

# Program

Date: Monday, 18/Mar/2019						
8:00am 8:45am	<b>Registration</b> Location: <a href="#">Foyer RW I</a>					
8:45am 9:00am	<b>Opening</b> Location: <a href="#">H24 (RW I)</a>					
9:00am 9:45am	<b>Plenary: Analyzing Retail Market Basket Data by Unsupervised Machine Learning Methods by Harald Hruschka (University of Regensburg, Germany)</b> Location: <a href="#">H24 (RW I)</a>					
9:45am 10:30am	<b>Plenary: Zero-Sum Regression by Rainer Spang (University of Regensburg, Germany)</b> Location: <a href="#">H24 (RW I)</a>					
10:30am 11:00am	<b>Coffee break</b> Location: <a href="#">Foyer RW I</a>					
11:00am 12:15pm	<b><a href="#">Statistics and Data Analysis</a></b> Location: <a href="#">S57 (RW I)</a>	<b><a href="#">Clustering 1</a></b> Location: <a href="#">S58 (RW I)</a>	<b><a href="#">Machine Learning 1</a></b> Location: <a href="#">S59 (RW I)</a>	<b><a href="#">Biostatistics and Bioinformatics 1</a></b> Location: <a href="#">S61 (RW I)</a>	<b><a href="#">Data Analysis in Finance 1</a></b> Location: <a href="#">S62 (RW I)</a>	<b><a href="#">Consumer Preferences and Marketing Analytics 1</a></b> Location: <a href="#">S64 (RW I)</a>
12:15pm 1:30pm	<b>Lunch (Monday)</b> Location: <a href="#">Frischraum (Mensa)</a>					
1:00pm 1:30pm	<b>Software Demonstration: Process Mining Using Celonis (Jerome Geyer-Klingeberg and Angela-Sophia Gebert, Celonis SE)</b> Location: <a href="#">H24 (RW I)</a>					
1:30pm 2:15pm	<b>Plenary: Co-Clustering – A Survey on Models, Algorithms and Applications by Hans-Hermann Bock (RWTH Aachen, Germany)</b> Location: <a href="#">H24 (RW I)</a>			<b>Plenary: Discrete Time-to-Event Analysis – Methods and Recent Developments by Matthias Schmid (University of Bonn, Germany)</b> Location: <a href="#">H25 (RW I)</a>		
2:15pm 3:00pm	<b>Plenary: Composite Indicators and Rankings by Andrzej Sokolowski (University of Krakow, Poland)</b> Location: <a href="#">H24 (RW I)</a>			<b>Plenary: Big Data Science in Systems Medicine – A Disruptive View on Current Medicine by Jan Baumbach (TU Munich, Germany)</b> Location: <a href="#">H25 (RW I)</a>		
3:00pm 3:30pm	<b>Coffee break</b> Location: <a href="#">Foyer RW I</a>					
3:30pm 5:10pm	<b><a href="#">Statistical Learning</a></b> Location: <a href="#">S57 (RW I)</a>	<b><a href="#">Clustering 2</a></b> Location: <a href="#">S58 (RW I)</a>	<b><a href="#">Interpretable Machine Learning 1</a></b> Location: <a href="#">S59 (RW I)</a>	<b><a href="#">Biostatistics</a></b> Location: <a href="#">S61 (RW I)</a>	<b><a href="#">Data Analysis in Finance 2</a></b> Location: <a href="#">S62 (RW I)</a>	<b><a href="#">Consumer Preferences and Marketing Analytics 2</a></b> Location: <a href="#">S64 (RW I)</a>
5:10pm 5:30pm	<b>Coffee break</b> Location: <a href="#">Foyer RW I</a>					
5:30pm 6:45pm	<b><a href="#">Data Science Education</a></b> Location: <a href="#">S57 (RW I)</a>	<b><a href="#">Machine Learning 2</a></b> Location: <a href="#">S59 (RW I)</a>	<b><a href="#">Biostatistics and Bioinformatics 2</a></b> Location: <a href="#">S61 (RW I)</a>	<b><a href="#">Data Analysis in Finance 3</a></b> Location: <a href="#">S62 (RW I)</a>	<b><a href="#">Consumer Preferences and Marketing Analytics 3</a></b> Location: <a href="#">S64 (RW I)</a>	
7:00pm 9:00pm	<b>Welcome Reception (Richard Wagner museum by walking or bus shuttle)</b> Location: <a href="#">Richard Wagner museum</a>					

<b>Date: Tuesday, 19/Mar/2019</b>						
9:00am 9:45am	<a href="#">Plenary: Using Microblogging to Predict IPO Success by Means of Apache Spark Big Data Analytics by Dirk Van den Poel (University of Ghent, Belgium)</a> Location: <a href="#">H24 (RW I)</a>			<a href="#">Plenary: Meta-Analysis and Symbolic Data Analysis by Masahiro Mizuta (Hokkaido University, Japan)</a> Location: <a href="#">H25 (RW I)</a>		
9:45am 11:00am	<a href="#">Complexity, Data Science and Statistics through Visualization and Classification 1</a> Location: <a href="#">S57 (RW I)</a>	<a href="#">Stream Mining 1</a> Location: <a href="#">S58 (RW I)</a>	<a href="#">Interpretable Machine Learning 2</a> Location: <a href="#">S59 (RW I)</a>	<a href="#">Data Analysis in Psychology</a> Location: <a href="#">S61 (RW I)</a>	<a href="#">Data Analysis in Finance 4</a> Location: <a href="#">S62 (RW I)</a>	<a href="#">Marketing Research</a> Location: <a href="#">S64 (RW I)</a>
11:00am 11:30am	<b>Coffee break</b> Location: <a href="#">Foyer RW I</a>					
11:30am 1:10pm	<a href="#">Complexity, Data Science and Statistics through Visualization and Classification 2</a> Location: <a href="#">S57 (RW I)</a>	<a href="#">Image and Text Mining</a> Location: <a href="#">S58 (RW I)</a>	<a href="#">Interpretable Machine Learning 3</a> Location: <a href="#">S59 (RW I)</a>	<a href="#">Data Analysis in Medicine, Health Care and Ecology</a> Location: <a href="#">S61 (RW I)</a>	<a href="#">Data Analysis in Industrial Automation 1</a> Location: <a href="#">S62 (RW I)</a>	<a href="#">Structural Equation Models in Marketing 1</a> Location: <a href="#">S64 (RW I)</a>
1:10pm 1:55pm	<b>General Meeting AG DANK</b> Location: <a href="#">S58 (RW I)</a>					
1:10pm 2:25pm	<b>Lunch (Tuesday)</b> Location: <a href="#">Frischraum (Mensa)</a>					
2:25pm 3:10pm	<a href="#">Plenary: CB-SEM or PLS-SEM? Five Perspectives and Five Recommendations by Marko Sarstedt (Otto von Guericke University Magdeburg, Germany)</a> Location: <a href="#">H24 (RW I)</a>			<a href="#">Plenary: Relations Among K-means, Mixture of Distributions, and Fuzzy Clustering by Sadaaki Miyamoto (University of Tsukuba, Japan)</a> Location: <a href="#">H25 (RW I)</a>		
3:10pm 4:25pm	<a href="#">Debate: Data Science - Occupation or Profession?</a> Location: <a href="#">S57 (RW I)</a>	<a href="#">Stream Mining 2</a> Location: <a href="#">S58 (RW I)</a>	<a href="#">Machine Learning 3</a> Location: <a href="#">S59 (RW I)</a>	<a href="#">Data Analysis in Industrial Automation 2</a> Location: <a href="#">S62 (RW I)</a>	<a href="#">Structural Equation Models in Marketing 2</a> Location: <a href="#">S64 (RW I)</a>	
4:25pm 4:45pm	<b>City Tour</b> Location: <a href="#">Foyer RW I</a>			<b>Coffee break</b> Location: <a href="#">Foyer RW I</a>		
4:30pm 6:00pm	<b>General Meeting GfKI</b> Location: <a href="#">S57 (RW I)</a>					
7:00pm	<b>Conference Dinner at Restaurant "Liebesbier"</b> Location: <a href="#">Liebesbier Restaurant &amp; Craft-Bier</a>					

