

„Mathematics of Machine Learning“

Tutorial von Prof. Dr. Gitta Kutyniok, Institute of Mathematics, TU Berlin
am **03.05.2018, 13:00 – 17:00**
TU Berlin, Raum H 3005, Hauptgebäude, 3.OG
Straße des 17. Juni 135, 10623 Berlin

Programm der 31. Sitzung am 04.05.2018

— Advances in Information Theory, Coding, and Communications —

TU Berlin, Raum H 3005, Hauptgebäude, 3.OG
Straße des 17. Juni 135, 10623 Berlin

- 9:00 – 9:05 Dirk Wübben, *Arbeitsbereich Nachrichtentechnik, Universität Bremen*
Begrüßung
- 9:05 – 9:15 Giuseppe Caire, *Communication and Information Theory Chair, TU Berlin*
Lehrstuhlvorstellung

Sitzung I

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- 9:15 – 9:35 Maximilian Stark, *Institut für Nachrichtentechnik, TU Hamburg-Harburg*
Information-Optimum Quantizer Design in Sensor Networks - The Message Alignment Problem
- 9:35 – 9:55 Shayan Hassanpour, *Arbeitsbereich Nachrichtentechnik, Universität Bremen*
On the Equivalence of Double Maxima and KL-Means for Information Bottleneck-Based Source Coding
- 9:55 – 10:15 Cagkan Yapar, *Communication and Information Theory Chair, TU Berlin*
Information bottleneck for an oblivious relay with state information
- 10:15 – 10:35 Meik Dörpinghaus, *Vodafone Chair Mobile Communications Systems, TU Dresden*
Testing Optimality of Sequential Decision-Making
- 10:35 – 11:05 **Kaffeepause**

Sitzung II

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- 11:05 – 11:25 Andreas Benzin, *Communication and Information Theory Chair, TU Berlin*
On the real time capabilities of different massive MIMO precoder algorithms
- 11:25 – 11:45 Thomas Kühne, *Communication and Information Theory Chair, TU Berlin*
Hybrid Digital Analog Beamforming: theory and testbed implementation
- 11:45 – 12:05 Sebastian Stern, *Institute of Communications Engineering, Ulm University*
Quaternion-Valued MIMO Transmission via Dual-Polarized Antennas

- 12:05 –12:25 Xiaoshen Song, *Communication and Information Theory Chair, TU Berlin*
An Efficient Time-Domain Beam Alignment Scheme for Multi-User mmWave MIMO Systems
- 12:25 –12:45 Mahdi Barzegar Khalilsarai, *Communication and Information Theory Chair, TU Berlin*
Active Channel Sparsification: Realizing FDD Massive MIMO through Sparse Structures
- 12:45 –13:45 **Mittagessen**

Sitzung III

- 13:45 –14:05 Alexander Fengler, *Communication and Information Theory Chair, TU Berlin*
Coding for the OR/Adder channel
- 14:05 –14:25 Osman Musa, *Institute of Telecommunications, TU Wien*
Sparse Regression Codes - Approximate Message Passing, Convex Approaches and Empirical Findings
- 14:25 –14:45 Jan Brumm, *Institut für Nachrichtentechnik, TU Hamburg-Harburg*
Channel Capacity for Ultra Wideband In-Body Communication
- 14:45 –15:05 Thomas Delamotte, *Institut für Informationstechnik, Universität der Bundeswehr München*
MIMO Feeder Links for High Throughput Satellites
- 15:05 –15:25 Mozghan Bayat, *Communication and Information Theory Chair, TU Berlin*
Coded Caching in Wireless Networks
- 15:25 –15:55 **Kaffepause**

Sitzung IV

- 15:55 –16:10 Aizaz Shah, *Institut für Nachrichtentechnik, TU Hamburg-Harburg*
Information Bottleneck Methods in Polar Codes
- 16:10 –16:25 Ali Bereyhi, *Lehrstuhl für Digitale Übertragung, FAU Erlangen-Nürnberg*
Large-system Analysis of RLS recovery with Asymmetric Penalty
- 16:25 –16:40 Onur Günlü, *Institute for Communications Engineering, TU Munich*
Secret Key Agreement with Physical and Biometric Identifiers
- 16:40 –16:55 Matthias Frey, *Fachgebiet Netzwerk-Informationstheorie, TU Berlin*
The MAC Resolvability Region, Semantic Security and Its Operational Implications
- 16:55 – **Verabschiedung**