

# Program

**Scientific Program of GfKI 2012 (Overview)*****Tuesday, July 31, 2012*****Social events**

**20:00** Informal come-together in *Knochenhauer Amtshaus*  
(<http://www.knochenhaueramtshaus.com/>) in the city center at the market place

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***Wednesday, August 01, 2012***

**08:15** Registration (Building: HS 52, Foyer)

**09:00** Opening (Building: HS 52, Room: 001 (Theater))

- Welcome by Prof. Dr. Wolfgang-Uwe Friedrich (President of the University of Hildesheim)
- Welcome by Prof. Dr. Martin Sauerwein (Dean of faculty for mathematics, natural sciences, economy and computer science, University of Hildesheim)
- Welcome and best paper awards by Prof. Dr. Claus Weihs (President of the GfKI):
  - Best Paper Award 2011 - methods: "Implications of Axiomatic Consensus Properties", Florent Domenach and Ali Tayari (Department of Computer Science, University of Nicosia)
  - Best Paper Award 2011 - application: "Comparing Earth Movers Distance and its Approximations for Clustering Images", Sarah Frost and Daniel Baier (Institute of Business Administration and Economics, Brandenburg University of Technology Cottbus)
- Welcome by Prof. Dr. Myra Spiliopoulou (Program Chair)
- Welcome by Prof. Dr. Dr. Lars Schmidt-Thieme (Local Organizer)

**10:00** Opening Plenary (Building: HS 52, Room: 001 (Theater)),  
Wolfgang Gaul: *Where Data Analysis meets Graph Theory* (4),  
Chair: L. Schmidt-Thieme

**Coffee break 10:45 – 11:15**

<b>Building</b>	HS 52, Room 001	HS 1, Room 007	HS 52, Room 101	HS 27, Room 003	HS 2a, Room 004
<b>Area</b>	Statistics & Data Analysis	Data Analysis & Classification in Marketing	Data Analysis in Finance	Machine Learning & Knowledge Discovery	Interdisciplinary Domains
<b>Session</b>	<i>Clustering 1</i>			<i>Recommenders &amp; Multi-Criteria Optimization</i>	<i>Education</i>
<b>Chair</b>	H. Bock	S. Voekler	K. Jajuga	L. Schmidt- Thieme	S. Krolak- Schwerdt
<b>11:15</b>	Alexandrovich (30)	Baier (56)	Vogt (83)	Symeonidis (100)	Trendtel (129)
<b>11:40</b>	Tanioka (52)	Rese (64)	Müller (79)	Ntoutsis (95)	Kasper (119)
<b>12:05</b>	Ayale (36)	-	Feldman (75)	Cheng (90)	-

**Lunch break 12:30 – 13:30**

**13:30** Semi Plenary (Building: HS 52, Room: 001 (Theater)),  
Katsutoshi Yada: *Knowledge Discovery in Shopping Path Data* (10),  
Chair: D. Baier

**13:30** Semi Plenary (Building: HS 27, Room 003),  
Thomas Seidl: *Stream Data Mining and Anytime Algorithms* (9), Chair: C. Weihs

**Break 14:15 – 14:30**

<b>Building</b>	HS 52, Room 001	HS 1, Room 007	HS 52, Room 101	HS 27, Room 003	HS 2a, Room 004
<b>Area</b>	Statistics & Data Analysis	Data Analysis & Classification in Marketing	Data Analysis in Finance	Machine Learning & Knowledge Discovery	Interdisciplinary Domains
<b>Session</b>	<i>Classification 1</i>			<i>Streams</i>	<i>Psychology</i>
<b>Chair</b>	J. Schiffner	A. Sänn	K. Jajuga	C. Weihs	F. Klapproth
<b>14:30</b>	Bischi (33)	Bak (59)	Piontek (81)	Bolanos (88)	Hahn (114)
<b>14:55</b>	Takai (51)	Rumstadt (65)	Nagy (80)	Tödten (101)	Hörstermann (118)
<b>15:20</b>	Lange (42)	Voekler (70)	Kaszuba (78)	Matuszyk (93)	Geyer-Schulz (113)