**Date: Wednesday, 20/Mar/2019**

9:00am 9:45am	<b>PLS-SEM 1: Partial Least Squares Structural Equation Modeling Workshop - Introduction</b> Location: <a href="#">S57 (RW I)</a>		<b>Plenary: Archetypes, Prototypes and Other Types: The Current State and Prospects for Future Research by Francesco Palumbo (University of Naples Federico II, Italy)</b> Location: <a href="#">H24 (RW I)</a>			
9:45am 11:00am	<b>PLS-SEM 2: Fundamentals of Measurement I</b> Location: <a href="#">S57 (RW I)</a>	<b><a href="#">Dimension Reduction 1</a></b> Location: <a href="#">S58 (RW I)</a>	<b><a href="#">Machine Learning 4</a></b> Location: <a href="#">S59 (RW I)</a>	<b><a href="#">Data Analysis in Social Sciences 1</a></b> Location: <a href="#">S61 (RW I)</a>	<b><a href="#">Data Analysis Models in Economics and Business 1</a></b> Location: <a href="#">S62 (RW I)</a>	<b><a href="#">Social Network Analysis</a></b> Location: <a href="#">S64 (RW I)</a>
11:00am 11:30am	<b>Coffee break</b> Location: <a href="#">Foyer RW I</a>					
11:30am 12:45pm	<b>PLS-SEM 3: Fundamentals of Measurement II</b> Location: <a href="#">S57 (RW I)</a>	<b><a href="#">Dimension Reduction 2</a></b> Location: <a href="#">S58 (RW I)</a>	<b><a href="#">Machine Learning 5</a></b> Location: <a href="#">S59 (RW I)</a>	<b><a href="#">Data Analysis in Social Sciences 2</a></b> Location: <a href="#">S61 (RW I)</a>	<b><a href="#">Data Analysis Models in Economics and Business 2</a></b> Location: <a href="#">S62 (RW I)</a>	<b><a href="#">Innovation</a></b> Location: <a href="#">S64 (RW I)</a>
12:45pm 1:00pm	<b>Closing of the Conference</b> Location: <a href="#">H24 (RW I)</a>					
1:00pm 1:45pm	<b>Lunch (Wednesday)</b> Location: <a href="#">Frischraum (Mensa)</a>					
1:45pm 3:00pm	<b>PLS-SEM 4: Assessment of PLS-SEM: Results and Exercises I</b> Location: <a href="#">S57 (RW I)</a>					
3:00pm 3:15pm	<b>Coffee break</b> Location: <a href="#">Foyer RW I</a>					
3:15pm 5:00pm	<b>PLS-SEM 5: Assessment of PLS-SEM: Results and Exercises II; Outlook on Advanced Topics</b> Location: <a href="#">S57 (RW I)</a>					

# Conference Agenda

## MONDAY

8:00am - 8:45am <u>Foyer RW I</u>	<b>Registration</b>
8:45am - 9:00am <u>H24 (RW I)</u>	<b>Opening</b> Daniel Baier (University of Bayreuth, General Conference Chair ECDA2019), Torsten Eymann (University of Bayreuth, Vice President for Information Technology & Entrepreneurship), Berthold Lausen (President IFCS, President GfKI, Program Chair ECDA2019), Francesco Palumbo (University of Naples Federico II, General Conference Chair ECDA2020)
9:00am - 9:45am <u>H24 (RW I)</u>	<b>Plenary: Analyzing Retail Market Basket Data by Unsupervised Machine Learning Methods by Harald Hruschka (University of Regensburg, Germany)</b> Session Chair: <b>Winfried Steiner</b>
9:45am - 10:30am <u>H24 (RW I)</u>	<b>Plenary: Zero-Sum Regression by Rainer Spang (University of Regensburg, Germany)</b> Session Chair: <b>Berthold Lausen</b>
10:30am - 11:00am <u>Foyer RW I</u>	<b>Coffee break</b>
11:00am - 12:15pm <u>S57 (RW I)</u>	<b>Statistics and Data Analysis</b> Session Chair: <b>Ulrich Müller-Funk</b>
	<b>Interpretability of Prediction Intervals for Neural Net</b> <u>Claus Weihs</u> , Malte Jastrow University of Dortmund, Germany
	<b>Sense and Sensibility: Measuring the Predictive Significance of Classifiers</b> <u>Ulrich Müller-Funk</u> <sup>1</sup> , Stefanie Weiß <sup>2</sup> <sup>1</sup> Westfälische Wilhelms-Universität Münster, Germany; <sup>2</sup> Deutsche Telekom
	<b>On the Use of the Imprecise Dirichlet Model in the Case of Missing Data</b> <u>Aziz Omar</u> <sup>1,2</sup> , Thomas Augustin <sup>1</sup> <sup>1</sup> Department of Statistics, LMU Munich, Germany; <sup>2</sup> Helwan University, Egypt
11:00am - 12:15pm <u>S58 (RW I)</u>	<b>Clustering 1</b> Session Chair: <b>Christian Hennig</b>
	<b>A Multivariate Characterisation of Clustering Quality and Validity</b> <u>Christian Hennig</u> University of Bologna, Italy
	<b>On a Class of Minimum Distance Aggregation Clustering Algorithms Based on Bi-Partial Objective Function</b> <u>Jan W. Owsinski</u> Systems Research Institute, Polish Academy of Sciences, Poland
	<b>Cluster Validation for Mixed-type Data</b> <u>Rabea Aschenbruck</u> , Gero Szepannek Hochschule Stralsund, Germany
11:00am - 12:15pm <u>S59 (RW I)</u>	<b>Machine Learning 1</b> Session Chair: <b>Josef Schosser</b>
	<b>Multivariate Extrapolation – a Tensor-Based Approach</b> <u>Josef Schosser</u> , Angelika Schmid University of Passau, Germany

	<p><b>Time Series Forecasting Using Variants of Recurrent Neural Networks</b>  <u>CHETTAN KUMAR</u>, SAFAK KURT, Stefan Schöning, Stefan Jablonski  University of Bayreuth</p>
11:00am - 12:15pm S61 (RW I)	<p><b>Biostatistics and Bioinformatics 1 (organized by Dominik Heider)</b>  Session Chair: <b>Rainer Spang</b></p>
	<p><b>An Effects Size Measure Based on Probabilities and Covering Data Sets where Cohen's d is not Applicable</b>  <u>Alfred Ultsch</u><sup>1</sup>, Jörn Lötsch<sup>2,3</sup>  <sup>1</sup>DataBionics Research Group, University of Marburg, Hans - Meerwein - Straße, 35032 Marburg, Germany; <sup>2</sup>Institute of Clinical Pharmacology, Goethe - University, Theodor Stern Kai 7, 60590 Frankfurt am Main, Germany; <sup>3</sup>Fraunhofer Institute for Molecular Biology and Applied Ecology IME, Project Group Translational Medicine and Pharmacology TMP, Theodor – Stern - Kai 7, 60590 Frankfurt am Main, Germany</p> <hr/> <p><b>Incorporating Foreign Classes in Feature Selection Processes</b>  <u>Robin Szekely</u>, Ludwig Lausser, Hans A. Kestler  Institute of Medical Systems Biology, Ulm University, Germany</p> <hr/> <p><b>A Comparative Study on Peptide Encodings for Biomedical Classification</b>  <u>Sebastian Spänig</u>, Dominik Heider  Department of Bioinformatics, Faculty of Mathematics and Computer Science, University of Marburg, Germany</p>
11:00am - 12:15pm S62 (RW I)	<p><b>Data Analysis in Finance 1</b>  Session Chair: <b>Hermann Locarek-Junge</b></p>
	<p><b>Minimum MSE Hedging of Complex Financial Retail Structured Products in Discrete Time</b>  <u>Philip Rosenthal</u>, Rainer Baule  University of Hagen, Germany</p> <hr/> <p><b>The Volatility of Hourly Electricity Contracts on the Continuous Intraday Market</b>  <u>Michael Naumann</u>  University of Hagen, Germany</p> <hr/> <p><b>The Impact of Financial Speculation on Commodity Prices: A Meta-Granger Analysis</b>  Jerome Geyer-Klingenberg, Marie Hütter, Andreas Rathgeber, Florian Schmid, <u>Thomas Wimmer</u>  Institute of Materials Resource Management, University of Augsburg, Werner-von-Siemens-Straße 6, 86159 Augsburg, Germany.</p>
11:00am - 12:15pm S64 (RW I)	<p><b>Consumer Preferences and Marketing Analytics 1 (organized by Reinhold Decker and Winfried Steiner)</b>  Session Chair: <b>Winfried Steiner</b></p>
	<p><b>Ranking, Rating, and Pairwise Comparisons: On Transformations between Representations of Preference Structures</b>  <u>Andreas Geyer-Schulz</u>  Karlsruhe Institute of Technology, Germany</p> <hr/> <p><b>Multimodal Preference Heterogeneity in Choice-Based Conjoint Analysis: A Simulation Study</b>  <u>Nils Goeken</u><sup>1</sup>, Peter Kurz<sup>2</sup>, Winfried Steiner<sup>1</sup>  <sup>1</sup>Clausthal University of Technology; <sup>2</sup>bms marketing research &amp; strategy</p> <hr/> <p><b>Optimizing Tickets for Sport Event Spectators</b></p>

