

DEEP LEARNING & MATHEMATICAL TOOLS FOR 6G FAU-KU WORKSHOP

17 July 2025 at H16, Cauerstr. 7, Erlangen

WORKSHOP CHAIRS

Ralf Müller, Speaker Elite Study Program ASC
(Friedrich-Alexander-Universität Erlangen-Nürnberg)
Samson Lasaulce (Khalifa University)
Mérouane Debbah (Khalifa University)

INVITED SPEAKERS

Florian Euchner (University of Stuttgart)
Eduard Jorswieck (Technische Universität Braunschweig)
Abdel Lisser (Paris-Saclay University)
Slawomir Stanczak (Technische Universität Berlin)
Emiliano Traversi (ESSEC Paris)
Antonia Tulino (Università degli Studi di Napoli Federico II)
Benjamin Zaidel (Bar-Ilan University)
Abdellatif Zaidi (Huawei Paris)

PROGRAM

- 08:10 *Introduction by R. Müller*
- 08:15 *A Multi-Agent DRL Framework for Dynamic Control of Latency Critical Services by A. Tulino*
- 09:00 *Measurement Datasets for Machine Learning in Wireless Communications by F. Euchner*
- 09:45 *Distributed Statistical Learning: Architectures, Algorithms and Information and Communication Views by A. Zaidi*
- 10:30 COFFEE**
- 11:00 *Sparse NOMA: An Information Theoretic Perspective by B. M. Zaidel*
- 11:45 **Panel Maths for Deep Learning or Deep Learning for Maths?** Invited participants:
M. Debbah, A. Zaidi, A. Lisser and E. Traversi
- 12:30 LUNCH**
- 14:00 *Future of Resource Allocation and Optimization for Wireless: Somewhere Between “fmincon” and LLM Prompting? by E. Jorswieck*
- 14:45 *Network as Sensor: Gaining Insight into Beamforming Design for ICAS in 6G by S. Stanczak*
- 15:30 *Neural Networks for Solving some Nonlinear Optimization Problems by A. Lisser*
- 16:15 COFFEE**
- 16:45 **Poster Session by ASC** (Johanna Fröhlich, Marina Ritthaler, Levi Bohnacker, Paul Wawarek-López, Jan Claar)