**Coffee break 15:45 – 16:15**

<b>Building</b>	HS 52, Room 001	HS 1, Room 007	HS 52, Room 101	HS 27, Room 003	HS 2a, Room 004
<b>Area</b>	Statistics & Data Analysis	Statistics & Data Analysis	Data Analysis in Finance	Machine Learning & Knowledge Discovery <i>Clustering</i>	Invited Session:
<b>Session</b>	<i>Statistics I</i>	<i>Statistics in Economics</i>			<i>Applications in Empirical Educational Research Based on Secondary Data</i>
<b>Chair</b>	F. Schwaiger	A. Rybicka	M. Hanke		A. Schwarz
<b>16:15</b>	Beige (31)	Brzezinska (34)	Bessler (72)	Mouysset (94)	Schwarz (19)
<b>16:40</b>	Voigt (53)	Biron (32)	Rutkowska- Ziarko (82)	Pelka (96)	Makles (18)
<b>17:05</b>	Joenssen (40)	Jefmanski (39)	Garsztka (76)	Völkel (103)	Schwarz (127)

**Social events**

**16:30** Guided tour of UB Hildesheim

**17:30** Guided tour of Dombibliothek

**18:00** Guided City tour of Hildesheim (German)

**18:00** Guided City tour of Hildesheim (English)

**20:00** Reception in the city hall at the market place (Greeting: Ruth Seefels,  
Mayor of Hildesheim, Claus Weihs, President of GfKI)

**Thursday, August 02, 2012**

**08:15** Registration (Building: HS 52, Foyer)

**09:00** Plenary (Building: HS 52, Room: 001 (Theater)),  
João Gama: *Data Stream Mining for Ubiquitous Environments* (3),  
Chair: M. Spiliopoulou

**Break 09:45 – 10:00**

<b>Building</b>	HS 52, Room 001	HS 1, Room 007	HS 52, Room 101	HS 27, Room 003	HS 2a, Room 004
<b>Area</b>	Statistics & Data Analysis	Biostatistics & Bioinformatics		Invited Session:	Interdisciplinary Domains
<b>Session</b>	<i>Factor analysis</i>			<i>Dynamic Cluster Analysis - Theory and Practise</i>	<i>Music 1</i>
<b>Chair</b>	C. Hennig	H. Kestler		J. Pociecha	C. Weihs
<b>10:00</b>	Schoonees (49)	Potapov (138)	-	Bock (22)	Dittmar (111)
<b>10:25</b>	-	Schmid (139)	-	Najman (24)	Hillewaere (117)
<b>10:50</b>	Mucha (47)	Matuszyk (136)	-	Lula (23)	Bauer (108)

**Coffee break 11:15 – 11:30**

<b>Building</b>	HS 52, Room 001	HS 1, Room 007	HS 52, Room 101	HS 27, Room 003	HS 2a, Room 004
<b>Area</b>	Statistics & Data Analysis	Biostatistics & Bioinformatics		Invited Session:	Interdisciplinary Domains
<b>Session</b>	<i>Classification 2</i>			<i>Dynamic Cluster Analysis - Theory and Practise</i>	<i>Music 2</i>
<b>Chair</b>	B. Bischl	H. Kestler		J. Pociecha	C. Weihs
<b>11:30</b>	Meyer (45)	Heider (135)	-	Sokolowski (25)	Vatolkin (130)
<b>11:55</b>	Lange (43)	Burkovski (134)	-	Voekler (27)	Eichhoff (112)
<b>12:20</b>	Schwenker (50)	Maucher (137)	-	Stanimir (26)	Lukashevich (123)
<b>12:45</b>	Nguyen (124)				Krey (120)

**12:45 Meeting AG Biostatistik (HS 1, Room 007)****13:30 Meeting AG DA-NK (HS 52, Room 101)****Lunch break 12:45 – 14:00****14:00** Semi Plenary (Building: HS 52, Room: 001 (Theater)),Michele Sebag: *Autonomous Robotics: Defining Instincts and Learning Systems of Values* (8), Chair: W. Gaul