	<u>Mario Kaiser</u> , Herbert Woratschek University of Bayreuth, Germany
12:15pm - 1:30pm <u>Frischraum</u> (Mensa)	<b>Lunch (Monday)</b>
1:00pm - 1:30pm <u>H24 (RW I)</u>	<b>Software Demonstration: Process Mining Using Celonis (Jerome Geyer-Klingenberg and Angela-Sophia Gebert, Celonis SE)</b> Session Chair: <b>Daniel Baier</b>
1:30pm - 2:15pm <u>H24 (RW I)</u>	<b>Plenary: Co-Clustering – A Survey on Models, Algorithms and Applications by Hans-Hermann Bock (RWTH Aachen, Germany)</b> Session Chair: <b>Claus Weihs</b>
1:30pm - 2:15pm <u>H25 (RW I)</u>	<b>Plenary: Discrete Time-to-Event Analysis – Methods and Recent Developments by Matthias Schmid (University of Bonn, Germany)</b> Session Chair: <b>Hans Kestler</b>
2:15pm - 3:00pm <u>H24 (RW I)</u>	<b>Plenary: Composite Indicators and Rankings by Andrzej Sokolowski (University of Krakow, Poland)</b> Session Chair: <b>Akinori Okada</b>
2:15pm - 3:00pm <u>H25 (RW I)</u>	<b>Plenary: Big Data Science in Systems Medicine – A Disruptive View on Current Medicine by Jan Baumbach (TU Munich, Germany)</b> Session Chair: <b>Dominik Heider</b>
3:00pm - 3:30pm <u>Foyer RW I</u>	<b>Coffee break</b>
3:30pm - 5:10pm <u>S57 (RW I)</u>	<b>Statistical Learning (organized by Angela Montanari)</b> Session Chair: <b>Angela Montanari</b>
	<b>The Importance of Being Clustered: Uncluttering the Trends of Statistics from 1970 to 2015</b> <u>Laura Anderlucci</u> , <u>Angela Montanari</u> , <u>Cinzia Viroli</u> University of Bologna, Italy
	<b>Covariate Selection in Non-Gaussian Linear Regression Models: a Bayesian Solution</b> <u>Giuliano Galimberti</u> , <u>Saverio Ranciati</u> , <u>Gabriele Soffritti</u> Università di Bologna, Italy
	<b>An Algebraic Estimator for Large Spectral Matrices</b> <u>Matteo Farnè</u> <sup>1</sup> , <u>Matteo Barigozzi</u> <sup>2</sup> <sup>1</sup> University of Bologna, Italy; <sup>2</sup> London School of Economics and Political Science, UK
	<b>Fast and Robust Model Selection Based on Ranks</b> <u>Wojciech Rejchel</u> <sup>1</sup> , <u>Malgorzata Bogdan</u> <sup>2</sup> <sup>1</sup> Nicolaus Copernicus University in Torun; <sup>2</sup> University of Wroclaw
3:30pm - 5:10pm <u>S58 (RW I)</u>	<b>Clustering 2</b> Session Chair: <b>Fionn Murtagh</b>
	<b>Bounds for the Number of Partitions of a Graph</b> <u>Fabian Ball</u> , <u>Andreas Geyer-Schulz</u> Karlsruhe Institute of Technology, Germany
	<b>A Bipartite-Graph Based Approach for Split-Merge Evolutionary Clustering</b> <u>Veselka Boeva</u> <sup>1</sup> , <u>Milena Angelova</u> <sup>2</sup> , <u>Elena Tsiporkova</u> <sup>3</sup> <sup>1</sup> Blekinge Institute of Technology, Sweden; <sup>2</sup> Technical University of Sofia, Plovdiv, Bulgaria; <sup>3</sup> The Collective Center for the Belgian technological industry, Brussels, Belgium

	<p><b>A Study on the Improvement of the Overlapping Cluster Analysis</b>  <u>Satoru Yokoyama</u>  Aoyama Gakuin University, Japan</p> <hr/> <p><b>Clustering Ranking Data via Copulas</b>  <u>Marta Nai Ruscone</u>  LIUC, Italy</p>
3:30pm - 5:10pm S59 (RW I)	<p><b>Interpretable Machine Learning 1 (organized by Johannes Fürnkranz, Eneldo Loza Mencía and Ute Schmid)</b>  Session Chair: <b>Johannes Fürnkranz</b></p>
	<p><b>Interpretable Decision Sets - An Analysis</b>  <u>Jiri Filip</u>, Tomas Kliegr  University of Economics, Prague, Czech Republic</p> <hr/> <p><b>Explaining Interpretable Models: A General Process Model for Explanation Generation in Inductive Logic Programming</b>  <u>Mark Gromowski</u>, Michael Siebers, Ute Schmid  Cognitive Systems Group, University of Bamberg, Germany</p> <hr/> <p><b>Methods for Understanding the Influence of Input Variables on the Decision of a Deep Artificial Neural Network</b>  <u>Torsten Dietl</u>  Technische Universität Darmstadt, Germany</p> <hr/> <p><b>Comparing Regularization Methods for Activation Maximization</b>  <u>Antonia Hain</u>, Ulf Krumnack  University of Osnabrück, Germany</p>
3:30pm - 5:10pm S61 (RW I)	<p><b>Biostatistics</b>  Session Chair: <b>Hans Kestler</b></p>
	<p><b>Semantic Multi-class Classifier Systems in Precision Medicine</b>  <u>Lea Siegle</u>, Ludwig Lausser, Hans A. Kestler  Institute of Medical Systems Biology, Ulm University, Germany</p> <hr/> <p><b>Attributable Fraction in Multifactorial Situations – Concepts and Properties of Commonly Used Methods</b>  <u>Carolin Malsch</u><sup>1,2</sup>  <sup>1</sup>Institute of Clinical Epidemiology and Biometry, University of Würzburg, Germany; <sup>2</sup>Comprehensive Heart Failure Center, University Hospital of Würzburg, Germany</p> <hr/> <p><b>Improving Classification of Single-Cell Data Using Consensus Clustering Based on Different Laplacian eigenmaps</b>  <u>Cornelia Fütterer</u><sup>1</sup>, Thomas Augustin<sup>1</sup>, Christiane Fuchs<sup>2</sup>  <sup>1</sup>LMU München, Germany; <sup>2</sup>Helmholtz Zentrum München and Universität Bielefeld</p>
3:30pm - 5:10pm S62 (RW I)	<p><b>Data Analysis in Finance 2 (organized by Krzysztof Jajuga)</b>  Session Chair: <b>Krzysztof Jajuga</b></p>
	<p><b>Systemic risk and measures of connectedness in financial system for chosen countries</b>  <u>Katarzyna Kuziak</u>, Krzysztof Piontek  Wrocław University of Economics, Poland</p> <hr/> <p><b>Low Volatility Anomaly and Value at Risk: Risk-adjusted Returns of Stock Portfolios Based on VaR Predictions</b>  <u>Bernhard Lange</u>, Matthias Gehrke  FOM University of Applied Sciences, Germany</p>

