

1st Industry Collaboration and Transfer Exchange on AI

From Research to Market

6 - 7 May 2024

Innovation Center
Saarland University
66123 Saarbrücken, Germany

 Co-funded by
the European Union

Join us on our journey to facilitate the
seamless transfer of knowledge and
innovation from research to industry,
shaping the future of Artificial Intelligence
and its practical applications.

Workshop programme

6th May 2024

- 12:30 – 13:30** Welcome & Reception
- 13:30 - 13:45** **Synergy for Innovation: Enhancing Research Commercialisation Through Corporate and Startup Collaboration**
*Thomas Neubert - Founder/MD
Transatlantic AI eXchange (TAIX)*
- 13:45 – 14:05** **European AI Talent Networks bridging Academia and Industry**
*Laure Poirson - EIT ICT Labs Germany – AI Grid Project
Mohamed Behery - CLAIRE | Rising Researchers Network, RWTH Aachen University*
- 14:05 – 16:00** Parallel Working Groups
- 16:00 – 16:30** Coffee Break
- 16:30 - 18:00** Parallel Working Groups
- 18:00 - 21:00** Dinner & Socialising

7th May 2024

- 08:30 – 09:00** Welcome & Reception
- 09:00 - 09:15** **Trustworthy AI as a Driving Force for Societally Beneficial Innovations**
Kevin Baum, German-Research Center for Artificial Intelligence (DFKI)
- 09:15 – 09:35** **Best practices of Academic-Industry Collaboration from the VISION Project**
*Elizabeth EL HADDAD, Inria
Beatrice Bozzao, Intellera Consulting S.p.A.*
- 09:35 – 12:30** Parallel Working Groups
- 12:30 – 13:30** Lunch Break & Socialising
- 13:30 - 15:30** Parallel Working Groups
- 15:30 - 16:30** Plenary presentation of key findings from the Parallel Working Groups
- 16:30** Closing

Working Groups

Workshop 1:

Bleeding edge innovations or reliable solutions?

The suitability of research results for industry transfer depends on their Technology Readiness Level (TRL), ranging from cutting-edge (TRL8) to moderately advanced (TRL5). While TRL8 findings are readily adoptable, TRL5 results can be tailored to align closely with industry requirements. Hence, the key considerations are identifying the TRL of research outcomes and understanding the industry partners' specific needs. Let's discuss these aspects and the existing achievements together.

Workshop 2:

Reliable and Efficient Generative AI (GenAI)

Join us in discussing the future of GenAI and its on-device & in-cloud applications. Efficient fine-tuning proves its effectiveness against long and extensive training. Consequently, forthcoming hybrid AI models will have the ability to operate both locally on devices and in the cloud. Decisions about which model to employ will be influenced by factors such as 5G/6G network latencies, the availability of computational resources, and legal considerations.

Workshop 3:

Robustness of AI/ML Models

Robust AI/ML models are designed to maintain validity, performance, and resilience throughout their lifecycle, even in the face of changes or attacks. This involves implementing strategies to continuously monitor and adapt models to evolving conditions and potential threats. By prioritising robustness, organisations can enhance the reliability and effectiveness of their AI/ML solutions.

Workshop 4:

Trustworthiness of AI systems

Join us to explore how user needs influence the effectiveness of explanations versus analysability in promoting trust in AI/ML models, particularly in specialised contexts, such as neural network-based control systems. In some cases, such as those involving process engineers, analysability (e.g., sensitivity analysis), may be more beneficial than explanations. Tailoring approaches to provide the most relevant insights for users' specific needs can ultimately increase confidence in AI/ML models.

Workshop 5:

Bridging Simulation and Real Measurements

When developing AI/ML/statistical models, the gap between simulation (surrogate models) and real measurements must be closed – both sources of data are necessary, as typically either one alone lacks sufficient quantity or accuracy. How can these be closed?

Workshop 6:

Data Quality and Accessibility

Discover with us the growing acknowledgement of the importance of prioritising data quality, accessibility, and regulatory measures alongside algorithms to foster trustworthy AI. Initiatives like the European Commission's Data Governance Act and Common European Data Spaces aim to enhance data access. Furthermore, explore the potential of synthetic data as a promising alternative for AI applications, particularly when real data access is limited, aligning with efforts to improve trustworthiness and facilitate research and industry transfer in AI/ML.

Workshop 7:

AI in business processes and hidden risks

AI can streamline existing business processes, delivering immediate efficiency gains and simple return on investment calculations. Conversely, AI can also revolutionise non-existent or fundamentally changing processes, which is a riskier, but potentially more impactful route. Ultimately, the industry's appetite for risk will determine its approach to adopting AI solutions. But how high is it?

Workshop 8:

AI models and privacy

AI models applied in upstream activities rely on sensitive data, such as individual load curves and contract details, necessitating privacy safeguards to align with GDPR and national regulations. This involves implementing privacy-preserving practices like Differential Privacy in Stochastic Gradient Descent and defending against privacy attacks, enabling scalability across diverse applications and data types, including consumer or IoT data and structured or unstructured data. Discuss with us the necessary measures and their effective implementation to enable scalability across different data types and applications.

Workshop 9:

Neuro-symbolic AI : expert augmented AI

Multiple industry organisations use expert systems that include rules, ontologies and knowledge graphs for downstream activities, alongside neural models for learning from data. Combining symbolic reasoning with neural approaches improves performance, provides explainability and increases confidence in the model results, especially when symbolic knowledge cannot be directly converted into physical equations for neural networks. The aim of the workshop is to share methods and experiences in integrating symbolic and neural thinking, especially in scenarios where symbolic knowledge cannot be easily translated into neural networks.

Workshop 10:

TrustedAI: Generative AI to empower Traffic Event Scenario Generator

Join us in discussions while tackling the issue of out-of-distribution (OOD) data by leveraging generative AI and constraint satisfaction problem (ML) techniques, enhanced by a collection of explicit (symbolic) attributes. Our aim is to generate in-distribution traffic scenarios, including corner/critical traffic events, to achieve automation levels L3-L5 (SAE). Through a transfer of knowledge and know-how, delve into the significance of these challenges and the proposed solutions for the industry.

[Please register here.](#)

