UNIVERSITY OF PASSAU

Faculty of Business Administration and Economics

A cordial invitation to the opening talk of the
Brown Bag Seminar
Recent Developments in Data Science:

Almost model-free prediction of trending nonlinear seasonal series

by
Harry Haupt
and
Joachim Schnurbus

Date:	26.04.2021 (Monday) at 11:00
Location:	Zoom
Link and further information:	Course 39740 Seminar: Doctoral Seminar "Recent Developments in Data Science" in Stud.IP

Abstract:

Time series prediction methods rapidly evolve to meet increasingly complex amounts of data. Driven by algorithmic advance and availability they are also increasingly costly due to necessary data pre-processing, transformation, filtering, and the associated interpretation. We develop a prediction framework for time series which may exhibit complex forms of trend-season interactions. A multiplicative weighting scheme reflects the periodic nature of seasonal cycles and potential nonlinearities in local seasonal and global trend patterns. In contrast to competitors from statistics and machine learning the proposed local linear method is simple to interpret and has a low computation time, as bandwidth selection and prediction are based on the same automated prediction error validation. Its application and predictive performance neither depend on ad hoc data pre-processing/-filtering, nor assumptions on functional form. Monte Carlo and real data results illustrate the convincing (point and interval) prediction performance.

Speakers:

Prof. Dr. Harry Haupt

Chaired Full Professor of Statistics & Data Analytics at the University of Passau since 2012. Before that he was Chaired Full Professor for Statistics & Econometrics at Bielefeld University from 2007 to 2012. He was Vice President for Research & the Advancement of Early Career Researchers & International Matters at the University of Passau from 2014 to 2020 and Chairman of the Committee Statistical Theory & Methodology in the German Statistical Society from 2012 to 2020. His fields of research include econometric theory and applied statistics. He has published in internationally renowned journals such as Econometric Theory, Journal of Multivariate Analysis, Journal of Applied Econometrics and others.

PD Dr. Joachim Schnurbus

Head of Computational Statistics and Mathematics Teaching Unit at University of Passau since September 2018. Before this he finished his Postdoctoral studies (Habilitation) in Statistics at the University of Passau in 2017 and was Interim Professor of Statistics at the Ludwig-Maximilians-Universität Munich in 2018. His fields of research cover computational statistics and applied statistics. He has published in internationally renowned journals such as Journal of Applied Econometrics, Journal of Applied Statistics, Decision Support Systems and others.