	<hr/> <p><b>What Makes the Crowd Wise? An Empirical Analysis of Fundamental Information, Investor Sentiment, and Stock Market Performance</b>  Brigitte Eierle, <u>Sebastian Klamer</u>, Matthias Muck  University of Bamberg, Germany</p> <hr/> <p><b>The Degree of Corporation Diversification: Insights from Ownership Concentration and Ownership Identity</b>  Joachim Rojahn, <u>Florian Zechser</u>  isf Institute for Strategic Finance, FOM Hochschule, Essen, Germany</p>
3:30pm - 5:10pm <u>S64 (RW I)</u>	<p><b>Consumer Preferences and Marketing Analytics 2 (organized by Reinhold Decker and Winfried Steiner)</b>  Session Chair: <b>Harald Hruschka</b></p>
	<p><b>Adaptive CBC: Are the Benefits Justifying its Additional Efforts Compared to Traditional CBC?</b>  <u>Benedikt Martin Brand</u>, Daniel Baier  University of Bayreuth, Germany</p> <hr/> <p><b>Value Creation in Fashion Retailing: Empirical Findings of a Jobs-To-Be-Done Framework Application</b>  <u>Franziska Kullak</u>, Daniel Baier, Herbert Woratschek  University of Bayreuth, Germany</p> <hr/> <p><b>Recommender Systems for Personalized Advertising: Success Factors for Designing Product Recommendations from a Customers' Perspective</b>  <u>Timo Schreiner</u>, Alexandra Rese, Daniel Baier  University of Bayreuth, Germany</p> <hr/> <p><b>Measuring Preferences for Complex Products – Self-explicated Methods vs. Pairwise Comparison-based Preference Measurement (PCPM)</b>  <u>Jörgen Eimecke</u><sup>1</sup>, Madeline Hecht<sup>2</sup>, Julia Clara Buchold<sup>2</sup>, Daniel Baier<sup>2</sup>  <sup>1</sup>BF/M-Bayreuth e.V., Germany; <sup>2</sup>University of Bayreuth, Germany</p>
5:10pm - 5:30pm <u>Foyer RW I</u>	<p><b>Coffee break</b></p>
5:30pm - 6:45pm <u>S57 (RW I)</u>	<p><b>Data Science Education</b>  Session Chair: <b>Karsten Lübke</b></p>
	<p><b>Causal Modelling for Data Literacy - in Intro Stats?</b>  <u>Karsten Lübke</u><sup>1</sup>, Matthias Gehrke<sup>1</sup>, Jörg Horst<sup>2</sup>, Sebastian Sauer<sup>1</sup>  <sup>1</sup>FOM University of Applied Sciences, Germany; <sup>2</sup>Bielefeld University of Applied Sciences, Germany</p> <hr/> <p><b>Industrial Data Science: implementation of a qualification concept for machine learning in industrial production</b>  <u>Jennifer Neuhaus-Stern</u>, Nadja Bauer, Daniel Horn, Malte Jastrow, Claus Weihs  TU Dortmund University, Germany</p> <hr/> <p><b>'Optimal' Data Reduction in Non-Stationary Systems</b>  <u>Jakob Krause</u>  MLU Halle-Wittenberg, Germany</p>
5:30pm - 6:45pm <u>S59 (RW I)</u>	<p><b>Machine Learning 2</b>  Session Chair: <b>Atsuho Nakayama</b></p>
	<p><b>Amharic Handwritten Character Recognition Using Convolutional Neural Network</b>  Mesay Samuel Gondere<sup>1</sup>, Lars Schmidt-Thieme<sup>2</sup>, Abiot Sinamo Boltena<sup>3</sup>, <u>Hadi Samer Jomaa</u><sup>2</sup></p>



	<p><sup>1</sup>Faculty of Computing and Software Engineering, Arba Minch University, Ethiopia; <sup>2</sup>Information Systems and Machine Learning Lab, University of Hildesheim, Germany; <sup>3</sup>School of Computing, Ethiopian Institute of Technology-Mekelle, Mekelle University</p> <hr/> <p><b>A Research Survey on Applications of Recurrent Neural Networks and its Variants</b>  <u>CHETTAN KUMAR</u>, Muhammad Hassaan, Stefan Jablonski  University of Bayreuth</p>
5:30pm - 6:45pm S61 (RW I)	<p><b>Biostatistics and Bioinformatics 2 (organized by Dominik Heider)</b>  Session Chair: <b>Dominik Heider</b></p>
	<p><b>A Novel Privacy-preserving Software Framework for Federated Machine Learning in Clinical Settings</b>  <u>Marta Lemanczyk</u>, Dominik Heider  Department of Mathematics and Computer Science, Philipps-University of Marburg, Germany</p> <hr/> <p><b>Inverse Document Frequency as the Distance for Clustering Gene Sets</b>  <u>Michael Christoph Thrun</u><sup>1</sup>, Catharina Lippmann<sup>2</sup>, Ultsch Alfred<sup>1</sup>  <sup>1</sup>Databionics Research Group, University of Marburg, Germany; <sup>2</sup>Fraunhofer Institute of Molecular Biology and Applied Ecology - Project Group Translational Medicine and Pharmacology (IME-TMP), Theodor-Stern-Kai 7, 60590 Frankfurt am Main</p> <hr/> <p><b>Extracting Ordinal Substructures from Multi-categorical Datasets</b>  <u>Lisa M. Schäfer</u>, Ludwig Lausser, Hans A. Kestler  Institute of Medical Systems Biology, Ulm University, Germany</p>
5:30pm - 6:45pm S62 (RW I)	<p><b>Data Analysis in Finance 3</b>  Session Chair: <b>Hermann Locarek-Junge</b></p>
	<p><b>Negations and Newspaper Sentiment – Improving and Testing the BPW-Dictionary</b>  <u>Matthias Pöferlein</u>  University of Bayreuth, Germany</p> <hr/> <p><b>Bubble Detection in Error Correction Models</b>  <u>Leopold Sögner</u><sup>1</sup>, Martin Wagner<sup>2</sup>  <sup>1</sup>Institute for Advanced Studies, Austria; <sup>2</sup>TU Dortmund</p>
5:30pm - 6:45pm S64 (RW I)	<p><b>Consumer Preferences and Marketing Analytics 3 (organized by Reinhold Decker and Winfried Steiner)</b>  Session Chair: <b>Reinhold Decker</b></p>
	<p><b>Investigating Machine Learning Techniques for Solving NP-hard Product-line Optimization Problems</b>  <u>Sascha Vökler</u><sup>1</sup>, Daniel Baier<sup>2</sup>  <sup>1</sup>Brandenburg University of Technology Cottbus-Senftenberg, Germany; <sup>2</sup>University of Bayreuth, Germany</p> <hr/> <p><b>New Notion of Constructing Brand Switching Matrix with Diagonal Elements</b>  <u>Akinori Okada</u><sup>1</sup>, Hiroyuki Tsurumi<sup>2</sup>  <sup>1</sup>Rikkyo University; <sup>2</sup>Yokohama National University</p> <hr/> <p><b>Bored out or Stressed out – Respondents’ Aggregation and Simplification Patterns in Preference Measurement</b>  <u>Alexander Sänn</u><sup>1</sup>, Jörgen Eimecke<sup>2</sup>  <sup>1</sup>University of Bayreuth, Germany; <sup>2</sup>BF/M Bayreuth</p>

7:00pm - 9:00pm	<b>Welcome Reception (Richard Wagner museum by walking or bus shuttle)</b> From 6:00pm possibility to visit the Wagner museum (guided tours every 10 min.)
<u>Richard Wagner museum</u>	