**14:00** Semi Plenary (Building: HS 27, Room 003),

Alex Weissensteiner: *Arbitrage-Free Scenario Trees for Financial Optimization*

(5), Chair: K. Jajuga

**Break 14:45 – 14:55**

<b>Building</b>	HS 52, Room 001	HS 1, Room 007	HS 52, Room 101	HS 27, Room 003	HS 2a, Room 004
<b>Area</b>	Statistics & Data Analysis	Data Analysis & Classification in Marketing	Data Analysis in Finance	Machine Learning & Knowledge Discovery <i>Classification &amp; Ensembles</i>	
<b>Session</b>	<i>Clustering 2</i>				
<b>Chair</b>	Ritter	R. Decker	M. Hanke		
<b>14:55</b>	Wilk (54)	Steiner (67)	Geyer (77)	Schwenker (97)	-
<b>15:20</b>	Schwaiger (38)	Lichtenthaler (61)	Bohlmann (74)	Senge (98)	-
<b>15:45</b>	Hennig (37)	Tuma (69)	-	Vatolkin (102)	-

**Coffee break 16:10 – 16:40**

<b>Building</b>	HS 52, Room 001	HS 1, Room 007	HS 52, Room 101	HS 27, Room 003	HS 2a, Room 004
<b>Area</b>	Statistics & Data Analysis	Data Analysis & Classification in Marketing			Interdisciplinary Domains
<b>Session</b>	<i>Model selection</i>				<i>Language &amp; Education</i>
<b>Chair</b>	C. Weihs	R. Decker			S. Krolak- Schwerdt
<b>16:40</b>	Liebscher (44)	Minke (62)	-	-	Beica (109)
<b>17:05</b>	Mucha (46)	Bak (57)	-	-	Nisioi (125)
<b>17:30</b>					Ünlü (131)

**Break 17:30 – 18:00**

**18:00** General meeting of the German Classification Society

(Building: HS 52, Room: 001 (Theater), End: 19:30)

**Social events**

**20:15** Conference dinner in the Novotel (Bahnhofsallee 38, 31134 Hildesheim, admittance: 19:30)

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**Friday, August 03, 2012**

**08:15** Registration (Building: HS 52, Foyer)

**09:00** Semi Plenary (Building: HS 52, Room: 001 (Theater)),  
Hillol Kargupta: *Connected Cars, Machine-to-Machine Environments, and Distributed Data Mining* (6), Chair: L. Schmidt-Thieme

**09:00** Semi Plenary (Building: HS 27, Room 003),  
Dirk Van den Poel: *On the value of incorporating sequential information into predictive analytics classification models for analytical CRM* (7),  
Chair: W. Steiner

**Break 09:45 – 09:55**

<b>Building</b>	HS 52, Room 001	HS 1, Room 007	HS 52, Room 101	HS 27, Room 003	HS 2a, Room 004
<b>Area</b>	Statistics & Data Analysis	Data Analysis & Classification in Marketing	Machine Learning & Knowledge Discovery	Machine Learning & Knowledge Discovery	Interdisciplinary Domains
<b>Session</b>	<i>Applications</i>		<i>Opinions and marketing</i>	<i>Distributed and Temporal Data Analysis</i>	<i>Quality</i>
<b>Chair</b>	H. Mucha	D. Van den Poel		J. Gama	C. Hennig
<b>09:55</b>	Santos (48)	Kottemann (60)	Ahn (86)	Khan (92)	Thorleuchter (128)
<b>10:20</b>	Klapproth (41)	Ballings (58)	Sinelnikova (99)	Dávid (91)	Hildebrand (116)
<b>10:45</b>	Carvalho (35)	Paetz (63)	Wagner (104)	Bakhtyar (87)	Rozkrut (126)

**Coffee break 11:10 – 11:25**

<b>Building</b>	HS 52, Room 001	HS 1, Room 007	HS 52, Room 101	HS 27, Room 003	HS 2a, Room 004
<b>Area</b>	Invited Session:	Data Analysis & Classification in Marketing		Machine Learning & Knowledge Discovery <i>Social networks</i>	Interdisciplinary Domains
<b>Session</b>	<i>Ensemble methods in clustering and classification</i>				<i>Maps &amp; Images</i>
<b>Chair</b>	B. Lausen	A. Rese		P. Symeonidis	I. Herzog
<b>11:25</b>	Ziegler (15)	Sänn (68)	-	Yakoubi (106)	Busche (110)
<b>11:50</b>	Binder (13)	Selka (66)	-	Wartena (105)	Herzog (115)
<b>12:15</b>	Janitza (14)	-	-	-	Loidl (121)
<b>12:40</b>	Adler (12)	-	-	Buza (89)	-

