

Tuesday, December 3, 2019	
13:00 - 13:40	REGISTRATION & COFFEE
13:40	OPENING
13:45	Ingo Steinwart (Stuttgart) Some thoughts and questions towards a statistical understanding of DNNs
14:30	Dmitry Yarotsky (Moscow) The fast non-classical approximation phase in deep neural networks
15:15 - 15:45	COFFEE BREAK
15:45	Philipp Petersen (Vienna) High-dimensional approximation by deep neural networks in the context of parametric PDEs
16:30	Andrea Manzoni (Milan) Nonlinear dimensionality reduction of parametrized PDEs using deep learning techniques
16:50	Ilja Klebanov (Berlin) Rigorous theory of conditional mean embeddings

Wednesday, December 4, 2019	
09:00	Christoph Schwab (Zurich) Deep neural network expression for PDEs with uncertain input and data
09:45	Helmut Bölcskei (Zurich) Fundamental limits of deep neural network learning
10:30 – 11:00	COFFEE BREAK
11:00	Gitta Kutyniok (Berlin) Transferability of spectral graph convolutional neural networks
11:45	Ivan Oseledets (Moscow) Greedy algorithm for learning deep neural network architectures
12:30 – 14:00	LUNCH BREAK
14:00	Edwin Stoudenmire (New York) Theory of a generative machine learning algorithm based on matrix product states
14:45	Johannes Rauh (Leipzig) Approximation properties of stochastic neural networks
15:05 – 15:30	COFFEE BREAK
15:30	Patrick Gelß (Berlin) Tensor-based algorithms for image classification
15:50	Philipp Trunschke (Berlin) Image classification with tensor networks
16:10	Leon Sallandt (Berlin) A near model-free method for solving the Hamilton-Jacobi-Bellman equation in high dimensions
19:00 – 21:00	DINNER at “Umspannwerk OST”, Palisadenstr. 48, 10243 Berlin

Thursday, December 5, 2019	
09:00	Arnulf Jentzen (Münster) High-dimensional approximation capacities of deep neural networks
09:45	Philipp Grohs (Vienna) Phase transitions in rate-distortion theory and deep learning
10:30 – 11:00	COFFEE BREAK
11:00	Alexandra Carpentier (Magdeburg) Adaptive inference and its relations to sequential decision making
11:45	Pradeep Kr. Banerjee (Leipzig) Deep representation learning based on Blackwell sufficiency and the unique information
12:05	Pavel Dvurechensky (Berlin) On the complexity of optimal transport problems
12:25	CLOSING