# TUESDAY

9:00am - 9:45am H24 (RW I)	<p><b><u>Plenary: Using Microblogging to Predict IPO Success by Means of Apache Spark Big Data Analytics by Dirk Van den Poel (University of Ghent, Belgium)</u></b> Session Chair: <b>Reinhold Decker</b></p>
9:00am - 9:45am H25 (RW I)	<p><b><u>Plenary: Meta-Analysis and Symbolic Data Analysis by Masahiro Mizuta (Hokkaido University, Japan)</u></b> Session Chair: <b>Claus Weihs</b></p>
9:45am - 11:00am S57 (RW I)	<p><b><u>Complexity, Data Science and Statistics through Visualization and Classification 1 (organized by Carmela Iorio and Roberta Siciliano)</u></b> Session Chair: <b>Carmela Iorio</b> Session Chair: <b>Roberta Siciliano</b></p>
	<p><b>Enhancement on Probabilistic Boosted-Oriented Clustering</b> <u>Roberta Siciliano</u>, Giuseppe Pandolfo, Antonio D'Ambrosio University of Naples Federico II, Italy</p> <hr/> <p><b>Interactive Visualization of Story-Boards: a Case Study of Long Time Series about Agriculture in Scotland</b> <u>Michele Staiano</u><sup>1</sup>, Giuseppe Pandolfo<sup>1</sup>, Richard Aspinall<sup>2</sup> <sup>1</sup>Department of Industrial Engineering, University of Naples Federico II, Italy; <sup>2</sup>Independent, c/o James Hutton Institute, Craigiebuckler, Aberdeen, Scotland, UK</p> <hr/> <p><b>Nonparametric clustering of spherical data</b> <u>Giuseppe Pandolfo</u>, Antonio D'Ambrosio University of Naples Federico II, Italy</p>
9:45am - 11:00am S58 (RW I)	<p><b><u>Stream Mining 1</u></b> Session Chair: <b>Andreas Geyer-Schulz</b></p>
	<p><b>End-to-End Motion Classification Using Smartwatch Sensor Data</b> Torben Windler, <u>Junaid Ahmed Ghauri</u>, Muhammad Usman Syed, Tamara Belostotskaya, Valerie Chikukwa, Rafael Rêgo Drumond Informations Systems and Machine Learning Lab, University of Hildesheim, Germany</p> <hr/> <p><b>Statistical Analysis of Unauthorized Internet Access Log Data and its Interpretation</b> <u>Hiroyuki Minami</u> Hokkaido University, Japan</p> <hr/> <p><b>Comparison of Decision Tree Algorithms for Data Streams with Concept Drift</b> <u>Jennifer Neuhaus-Stern</u>, Sarah Schnackenberg, Uwe Ligges TU Dortmund, Germany</p>
9:45am - 11:00am S59 (RW I)	<p><b><u>Interpretable Machine Learning 2 (organized by Johannes Fürnkranz, Eneldo Loza Mencía and Ute Schmid)</u></b> Session Chair: <b>Eneldo Loza Mencía</b></p>
	<p><b>Comprehensibility in Symbolic Decision Systems</b> <u>Florian Lerch</u>, Alfred Ultsch Philipps University of Marburg, Germany</p> <hr/> <p><b>An Analysis of Design Choices in the LIME Framework</b> <u>Amir Hossein Akhavan Rahnama</u>, Henrik Boström KTH (Royal Institute of Technology)</p>

	<hr/> <p><b>Explaining Relational Concepts: When Visualisation and Visual Interpretation of a Deep Neural Network's Decision are not enough</b>  <u>Bettina Finzel</u>, Johannes Rabold, Ute Schmid  University of Bamberg, Germany</p>
9:45am - 11:00am S61 (RW I)	<p><b>Data Analysis in Psychology</b>  Session Chair: <b>Claas Christian Germelmann</b></p>
	<p><b>Representing and Analyzing the Tripartite Emotion Expression and Perception Model with Conditional Linear Gaussian Bayesian Networks</b>  <u>Eva Endres</u><sup>1</sup>, Thomas Augustin<sup>1</sup>, Klaus Scherer<sup>2</sup>  <sup>1</sup>LMU München, Germany; <sup>2</sup>University of Geneva</p> <hr/> <p><b>What Drives AfD Election Success?</b>  <u>Sebastian Sauer</u>, Oliver Gansser  FOM Hochschule, Germany</p> <hr/> <p><b>A single peaked multivariate logistic distance model</b>  <u>Mark de Rooij</u>  Leiden University, The Netherlands</p>
9:45am - 11:00am S62 (RW I)	<p><b>Data Analysis in Finance 4</b>  Session Chair: <b>Krzysztof Jajuga</b></p>
	<p><b>Extended Construction of the Credibility Premium</b>  <u>Anne Sumpf</u>  Technische Universität Dresden, Germany</p> <hr/> <p><b>Pricing options via Fourier transform - analysis of computational speed and accuracy</b>  <u>Arkadiusz Orzechowski</u>  Warsaw School of Economics, Poland</p> <hr/> <p><b>Algorithmic Trading using Long Short-Term Memory Network and Portfolio Optimization</b>  Riccardo Lucato, Edgar Jimenez, Eduardo Salvador Rocha, Yang Qi, <u>Marina Gavriluk</u>, Rafael Rêgo Drumond  University of Hildesheim, Germany</p>
9:45am - 11:00am S64 (RW I)	<p><b>Marketing Research</b>  Session Chair: <b>Herbert Woratschek</b></p>
	<p><b>Influence of Error Factors in Marketing Research: A Monte Carlo Method Based Analysis in the Retail Context</b>  <u>Michael Bruschi</u><sup>1</sup>, Ines Bruschi<sup>2</sup>, Eva Stüber<sup>3</sup>  <sup>1</sup>Anhalt University of Applied Sciences, Köthen, Germany; <sup>2</sup>Brandenburg University of Technology Cottbus-Senftenberg, Cottbus, Germany; <sup>3</sup>IFH Köln GmbH, Cologne, Germany</p> <hr/> <p><b>Handling Mechanisms of Missing Values within Marketing Research Journals -- A Literature-Based Analysis of Widely Used Missing Value Treatments Within High Ranked Marketing Journals and Open-Access Marketing Journals</b>  <u>Redhwan Amer</u>, Malek Simon Grimm, Ralf Wagner  University Kassel, Germany</p> <hr/> <p><b>"Handled Missing Values in High-Ranked Journals: Empirical Study on Reasons and Impact" -- based on literature review analysis</b>  <u>Redhwan Amer</u>, Malek Simon Grimm, Ralf Wagner  University Kassel, Germany</p>

11:00am - 11:30am <u>Foyer RW I</u>	<b>Coffee break</b>
11:30am - 1:10pm <u>S57 (RW I)</u>	<b><u>Complexity, Data Science and Statistics through Visualization and Classification 2 (organized by Carmela Iorio and Roberta Siciliano)</u></b> Session Chair: <b>Carmela Iorio</b> Session Chair: <b>Roberta Siciliano</b>
	<b>Spatially weighted exploratory regression tree: a quantitative story-telling proposal</b>
	<u>Carmela Iorio</u> , Giuseppe Pandolfo, Roberta Siciliano University of Naples Federico II, Italy
	<b>Median Constrained Bucket Order: a way to think about tied rankings</b> <u>Antonio D'Ambrosio</u> University of Naples Federico II, Italy
	<b>Clustering of All that is Exceptional and Anomalous, Counterposed to Commonality, in Big Data Analytics</b> <u>Fionn Murtagh</u> University of Huddersfield, United Kingdom
	<b>Detecting Unobserved Heterogeneity in Latent Growth Curve Models</b> <u>Laura Trinchera</u> <sup>1</sup> , Katerina M. Marcoulides <sup>2</sup> <sup>1</sup> NEOMA Business School, France; <sup>2</sup> University of Florida
11:30am - 1:10pm <u>S58 (RW I)</u>	<b><u>Image and Text Mining</u></b> Session Chair: <b>Ines Brusch</b>
	<b>Verifying User Preferences - A Content Based Analysis of Images in an Online Travel Community</b> <u>Ines Brusch</u> Brandenburg University of Technology Cottbus-Senftenberg, Germany
	<b>Beer Brand Image Classification Using Deep Learning</b> <u>Atsuhiko Nakayama</u> <sup>1</sup> , Daniel Baier <sup>2</sup> <sup>1</sup> Tokyo Metropolitan University, Japan; <sup>2</sup> University of Bayreuth, Germany
	<b>The Effect of Preprocessing on Short Document Clustering</b> Cynthia Koopman, <u>Adalbert Wilhelm</u> Jacobs University Bremen, Germany
	<b>2016 US Presidential Election Sentiment Analysis</b> <u>Bryant Hwang</u> Korea International School, Korea, Republic of (South Korea)
11:30am - 1:10pm <u>S59 (RW I)</u>	<b><u>Interpretable Machine Learning 3 (organized by Johannes Fürnkranz, Eneldo Loza Mencía and Ute Schmid)</u></b> Session Chair: <b>Ute Schmid</b>
	<b>An interactive visual tool to enhance understanding of random forest predictions</b> <u>Ram Bahadur Gurung</u> <sup>1</sup> , Tony Lindgren <sup>1</sup> , Henrik Boström <sup>2</sup> <sup>1</sup> Stockholm University, Sweden; <sup>2</sup> Royal Institute of Technology (KTH), Sweden
	<b>Representational Capabilities of Distilled Soft Decision Trees</b> <u>Benedikt Wagner</u> <sup>1</sup> , Tarek R. Besold <sup>2</sup> <sup>1</sup> City, University of London, UK; <sup>2</sup> Telefonica Innovation Alpha, Spain

