

HPI Kolloquium

29.06.2017, 16:00 Uhr

Hasso-Plattner-Institut, Vorlesungsgebäude, Auditorium 3
Campus Griebnitzsee, 14482 Potsdam

“Sequence Modeling: From Spectral Methods and Bayesian Nonparametrics to Deep Learning”

Prof. Dr. Alex Smola

Director of Machine Learning at Amazon / Professor, Carnegie Mellon University

Abstract

In this talk I will summarize a few recent developments in the design and analysis of sequence models. Starting with simple parametric models such as HMMs for sequences we look at nonparametric extensions in terms of their ability to model more fine-grained types of state and transition behavior. In particular we consider spectral embeddings, nonparametric Bayesian models such as the nested Chinese Restaurant Franchise and the Dirichlet-Hawkes Process. We conclude with a discussion of deep sequence models for user return time modeling, time-dependent collaborative filtering, and large-vocabulary user profiling.

Short CV

Prof. Smola is a worldwide distinguished researcher in Machine Learning field, he has over 79859 google scholar citations. He studied physics in Munich at the University of Technology, Munich, at the Università degli Studi di Pavia and at AT&T Research in Holmdel. During this time he was at the Maximilianeum München and the Collegio Ghislieri in Pavia. In 1996 he received the Master degree at the University of Technology, Munich and in 1998 the Doctoral Degree in computer science at the University of Technology Berlin. Until 1999 he was a researcher at the IDA Group of the GMD Institute for Software Engineering and Computer Architecture in Berlin (now part of the Fraunhofer Gesellschaft). After that, he worked as a Researcher and Group Leader at the Research School for Information Sciences and Engineering of the Australian National University. From 2004 onwards he worked as a Senior Principal Researcher and Program Leader at the Statistical Machine Learning Program at NICTA. From 2008 to 2012 he worked at Yahoo Research. In spring of 2012 he moved to Google Research to spend a wonderful year in Mountain View and he continued working there until the end of 2014. Since 2013 he is professor at Carnegie Mellon University. He co-founded Marianas Labs in early 2015. Since July 2016 he is director of machine learning at Amazon.

Host: Prof. Dr. Christoph Meinel / Dr. Haojin Yang