



Roundtable “Next Generation AI” Topic I: AI and Uncertainty

CAS Livestream: Friday, 26 November 2021 (9:00 - 16:00 h)

(The event will take place as a **zoom meeting**. For participation please register at info@cas.lmu.de. You will then receive the link to access the event.)

- 9:00 - 9:05 Welcome: Lena Bouman (CAS) and Gitta Kutyniok (LMU)
- 9:05 - 10:05 **1. Session: Uncertainty in Machine Learning** (Chair: Eyke Hüllermeier)
- 9:05 - 09:35 **Eyke Hüllermeier** (LMU)
Aleatoric and epistemic uncertainty in machine learning
- 9:35 - 10:05 **Willem Waegeman** (Ghent University)
Valid prediction intervals for regression and time series forecasting problems
- 10:05 - 11:05 **2. Session: Uncertainty in Argumentation** (Chair: Stephan Hartmann)
- 10:05 - 10:35 **Ulrike Hahn** (Birkbeck and MCMP/LMU)
Argumentation, Bayes, and AI
- 10:35 - 11:05 **Stephan Hartmann** (MCMP/LMU)
Agency, Argumentation and the Future of Science
- 11:05 - 11:30 Break
- 11:30 - 12:30 **3. Session: Uncertainty Calculus** (Chair: Gitta Kutyniok)
- 11:30 - 12:00 **Thomas Augustin** (LMU)
Uncertainty beyond probability
- 12:00 - 12:30 **Dominik Janzing** (Amazon Science, Tübingen)
Causal insights from merging different data sources: ‘diverse data’ instead of ‘big data’
- 12:30 - 13:30 Break
- 13:30 - 14:30 **4. Session: Uncertainty in Interaction** (Chair: Julian Müller)
- 13:30 - 14:00 **Cornelius Fritz** (LMU)
Networks ≠ Networks
- 14:00 - 14:30 **Julian Müller** (Bamberg/LMU)
Uncertainty as a resource of interactions
- 14:30 - 15:00 Break
- 15:00 - 16:00 **5. Session: Uncertainty in Imaging** (Chair: Björn Ommer)
- 15:00 - 15:30 **Björn Ommer** (LMU)
Explainable models & normalizing flows for uncertain (visual) data
- 15:30 - 16:00 **Balthasar Schachtner** (LMU)
The many faces of uncertainty in radiological AI