	<p><b>Instance-based explanations: motivation, overview, and the evidence counterfactual approach</b>  <u>Yanou Ramon</u>, David Martens  University of Antwerp, Belgium</p> <hr/> <p><b>Oracle coaching for informative decision trees</b>  <u>Cecilia Sönströd</u><sup>1</sup>, Ulf Johansson<sup>2</sup>, Henrik Boström<sup>3</sup>  <sup>1</sup>University of Borås, Sweden; <sup>2</sup>Jönköping University, Sweden; <sup>3</sup>KTH Royal Institute of Technology, Sweden</p>
11:30am - 1:10pm <u>S61 (RW I)</u>	<p><b>Data Analysis in Medicine, Health Care and Ecology</b>  Session Chair: <b>Masahiro Mizuta</b></p>
	<p><b>Analyses of serum fatty acids and vitamin D with dimension reduction methods</b>  <u>Yifan Chen</u><sup>1</sup>, Rojeet Shrestha<sup>2</sup>, Zhen Chen<sup>2</sup>, Hitoshi Chiba<sup>3</sup>, Shu-Ping Hui<sup>2</sup>, Emiko Okada<sup>4</sup>, Shigekazu Ukawa<sup>5</sup>, Takafumi Nakagawa<sup>6</sup>, Koshi Nakamura<sup>7</sup>, Akiko Tamakoshi<sup>7</sup>, Yuriko Komiya<sup>1</sup>, Hiroyuki Minami<sup>1</sup>, Masahiro Mizuta<sup>1</sup>  <sup>1</sup>Advanced Data Science Laboratory, Hokkaido University, Sapporo, Japan; <sup>2</sup>Faculty of Health Sciences, Hokkaido University, Sapporo, Japan; <sup>3</sup>Department of Nutrition, Sapporo University of Health Sciences, Sapporo, Japan; <sup>4</sup>Department of Nutritional Epidemiology, National Institute of Health and Nutrition, Tokyo, Japan; <sup>5</sup>Department of Nutritional Epidemiology, National Institute of Health and Nutrition, Tokyo, Japan; <sup>6</sup>The Hokkaido Centre for Family Medicine, Sapporo, Japan; <sup>7</sup>Department of Public Health, Hokkaido University Faculty of Medicine, Sapporo, Japan</p> <hr/> <p><b>Graph theoretical network analysis for Diagnoses based on Comorbidities</b>  <u>Reinhard Schuster</u><sup>1</sup>, Timo Emcke<sup>2</sup>  <sup>1</sup>MDK Nord (Medical Advisory Board of Statutory Health Insurance in Hamburg and Schleswig-Holstein), Germany; <sup>2</sup>KVSH (Association of SHI Physicians)</p> <hr/> <p><b>Comparison of Methods for Predicting High-cost Patients Captured Within the Oncology Care Model (OCM): A Simulation Study</b>  <u>Madhu Mazumdar</u>, Jung-Yi Lin, Kavita Dharamrajan, Wei Zhang, Mark Liu, Mark Sanderson, Luis Isola, Liangyuan Hu  Icahn School of Medicine at Mount Sinai, United States of America</p> <hr/> <p><b>Illuminating Interactions in Microbial Lake Ecology Using General Learning Chain Ensembles</b>  <u>Theodor Sperlea</u><sup>1</sup>, Daniela Beißer<sup>2</sup>, Jens Boenigk<sup>2</sup>, Dominik Heider<sup>1</sup>  <sup>1</sup>Department of Bioinformatics, Faculty of Mathematics and Computer Science, Philipps-Universität Marburg, Germany; <sup>2</sup>Biodiversity Department, Center for Water and Environmental Research, University of Duisburg-Essen, Germany</p>
11:30am - 1:10pm <u>S62 (RW I)</u>	<p><b>Data Analysis in Industrial Automation 1</b>  Session Chair: <b>Claus Weihs</b></p>
	<p><b>Data Analytics for Process Improvement in Industrial Settings</b>  Stefan Thalmann<sup>1</sup>, <u>Matej Vukovic</u><sup>2</sup>, Jürgen Mangler<sup>3</sup>, Christian Huemer<sup>3,4</sup>, Gerti Kappl<sup>3,4</sup>, Stefanie Lindstaedt<sup>5</sup>  <sup>1</sup>University of Graz, Austria; <sup>2</sup>Pro2Future GmbH, Austria; <sup>3</sup>ACDP GmbH, Austria; <sup>4</sup>TU Wien, Austria; <sup>5</sup>Graz University of Technology</p> <hr/> <p><b>Applying Two Theorems of Machine Learning to the Forecasting of Biweekly Arrivals at a Call Center</b>  <u>Michael Christoph Thrun</u><sup>1</sup>, Julian Märte<sup>2</sup>, Peter Böhme<sup>1</sup>, Tino Gehlert<sup>1</sup>  <sup>1</sup>Viessmann Werke GmbH &amp; Co. KG, 35107 Allendorf, Germany; <sup>2</sup>Mathematics and Computer Science, University of Marburg, Germany</p>

	<p><b>Deep Neural Networks for Data-driven Modelling of a Tube Mill Using Automatic Feature Extraction</b>  <u>Christian Thiel</u><sup>1</sup>, Carolin Steidl<sup>2</sup>, Sarah Johannesmann<sup>2</sup>, Bernd Henning<sup>2</sup>  <sup>1</sup>BENTELER Steel/Tube GmbH, Paderborn; <sup>2</sup>Elektrische Messtechnik, EIM-E, Universität Paderborn</p>
11:30am - 1:10pm S64 (RW I)	<p><b><u>Structural Equation Models in Marketing 1</u></b>  Session Chair: <b>Marko Sarstedt</b></p>
	<p><b>Technology Acceptance Model or Uses and Gratifications Approach: Which Approach Is Better Suited to Explain the Acceptance of Digital Voice Assistants?</b>  <u>Karolina Ewers</u>, Daniel Baier  University Bayreuth, Germany</p> <hr/> <p><b>Investigation of student satisfaction and student loyalty – a hierarchical latent variable model</b>  <u>Sarah Maria Wruck</u>, Winfried J. Steiner  Clausthal University of Technology, Germany</p> <hr/> <p><b>Discovering Kano’s Model in service satisfaction analysis using cubic terms</b>  <u>Björn Stöcker</u><sup>1</sup>, Aydin Nasseri<sup>2</sup>  <sup>1</sup>BAUR Versand (GmbH &amp; Co KG), Germany; <sup>2</sup>COGITARIS Gesellschaft für Marktforschung (GmbH), Germany</p> <hr/> <p><b>How to motivate a reviewer? Adoption of CRM Strategies to implement a successful relationship between a journal and a reviewer</b>  <u>Victoria-Anne Schweigert</u>, Andreas Geyer-Schulz  Karlsruhe Institute of Technology, Germany</p>
1:10pm - 1:55pm S58 (RW I)	<p><b>General Meeting AG DANK</b></p>
1:10pm - 2:25pm Frischraum (Mensa)	<p><b>Lunch (Tuesday)</b></p>
2:25pm - 3:10pm H24 (RW I)	<p><b><u>Plenary: CB-SEM or PLS-SEM? Five Perspectives and Five Recommendations by Marko Sarstedt (Otto von Guericke University Magdeburg, Germany)</u></b>  Session Chair: <b>Daniel Baier</b></p>
2:25pm - 3:10pm H25 (RW I)	<p><b><u>Plenary: Relations Among K-means, Mixture of Distributions, and Fuzzy Clustering by Sadaaki Miyamoto (University of Tsukuba, Japan)</u></b>  Session Chair: <b>Hans-Hermann Bock</b></p>
3:10pm - 4:25pm S57 (RW I)	<p><b><u>Debate: Data Science - Occupation or Profession?</u></b>  Session Chair: <b>Ursula Maria Garczarek</b>  Session Chair: <b>Detlef Steuer</b></p>
3:10pm - 4:25pm S58 (RW I)	<p><b><u>Stream Mining 2</u></b>  Session Chair: <b>Ingo Schmitt</b></p>
	<p><b>Topic Modelling for Summarizing Industrial Log Data</b>  <u>Benjamin Klöpper</u><sup>1</sup>, Shunmuga Prabhu Siddharthan<sup>1</sup>, Barbara Sprick<sup>2</sup>, Marcel Dix<sup>1</sup>  <sup>1</sup>ABB Corporate Research, Germany; <sup>2</sup>SRH Hochschule Heidelberg</p> <hr/> <p><b>Modeling PLM data to optimize car-dealership offerings</b>  <u>Dieter William Joenssen</u>  HS Aalen, Germany</p> <hr/> <p><b>Cognitive Bayesian Classification Based on Quantum Theory</b></p>

