

# Academia Europaea (AE)

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## AI Challenges for European Research and Academia

4-5 Sep. 2024

**Venue:** Lecture Theatre 311, Huxley Bldg. 3rd Floor, ICL, 180 Queens Gate, London SW7

**Sponsors:** Academia Europaea & CNRS Abraham de Moivre Math. Laboratory, ICL

**Co-Sponsor:** Foundation for Science and Technology, UK **AE Task Force on AI:** Erol Gelenbe MAE (Chair), Guy Brasseur MAE, Schahram Dustdar MAE, Thomas Eiter (MAE), Véronique Halloin, Alessandro Lenci **Organizing Committee:** Dan Crisan, Maths. Dept., ICL, Erol Gelenbe, Inst. Theoretical & Applied Informatics, Polish Acad. Sci., Federica Pratola, Maths.Dept. ICL

**For Invitation and Registration please Email: [seg@iitis.pl](mailto:seg@iitis.pl)**

## Preliminary Program

**Wednesday Sep 4, 2024**

**10.00am Welcome**

**10.10am-11.30 Introduction**

- **10.10-10.50** Eric Xing, President MBZUAI “Toward public and reproducible foundation models beyond lingual and visual intelligence: How a young university helps lead a young country in the premier league of global AI”
- **10.50-11.30** Zeina Zakhour, CTO Global Security Eviden/ATOS, “Interdisciplinary Perspectives on AI for Cybersecurity & Security for AI”

**11.30-12.30 Brain Modeling**

- Samuel Deslauriers-Gauthier, INRIA, “Modeling the Brain Connectome”
- Dan Farina, ICL “Mapping Brain and Spinal Sensorimotor Activity”

**12.30am-1.15pm Lunch**

**1.15pm-3.15pm Machine Learning I**

- Yonina Eldar MAE, FAcad.Sci.Israel, Weizmann Institute “Model-based Deep Learning”
- Eric Moulines FAcadSci Fr, Ecole Polytechnique “Bayesian inverse problems with denoising diffusion model”
- Marco di Renzo MAE, CNRS, Centrale Supélec “Smart Metasurfaces for Communications”

**3.15pm-3.30pm Coffee Break**

### **3.30pm-6.00pm Machine Learning II**

- Louis Wehenkel MAE, Liège Univ. “Physics informed ML for bulk electric power systems”
- Tolga Birdal, ICL “Topological Deep Learning: Beyond Graph Data”
- Ekin Dogus Cubuk, Google DeepMind “Scaling up computational materials discovery via deep learning”
- Erol Gelenbe MAE, IITIS & KCL “Wave Equation for Quantum Neural Networks”

### **6.00-7.00 Panel: Technical Challenges for Machine Learning**

Yonina Eldar, Erol Gelenbe, Iryna Gurevych, Zeina Zakhour

### **7.30pm Dinner for Speakers and Organizers at Ogniesko (Exhibition Road)**

**Thursday Sep 5, 2024**

### **9.30am to 10.30am AI in Cybersecurity, Trust and Privacy**

- Yves-Alexandre de Montjoye, ICL “Computational Privacy and AI”
- Zheng Yan, Xidan University “AI-empowered Trust and Trust-controlled AI”
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### **10.30am-10.45am Coffee Break**

### **10.45am-12.00am Research on Language Technology**

- Iryna Gurevych, TU Darmstadt, “How to InterText? Modeling Text as a Living Object in Context”, [iryna.gurevych@tu-darmstadt.de](mailto:iryna.gurevych@tu-darmstadt.de)
- Anna Korhonen, Univ. Cambridge “Towards globally equitable language technologies”
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### **12.00am - 12.45am Lunch Break**

### **12.45am-3.00pm AI in Healthcare**

- Benoît Macq FroyAcad Be, Louvain Univ. “Coalitional Learning for Healthcare”
- Payam Barnaghi, ICL, “AI for Personalized Healthcare Alerts”
- James Cole, UCL “AI in the Analysis of Brain Ageing”

### **3.00pm-3.15pm Coffee Break**

### **3.15pm-6.15pm AI in Engineering**

- Helen Li, Duke Univ. “Efficient Machine Learning: Algorithm-Hardware Co-design”
- Alexandra Brintrup, Cambridge Univ. , “Explainable AI for Supply Chains”
- Eiman Kanjo, Nottingham Trent Univ. & ICL “Tiny ML” [ekanjo@ic.ac.uk](mailto:ekanjo@ic.ac.uk)
- Emmanouil Spyarakos, KCL “Interchangeability of AI and Control Theory for Robot Control”