**Break 13:05 – 13:15**

**13:15** Closing Plenary (Building: HS 52, Room: 001 (Theater)),

Shai Ben-David: *Universal Learning vs. No Free Lunch results - can there be learners that do not require task-specific knowledge?* (2), Chair: C. Hennig

**14:00** Farewell (Beverages/snacks, Building: HS 52, Foyer)

**End 14:30**



## Full Scientific Program of GfKI 2012

***Tuesday, July 31, 2012***

### Social events

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(<http://www.knochenhaueramtshaus.com/>) in the city center at the market place

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***Wednesday, August 01, 2012***

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- Welcome by Prof. Dr. Myra Spiliopoulou (Program Chair)
- Welcome by Prof. Dr. Dr. Lars Schmidt-Thieme (Local Organizer)

**10:00** Opening Plenary (Building: HS 52, Room: 001 (Theater)),  
Wolfgang Gaul: *Where Data Analysis meets Graph Theory* (4),  
Chair: L. Schmidt-Thieme

**Coffee break 10:45 – 11:15**

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**Statistics and Data Analysis: Clustering 1 (HS 52, Room 001)**

Chair: H. Bock

- 11:15** Grigory Alexandrovich: *An exact Newton's method for ML estimation in a penalized Gaussian mixture model* (30)
- 11:40** Kensuke Tanioka and Hiroshi Yadohisa: *Three-way Subspace Hierarchical Clustering based on Entropy Regularization Method* (52)
- 12:05** Daher Ayale and Dhome Thierry: *Geographic clustering through aggregation control* (36)

**Data Analysis and Classification in Marketing (HS 1, Room 007)**

Chair: S. Voekler

- 11:15** Daniel Baier, Wolfgang Polasek and Alexandra Rese: *Spatial Modeling of Dependencies Between Population, Education, and Economic Growth* (56)
- 11:40** Alexandra Rese, Hans-Georg Gemnden and Daniel Baier: *Rasch Models for Analyzing Role Models in Inter-Organisational Innovation Processes* (64)

**Data Analysis in Finance (HS 52, Room 101)**

Chair: K. Jajuga

- 11:15** Jonas Vogt: *Sovereign Credit Spreads During the European Fiscal Crisis* (83)
- 11:40** Marlene Müller: *Using generalized additive models to fit credit rating scores* (79)
- 12:05** Lukasz Feldman, Radoslaw Pietrzyk and Pawel Rokita: *A practical method of determining longevity and premature-death risk aversion in households and some proposals of its application* (75)

**Machine Learning and Knowledge Discovery: Recommenders and Multi-Criteria Optimization (HS 27, Room 003)**

Chair: L. Schmidt-Thieme

- 11:15** Panagiotis Symeonidis: *Recommendations in Time Evolving Multi-modal Social Networks* (100)
- 11:40** Eirini Ntoutsi, Kostas Stefanidis, Kjetil Norvag and Hans-Peter Kriegel: *gRecs: A collaborative filtering framework for group recommendations* (95)
- 12:05** Weiwei Cheng and Eyke Hüllermeier: *Label Ranking with Abstention: Learning to Predict Partial Orders* (90)

**Interdisciplinary Domains: Education (HS 2a, Room 004)**

Chair: S. Krolak-Schwerdt

**11:15** Matthias Trendtel and Ali Ünlü: *Using Latent Class Models with Random Effects for Investigating Local Dependence* (129)**11:40** Daniel Kasper and Ali Ünlü: *Sensitivity Analyses for the Rasch Model* (119)**Lunch break 12:30 – 13:30****13:30** Semi Plenary (Building: HS 52, Room: 001 (Theater)),  
Katsutoshi Yada: *Knowledge Discovery in Shopping Path Data* (10),  
Chair: D. Baier**13:30** Semi Plenary (Building: HS 27, Room 003),  
Thomas Seidl: *Stream Data Mining and Anytime Algorithms* (9), Chair: C. Weihs**Break 14:15 – 14:30****Statistics and Data Analysis: Classification 1 (HS 52, Room 001)**

