machines truly cooperate?*

Dr Gael Varoquaux, INRIA, ENS (Paris), FR
Table Foundation Models to Effortless Statistical Data Science

Prof Maria Carla Calzarossa, Università di Pavia, IT
Explainable AI: accuracy, complexity and robustness

12:00 - 1:30 pm   **Lunch break and informal discussions**

1:30 - 3:30 pm   **Machine Learning Algorithms, Methods and Tools I**

Prof. Mira Mezini, MAE, Fellow of Leopoldina, TU Darmstadt, DE
*AI-Assisted Programming: From Intelligent Code Completion to Foundation Models
and Beyond*

Prof. Barbara Hammer, MAE, Fellow of Acatech, Universität Bielefeld, DE
Deep Surrogate Models in Critical Infrastructures

Prof. Michel Barlaud, Senior Member IUF, Université Côte d'Azur, FR
*A new Linear Time Bi-level $\{\ell 1,\infty\}$ Projection: Application to the sparsification of
transformer neural networks*

Prof. Erol Gelenbe, MAE, Fellow of NATFr, Foreign Fellow of Belgian Royal Academy
of Sciences & Polish Academy of Sciences, Hon.FHAS, IITIS PAN, PL
Random Markovian Learning and some of its Applications

| 3:30 - 4:00 pm | **Coffee break** |

| 4:00 - 5:00 pm | **AI in Healtcare** |

Prof. Sushmita Mitra, Fellow of Indian National Scence Academy & INAE, Indian Statistical Institute, IN
Harnessing AI for healthcare

Dr Sophie Martin, University College London, UK
Explainable AI for Dementia

| 7:00 pm | **Dinner** |

PROGRAMME 28 OCTOBER

| 9:00 - 9:30 am | **Welcome coffee** |

| 09:30 - 12:00 pm | **AI & Security, Safety and Trust I** |

Prof. Zheng Yan, Fellow of Finnish Academy of Science and Letters, FI; Xidian University, PRC
AI-Empowered Voiceprint Authentication Services with High Security, Privacy, and Usability

Prof. Jose Camacho, University of Granada, ES
Interpretable AIOps: anomaly detection and observability with a fully interpretable pipeline

Dr Katarzyna Wasielewska, University of Applied Sciences Elblag, PL
Garbage In, Breach Out: Why Dataset Quality Matters for Cybersecurity

Dr Amel Bennaceur, Open University, UK
Engineering safe and socially-aware AI systems

Mohammed Nasereddin and **Prof. Erol Gelenbe**, IITIS-PAN, PL
Detailed measurements of Random Neural Network attack detection on an experimental test-bed

| 12:00 - 1:00 pm | **Lunch break** |

1:00 - 2:00 pm   Machine Learning Algorithms, Methods and Tools II

Prof. Ole-Christoffer Granmo, CAIR, University of Agder, Anzys Technologies, NO
& **Prof Rishad Shafik**, Newcastle University, UK
Learning with Low Power Hardware and Tsetlin Machines

Prof. Manuel Roveri, Politecnico di Milano, IT
On-device Tiny Machine Learning: From algorithm to technology (and back)

2:00 - 2:30 pm   Industry reseach presentation

Edgardo Montes de Oca, Montimage, FR
AI related EU projects at Montimage, and the use of LLMs for cybersecurity, security testing and monitoring

2:30 - 3:00 pm   Conclusions and Publication Plans

Contact regarding the workshop:
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