

# WAISE 2023 Programme

Sept 19th, 2023, Toulouse, France

**08:45-09:00** Opening and welcome to WAISE 2022, Organisation Committee

## **Keynote Talk**

09:00-10:00 Challenges in Building Safe LLM-Powered Conversational Systems, *by Razvan Dinu, Principal Applied Scientist, NVIDIA*

## **10:00-10:30** Coffee break

### **Session 1: AI Uncertainty and Monitoring**

10:30-10:50 Contextualised Out-of-Distribution Detection using Pattern Identification. *Romain Xu-Darme, Julien Girard-Satabin, Darryl Hond, Gabriele Incorvaia and Zakaria Chihani*

10:50-11:10 Conformal Prediction and Uncertainty Wrapper: What Statistical Guarantees Can You Get for Uncertainty Quantification in Machine Learning?  
*Lisa Jöckel, Michael Klaes, Janek Groß and Pascal Gerber*

11:10-11:30 AERoS: Assurance of Emergent Behaviour in Autonomous Robotic Swarms.  
*Dhaminda Abeywickrama, James Wilson, Suet Lee, Greg Chance, Peter Winter, Arianna Manzini, Ibrahim Habli, Shane Windsor, Sabine Hauert and Kerstin Eder*

### **Session 2: Assurances for Autonomous Systems**

11:30-11:45 Towards Deep Anomaly Detection with Structured Knowledge Representations (Doctoral paper). *Konstantin Kirchheim*

11:45-12:00 A Reasonable Driver Standard for Automated Vehicle Safety.  
*Philip Koopman and William Widen*

## **12:00-13:00** Lunch break

### **Session 3: AI Safety (1)**

13:00-13:20 Safety Integrity Levels for Artificial Intelligence.  
*Simon Diemert, Laure Millet, Jonathan Groves and Jeffrey Joyce*

13:20-13:40 AIMOS: Metamorphic Testing of AI - An Industrial Application.  
*Augustin Lemesle, Aymeric Varasse, Zakaria Chihani and Dominique Tachet*

13:40-14:00 A Group-Level Learning Approach Using Logistic Regression For Fairer Decisions.  
*Marc Elliott and Deepak Padmanabhan*

### **Session 4: Assurances for Autonomous Systems 2**

14:00-14:20 Towards Safe Machine Learning Lifecycles with ESG Model Cards.  
*Thomas Bonnier and Benjamin Bosch*

14:20-14:40 Can Large Language Models assist in Hazard Analysis?  
*Simon Diemert and Jens Weber*

14:40-15:00 Short Birds of a Feather Session

## **15:00-15:30** Coffee break

### **Session 5: AI Safety (2)**

15:30-15:45 Evaluating and Increasing Segmentation Robustness in CARLA.  
*Venkatesh Sambandham, Konstantin Kirchheim and Frank Ortmeier*

15:45-16:00 Structuring Research Related to Dynamic Risk Management for Autonomous Systems. *Rasmus Adler, Jan Reich and Richard Hawkins*

## **Community Debate**

16:00-17:00 Plenary Discussion "Towards the Last Mile in Engineering Safe AI Systems".

17:00-17:10 WAISE2023 Wrap Up