Chair: J. Schiffner

**14:30** Bernd Bischl, Julia Schiffner and Claus Weihs: *Benchmarking classification algorithms on high-performance computing clusters* (33)**14:55** Keiji Takai and Kenichi Hayashi: *Effects of Labeling Mechanisms on Classification Error in Linear Discriminant Analysis* (51)**15:20** Tatjana Lange, Karl Mosler and Pavlo Mozharovskyi: *DD $\alpha$ -classification of asymmetric and fat-tailed data* (42)**Data Analysis and Classification in Marketing (HS 1, Room 007)**

Chair: A. Sänn

**14:30** Andrzej Bąk and Tomasz Bartłomowicz: *Microeconometrics Multinomial Models and their Applications in Preferences Analysis using R* (59)**14:55** Susanne Rumstadt and Daniel Baier: *Variable Weighting and Selection Approaches for Market Segmentation: A Comparison* (65)**15:20** Sascha Voekler and Daniel Baier: *Solving Product Line Design Optimization Problems using Stochastic Programming* (70)

**Data Analysis in Finance (HS 52, Room 101)**

Chair: K. Jajuga

- 14:30** Krzysztof Piontek: *Value-at-Risk Backtesting Procedures Based on the Loss Functions - Simulation Analysis of the Power of Tests* (81)
- 14:55** Gabor I. Nagy and Krisztian Buza: *Clustering Algorithms for Storage of Tick Data* (80)
- 15:20** Bartosz Kaszuba: *Correlation of outliers in multivariate data* (78)

**Machine Learning and Knowledge Discovery: Streams (HS 27, Room 003)**

Chair: C. Weihs

- 14:30** Matthew Bolanos, John Forrest and Michael Hahsler: *A Study of the Efficiency and Accuracy of Data Stream Clustering for Large Data Sets* (88)
- 14:55** Miriam Tödten, Zaigham Faraz Siddiqui and Myra Spiliopoulou: *A Lightweight CVFDT Classifier for Streams with Concept Drift* (101)
- 15:20** Pawel Matuszyk: *Framework for Storing and Processing Relational Entities in a Data Stream* (93)

**Interdisciplinary Domains: Psychology (HS 2a, Room 004)**

Chair: F. Klapproth

- 14:30** Sonja Hahn: *ANOVA and Alternatives for Causal Inferences* (114)
- 14:55** Thomas Hörstermann and Sabine Krolak-Schwerdt: *Comparing regression approaches in modelling (non-)compensatory judgment formation* (118)
- 15:20** Andreas Geyer-Schulz, Jonas Kunze and Andreas Sonnenbichler: *Learning in groups and exam performance* (113)

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**Coffee break 15:45 – 16:15**

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**Statistics and Data Analysis: Statistics 1 (HS 52, Room 001)**

Chair: F. Schwaiger

- 16:15** Tim Beige, Thomas Terhorst, Claus Weihs and Holger Wormer: *Which District of Dortmund is the Most Dangerous?* (31)

- 16:40** Tobias Voigt, Roland Fried, Michael Backes and Wolfgang Rhode: *Gamma-Hadron-Separation in the MAGIC-Experiment* (53)
- 17:05** Dieter Joenssen and Udo Bankhofer: *Zur Begrenzung der Verwendungshäufigkeit von Spenderobjekten bei der Imputationen fehlender Daten mittels Hot-Deck-Verfahren* (40)

### **Statistics and Data Analysis: Statistics in Economics (HS 1, Room 007)**

Chair: A. Rybicka

- 16:15** Justyna Brzezinska: *Visual models for categorical data in economic research* (34)
- 16:40** Miguel Biron and Cristian Bravo: *Empirically Measuring the Effect of Violating the Independence Assumption in Behavioral Scoring* (32)
- 17:05** Bartłomiej Jefmanski and Marcin Pelka: *Fuzzy Composite Index for Customer Satisfaction Evaluation: an Application for Public Sector Services* (39)

### **Data Analysis in Finance (HS 52, Room 101)**

Chair: M. Hanke

- 16:15** Wolfgang Bessler and Daniil Wagner: *Sovereign Wealth Funds and Portfolio Choice* (72)
- 16:40** Anna Rutkowska-Ziarko: *Fundamental portfolio construction based on semi-variance* (82)
- 17:05** Przemysław Garsztka: *Optimal portfolios of assets taking into account the asymmetry of specific risk* (76)