	<u>Ingo Schmitt</u> BTU Cottbus-Senftenberg, Germany
3:10pm - 4:25pm S59 (RW I)	<b><u>Machine Learning 3</u></b> Session Chair: <b>Johannes Fürnkranz</b>
	<b>Towards Automated Machine Learning for Multi-Label Classification</b> <u>Marcel Wever</u> , Felix Mohr, Eyke Hüllermeier, Alexander Hetzer Paderborn University, Germany
	<b>Algorithm Selection as Recommendation: From Collaborative Filtering to Dyad Ranking</b> <u>Alexander Hetzer</u> , Marcel Wever, Felix Mohr, Eyke Hüllermeier Paderborn University, Germany
	<b>Well-Calibrated and Specific Probability Estimation Trees</b> Ulf Johansson <sup>1</sup> , Henrik Boström <sup>2</sup> , Tuwe Löfström <sup>1</sup> , <u>Cecilia Sönströd</u> <sup>3</sup> <sup>1</sup> Jönköping University, Sweden; <sup>2</sup> KTH, Royal Institute of Technology, Sweden; <sup>3</sup> University of Borås, Sweden
3:10pm - 4:25pm S62 (RW I)	<b><u>Data Analysis in Industrial Automation 2</u></b> Session Chair: <b>Adalbert Wilhelm</b>
	<b>Predictive quality control in industrial production processes</b> <u>Adalbert Wilhelm</u> Jacobs University Bremen, Germany
	<b>Using Errors-in-Variables Regression to model and analyze sequential Process Chains</b> <u>Oliver Meyer</u> , Claus Weihs TU Dortmund University, Germany
	<b>Kriging and FANOVA graphs for Computer Experiments with Both Continuous and Categorical Inputs</b> <u>Dominik Kirchhoff</u> Dortmund University of Applied Sciences and Arts, Germany
3:10pm - 4:25pm S64 (RW I)	<b><u>Structural Equation Models in Marketing 2</u></b> Session Chair: <b>Adam Sagan</b>
	<b>SEM-Tree hybrid models in the preferences analysis of the members of Polish households</b> <u>Adam Sagan</u> , Mariusz Lapczynski Cracow University of Economics, Poland
	<b>Versioning, Price Fairness and Purchase Decision – an Empirical Investigation</b> <u>Bastian Werner</u> , Ines Bruschi, Larissa Bürks-Arndt Brandenburg University of Technology Cottbus-Senftenberg, Germany
	<b>Change Management and Acceptance of CRM Systems: An Analysis by Means of Partial Least Squares</b> Christian Wehowski, Heike Papenhoff, <u>Karsten Lübke</u> FOM University of Applied Sciences, Germany
4:25pm - 4:45pm Foyer RW I	<b>City Tour</b>
4:25pm - 4:45pm Foyer RW I	<b>Coffee break</b>



4:30pm - 6:00pm	<b>General Meeting GfKI</b>
<u>S57 (RW I)</u>	
7:00pm	<b>Conference Dinner at Restaurant "Liebesbier"</b>
<u>Liebesbier Restaurant &amp; Craft-Bier</u>	Before dinner, there is the opportunity to do a <b>City Tour</b> (with the first groups starting at the university at 4:25 pm) and a <b>Brewery Tour</b> (with the first groups starting at 5 pm at the Liebesbier building).

# WEDNESDAY

<p>9:00am - 9:45am S57 (RW I)</p>	<p><b>PLS-SEM 1: Partial Least Squares Structural Equation Modeling Workshop - Introduction</b></p> <p>Partial Least Squares Structural Equation Modeling (PLS-SEM) by Marko Sarstedt on Wednesday, March 20, 2019, 9:00-17:00 Partial least squares structural equation modeling (PLS-SEM) has recently received considerable attention in a variety of disciplines, including marketing, strategic management, management information systems, and many more. PLS... </p>
<p>9:00am - 9:45am H24 (RW I)</p>	<p><b>Plenary: Archetypes, Prototypes and Other Types: The Current State and Prospects for Future Research by Francesco Palumbo (University of Naples Federico II, Italy)</b></p> <p>Session Chair: <b>Adalbert Wilhelm</b></p>
<p>9:45am - 11:00am S57 (RW I)</p>	<p><b>PLS-SEM 2: Fundamentals of Measurement I</b></p>
<p>9:45am - 11:00am S58 (RW I)</p>	<p><b>Dimension Reduction 1</b></p> <p>Session Chair: <b>Maurizio Vichi</b></p> <hr/> <p><b>Redundancy Analysis for Sparse Component Loadings</b> Yuki Yamagishi<sup>1</sup>, Hiroshi Yadohisa<sup>2</sup> <sup>1</sup>Graduate School of Culture and Information Science, Doshisha University; <sup>2</sup>Department of Culture and Information Science, Doshisha University</p> <hr/> <p><b>Hierarchical Disjoint Principal Component Analysis</b> Carlo Cavicchia, Maurizio Vichi, <u>Giorgia Zaccaria</u> University of Rome La Sapienza, Italy</p> <hr/> <p><b>Zero-Inflated Negative Binomial Matrix Factorization</b> <u>Hiroyasu Abe</u> Kyoto University, Japan</p>
<p>9:45am - 11:00am S59 (RW I)</p>	<p><b>Machine Learning 4</b></p> <p>Session Chair: <b>Josef Schosser</b></p> <hr/> <p><b>Locally Learned SVMs - The Regionalization Approach</b> <u>Florian Dumpert</u> University of Bayreuth, Germany</p> <hr/> <p><b>Hyperplane Folding - a Method for Handling Non-linear Relations in Support Vector Machines</b> <u>Lars Lundberg</u>, Håkan Lennestad, Veselka Boeva, Eva Garcia-Martin Blekinge Institute of Technology, Sweden</p> <hr/> <p><b>Predicting wine quality using machine learning techniques</b> Stavros Dimitri Ioannidis<sup>1</sup>, <u>Dimitrios Avraam Ioannides</u><sup>2</sup> <sup>1</sup>Univ.of Patras; <sup>2</sup>Univ.of Macedonia</p>
<p>9:45am - 11:00am S61 (RW I)</p>	<p><b>Data Analysis in Social Sciences 1</b></p> <p>Session Chair: <b>Cristina Davino</b></p> <hr/> <p><b>Decision Support System for Road Safety Improvement</b> <u>Katherina Meißner</u> University of Hildesheim, Germany</p> <hr/> <p><b>Clustering and modeling data. A quantile regression approach</b> <u>Cristina Davino</u>, Domenico Vistocco University of Naples Federico II, Italy</p>
<p>9:45am - 11:00am</p>	

