

Uncertainty Quantification in Machine-learning

Open questions and industrial issues

Paris, 8 January 2025

Laboratoire National de Métrologie et d'Essais

1 rue Gaston Boissier, 75015 Paris

<https://www.lne.fr/fr/contact>

Speakers:

Loïc Coquelin (LNE)
Laurent Lefebvre (Framatome)
Damien Garreau (U. Würzburg)
Eiji Kawasaki (CEA)
Clément Mantoux (SNCF)
Aaditya Ramdas (Carnegie Mellon)
Yann Richet (IRSN)
Gaël Varoquaux (INRIA)
Margaux Zaffran (Berkeley)

Organizers:

- Groupe Fiabilité & Incertitudes" - SFdS
- Groupe MALIA - SFdS
- Réseau Thématique Matrisk - CNRS

**Registration is free
but mandatory:**

<https://tinyurl.com/UQinML>



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08:30 - 09:00 : welcome	
09:00 - 09:45	Margaux Zaffran (Berkeley) <i>On the hardness of group-conditional distribution-free predictive inference. An application to prediction with missing covariates</i>
09:45 - 10:30	Aaditya Ramdas (Carnegie Mellon) <i>Conformal online model aggregation</i>
10:30 - 11:00 : coffee break	
11:00 - 11:45	Damien Garreau (Julius-Maximilians-Universität Würzburg) <i>Attention Meets Post-hoc Interpretability: A Mathematical Perspective</i>
11:45 - 12:30	Gaël Varoquaux (CEA - INRIA) <i>How to judge uncertainty of a classifier?</i>
12:30 - 14:00 : lunch	
14:00 - 14:30	Yann Richet (IRSN) <i>Clustering Methods for Decision-making</i>
14:30 - 15:00	Laurent Lefebvre (Framatome) <i>Uncertainty Quantification in Artificial Neural Networks: Overview and Application in Nuclear Industries</i>
15:00 - 15:30	Eiji Kawasaki (CEA) <i>Uncertainty Quantification in deep learning for physical simulation</i>
15:30 - 16:00 : coffee break	
16:00 - 16:30	Loic Coquelin (LNE) <i>Uncertainty-aware learning models in the industry: main challenges</i>
16:30 - 17:00	Clément Mantoux (SNCF) <i>Prediction of train delays: a ML approach, towards uncertainty quantification</i>