### **Machine Learning and Knowledge Discovery: Clustering (HS 27, Room 003)**

- 16:15** Sandrine Mouysset, Joseph Noailles, Daniel Ruiz and Clovis Tauber: *Spectral Clustering: interpretation and Gaussian parameter* (94)
- 16:40** Marcin Pelka: *Symbolic cluster ensemble based on co-association matrix vs. noisy variables and outliers* (96)
- 17:05** Gunnar Völkel, Uwe Schöning and Hans A. Kestler: *Group-Based Ant Colony Optimization* (103)

**Invited Session: Applications in Empirical Educational Research Based on Secondary Data (HS 2a, Room 004)**

Chair: A. Schwarz

- 16:15** Alexandra Schwarz: *Applications in Empirical Educational Research Based on Secondary Data* (19)  
**16:40** Anna Makles and Kerstin Schneider: *Does school choice increase ethnic segregation in primary schools or only segregation indices?* (18)  
**17:05** Alexandra Schwarz: *The Impact of Student Loans on Personal Financing of Higher Education in Germany* (127)

**Social events**

- 16:30** Guided tour of UB Hildesheim  
**17:30** Guided tour of Dombibliothek  
**18:00** Guided City tour of Hildesheim (German)  
**18:00** Guided City tour of Hildesheim (English)  
**20:00** Reception in the city hall at the market place (Greeting: Ruth Seefels, Mayor of Hildesheim, Claus Weihs, President of GfKI)

***Thursday, August 02, 2012***

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**08:15** Registration (Building: HS 52, Foyer)**09:00** Plenary (Building: HS 52, Room: 001 (Theater)),João Gama: *Data Stream Mining for Ubiquitous Environments* (3),

Chair: M. Spiliopoulou

**Break 09:45 – 10:00**

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**Statistics and Data Analysis: Factor analysis (HS 52, Room 001)**

Chair: C. Hennig

**10:00** Pieter Schoonees, Michel Van de Velden and Patrick Groenen: *Constrained dual scaling of successive categories for detecting response styles* (49)**10:50** Hans-Joachim Mucha, Hans-Georg Bartel and Jens Dolata: *Dual Scaling Classification and Its Application in Archaeometry* (47)**Biostatistics and Bioinformatics (HS 1, Room 007)**

Chair: H. Kestler

**10:00** Sergej Potapov, Asma Gul, Werner Adler and Berthold Lausen: *Decision tree ensembles with different split criteria* (138)**10:25** Florian Schmid, Ludwig Lausser and Hans A. Kestler: *A Transductive Set Covering Machine* (139)**10:50** Pawel Matuszyk, Dominik Brammen, René Schult and Myra Spiliopoulou: *Prediction of Surgery Duration Using Data Mining Methods on Anaesthesia Protocols* (136)

**Invited Session: Dynamic Cluster Analysis - Theory and Practise (HS 27, Room 003)**

Chair: J. Pociecha

- 10:00** Hans-Hermann Bock: *Old and new dynamic clustering methods* (22)  
**10:25** Kamila Migdał Najman and Krzysztof Najman: *Dynamical Clustering with Self Learning Neural Networks* (24)  
**10:50** Paweł Lula: *Machine learning approach in information retrieval for real estate offers analysis* (23)

**Interdisciplinary Domains: Music 1 (HS 2a, Room 004)**

Chair: C. Weihs

- 10:00** Christian Dittmar, Daniel Gärtner, Kay F. Hildebrand and Florian Müller: *Evaluating Similarity Measures for Plagiarism Detection in Melody Transcriptions* (111)  
**10:25** Ruben Hillewaere, Bernard Manderick and Darrell Conklin: *Alignment methods for folk tune classification* (117)  
**10:50** Nadja Bauer, Klaus Friedrichs, Julia Schiffner and Claus Weihs: *Onset detection using an auditory model* (108)
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**Coffee break 11:15 – 11:30****Statistics and Data Analysis: Classification 2 (HS 52, Room 001)**

Chair: B. Bischl

- 11:30** Oliver Meyer, Bernd Bischl and Claus Weihs: *Support Vector Machines on Large Data Sets: Simple Parallel Approaches* (45)  
**11:55** Tatjana Lange and Pavlo Mozharovskyi: *The Alpha-Procedure - a nonparametric invariant method for automatic classification of d-dimensional objects* (43)  
**12:20** Friedhelm Schwenker and Sascha Meudt: *On Instance Selection in Multi Classifier Systems* (50)  
**12:40** Hoang Huy Nguyen, Stefan Frenzel and Christoph Bandt: *Multi-Step Linear Discriminant Analysis for Classification of Event-Related Potentials* (124)