S62 (RW I)	<p><b><u>Data Analysis Models in Economics and Business 1 (organized by Józef Pociecha)</u></b>  Session Chair: <b>Józef Pociecha</b></p>
	<p><b>Selecting the Optimal Multidimensional Scaling Procedure for Interval-valued Data with Symbolic-to-classic and Symbolic-to-symbolic Approaches</b>  Marek Walesiak, <u>Andrzej Dudek</u>  Wroclaw University of Economics, Poland</p> <hr/> <p><b>Risk Factor Analysis of Companies Listed on the Warsaw Stock Exchange</b>  <u>Paweł Lula</u>, <u>Paweł Cabała</u>, <u>Renata Oczkowska</u>, <u>Jakub Kanclerz</u>  Cracow University of Economics, Poland</p> <hr/> <p><b>Fuzzy representation of linguistic measurement in risk perception, preferences and attitudes classification</b>  <u>Jozef Dziechciarz</u>, <u>Marta Dziechciarz Duda</u>  Wroclaw University of Economics, Poland</p>
9:45am - 11:00am	<p><b><u>Social Network Analysis</u></b>  Session Chair: <b>Alexandra Rese</b></p>
S64 (RW I)	<p><b>Viral marketing in the event industry: An empirical study to determine factors influencing the viral distribution of events</b>  <u>Thomas Reichstein</u>, <u>Ines Brusch</u>, <u>Rebecca Meier zu Ummeln</u>  BTU Cottbus-Senftenberg, Germany</p> <hr/> <p><b>The text mining and dimension reduction method application into exploring the isomorphic pressures in the corporate communications on the textual tweets´ data on a sustainability within the energy sector</b>  <u>Adriana Paliwoda-Matiolańska</u><sup>1</sup>, <u>Emilia Smolak-Lozano</u><sup>2</sup>, <u>Atsuhiko Nakayama</u><sup>3</sup>  <sup>1</sup>Cracow University of Economics, Poland; <sup>2</sup>University of Malaga, Spain; <sup>3</sup>Tokyo Metropolitan University, Japan</p> <hr/> <p><b>An integration of time series model and multi-agent simulation</b>  <u>Eiji Motohashi</u><sup>1</sup>, <u>Sotaro Katsumata</u><sup>2</sup>, <u>Akihiro Nishimoto</u><sup>3</sup>  <sup>1</sup>Yokohama National University, Japan; <sup>2</sup>Osaka University; <sup>3</sup>Kwansei Gakuin University</p>
11:00am - 11:30am	<p><b>Coffee break</b></p>
Foyer RW I	<p><b>PLS-SEM 3: Fundamentals of Measurement II</b></p>
11:30am - 12:45pm	
S57 (RW I)	<p><b><u>Dimension Reduction 2</u></b>  Session Chair: <b>Akinori Okada</b></p>
11:30am - 12:45pm	<p><b>Dimension Reduction for Qualitative Ideas in Innovation Search</b>  <u>Diana Schif</u><sup>1</sup>, <u>Ulrich Theodor Schwarz</u><sup>2</sup>  <sup>1</sup>BMW AG, Germany; <sup>2</sup>Chemnitz University of Technology</p> <hr/> <p><b>Uncovering the Structure of Rank Data by its Coherent Groups</b>  <u>Vartan Choulakian</u>  Université de Moncton, Canada</p> <hr/> <p><b>A feature selection method based on the naive Hotelling <math>\\$T^{\wedge}2\\$</math> statistic</b>  <u>Mitsuru TAMATANJ</u>  Doshisha University, Japan</p>
11:30am - 12:45pm	
S58 (RW I)	
11:30am - 12:45pm	<p><b><u>Machine Learning 5</u></b>  Session Chair: <b>Andreas Geyer-Schulz</b></p>
S59 (RW I)	

	<p><b>Convolutional Neural Networks in Economics: Opportunities and Challenges</b>  <u>Marvin Schweizer</u>, Abdolreza Nazemi, Andreas Geyer-Schulz  Karlsruhe Institute of Technology, Germany</p> <hr/> <p><b>Deep Physiological Models for Pain Intensity Recognition</b>  Patrick Thiam, <u>Friedhelm Schwenker</u>  Ulm University, Germany</p> <hr/> <p><b>Churn Analysis Using Deep Learning: Methods and Application</b>  <u>Tobias Albrecht</u>, Daniel Baier  University of Bayreuth, Germany</p>
11:30am - 12:45pm S61 (RW I)	<p><b>Data Analysis in Social Sciences 2</b>  Session Chair: <b>Θεόδωρος Χατζηπαντελης</b></p>
	<p><b>Algorithmic Sources of Publication Bias in Political Science Research</b>  <u>Alrik Thiem</u>, Lusine Mkrtchyan, David Sanchez  University of Lucerne, Switzerland</p> <hr/> <p><b>The involvement in politics via the social media channels: a multivariable analysis</b>  Evangelia Nikolaou Markaki<sup>1</sup>, <u>Theodore Chadjipantelis</u><sup>2</sup>  <sup>1</sup>ARISTOTLE UNIVERSITY OF THESSALONIKI, Greece; <sup>2</sup>ARISTOTLE UNIVERSITY OF THESSALONIKI, Greece</p> <hr/> <p><b>Visualization of latent higher-order interactions by regions of significance</b>  <u>Viktor Fredrich</u>, Ricarda Bouncken  University Bayreuth, Germany</p>
11:30am - 12:45pm S62 (RW I)	<p><b>Data Analysis Models in Economics and Business 2 (organized by Józef Pociecha)</b>  Session Chair: <b>Jozef Dziechciarz</b></p>
	<p><b>Logit leaf model in prediction of corporate bankruptcy</b>  Barbara Pawełek, <u>Józef Pociecha</u>, Sebastian Grabarz  Cracow University of Economics, Poland</p> <hr/> <p><b>Empirical Bayes method for the estimation of wages of small enterprises</b>  Grażyna Dehnel, <u>Łukasz Wawrowski</u>  The Poznań University Of Economics And Business, Poland</p> <hr/> <p><b>The Smart Development of German Government Regions (Regierungbezirke) 2005-2017</b>  <u>Andrzej Sokołowski</u><sup>1</sup>, Małgorzata Markowska<sup>2</sup>  <sup>1</sup>Cracow University of Economics, Poland; <sup>2</sup>Wrocław University of Economics, Poland</p>
11:30am - 12:45pm S64 (RW I)	<p><b>Innovation</b>  Session Chair: <b>Michael Brusch</b></p>
	<p><b>Forecasting Sales of Durable Goods – Does Search Data Help?</b>  <u>Carsten D. Schultz</u>  University of Hagen, Germany</p> <hr/> <p><b>A new algorithm to optimize the development of innovative products and services</b>  <u>Gloria Gheno</u><sup>1</sup>, Massimo Garbuio<sup>2</sup>  <sup>1</sup>Innovative data analysis, Italy; <sup>2</sup>University of Sydney, Australia</p>

	<p><b>Constructing an ideal workstream collaboration tool for coworking spaces using single-product choice-based conjoint measurement</b>  <u>Cristopher Siegfried Kopplin</u>, Daniel Baier  University of Bayreuth, Germany</p>
12:45pm	<b>Closing of the Conference</b>
1:00pm - 1:45pm	<b>Lunch (Wednesday)</b>
<u>Frischraum (Mensa)</u>	
1:45pm - 3:00pm	<b>PLS-SEM 4: Assessment of PLS-SEM: Results and Exercises I</b>
<u>S57 (RW I)</u>	
3:00pm - 3:15pm	<b>Coffee break</b>
<u>Foyer RW I</u>	
3:15pm - 5:00pm	<b>PLS-SEM 5: Assessment of PLS-SEM: Results and Exercises II; Outlook on Advanced Topics</b>
<u>S57 (RW I)</u>	