**Biostatistics and Bioinformatics (HS 1, Room 007)**

Chair: H. Kestler

- 11:30** Dominik Heider, Christoph Bartenhagen, J. Nikolaj Dybowski, Sascha Hauke, Martin Pyka and Daniel Hoffmann: *Unsupervised dimension reduction methods for protein sequence classification* (135)
- 11:55** Andre Burkovski, Ludwig Lausser and Hans A. Kestler: *Rank aggregation for candidate gene selection* (134)
- 12:20** Markus Maucher, Christian Wawra and Hans A. Kestler: *The critical noise level for learning Boolean functions* (137)
- 12:45 Meeting AG Biostatistik**

**Invited Session: Dynamic Cluster Analysis - Theory and Practise (HS 27, Room 003)**

Chair: J. Pociecha

- 11:30** Andrzej Sokolowski: *Classification of Three-Way Clustering Problems* (25)
- 11:55** Sascha Voekler and Baier Daniel: *Solving Product Line Design Optimization Problems using Stochastic Programming* (27)
- 12:20** Agnieszka Stanimir: *Studies in Lower Secondary Educational Level Outcomes Changes in Poland Using Correspondence Analysis* (26)

**Interdisciplinary Domains: Music 2 (HS 2a, Room 004)**

Chair: C. Weihs

- 11:30** Igor Vatolkin, Günther Rötter and Claus Weihs: *Music Genre Prediction by High-Level Instrument and Harmony Characteristics* (130)
- 11:55** Markus Eichhoff and Claus Weihs: *From Single Tones to MIDI Remixes - Detecting Families of Musical Instruments by High-Level Features* (112)
- 12:20** Hanna Lukashevich: *Confidence measures in automatic music classification* (123)
- 12:45** Sebastian Krey, Uwe Ligges and Friedrich Leisch: *Music and Timbre Segmentation by efficient Order Constrained K-Means Clustering* (120)

**13:30 Meeting AG DA-NK (HS 52, Room 101)**


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**Lunch break 12:45 – 14:00**

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Michele Sebag: *Autonomous Robotics: Defining Instincts and Learning Systems of Values* (8), Chair: W. Gaul
- 14:00** Semi Plenary (Building: HS 27, Room 003),  
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**Break 14:45 – 14:55**

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**Statistics and Data Analysis: Clustering 2 (HS 52, Room 001)**

Chair: Ritter

- 14:55** Justyna Wilk and Marcin Pelka: *Cluster Analysis of Symbolic Data with Application of R Software* (54)
- 15:20** Hajo Holzmann and Florian Schwaiger: *Merging States in Hidden Markov Models* (38)
- 15:45** Christian Hennig: *Some thoughts about the “number of clusters”-problem* (37)

**Data Analysis and Classification in Marketing (HS 1, Room 007)**

Chair: R. Decker

- 14:55** Winfried Steiner, Florian Siems, Anett Weber and Daniel Guhl: *Exploring Nonlinear Effects in the Relationship between Customer Satisfaction and Customer Retention* (67)
- 15:20** Christina Lichtenthaler and Lars Schmidt-Thieme: *Multinomial-SVM-Item-Recommender for Repeat Buying Scenarios* (61)
- 15:45** Michael Tuma: *Identifying Consumer Typologies from Online Product Reviews Using Finite Mixture Models* (69)

**Data Analysis in Finance (HS 52, Room 101)**

Chair: M. Hanke

- 14:55** Alois Geyer, Michael Hanke and Alex Weissensteiner: *A Simplex Rotation Algorithm for the Factor Approach to Generate Financial Scenarios* (77)
- 15:20** Daniel Bohlmann and Jarek Krajewski: *Feature reduction and pattern classification for financial forecasting, - A comparative study on different optimization strategies -* (74)

**Machine Learning and Knowledge Discovery: Classification & Ensembles (HS 27, Room 003)**

- 14:55** Friedhelm Schwenker, Michael Glodek and Martin Schels: *Ensemble learning for density estimation* (97)  
**15:20** Robin Senge and Eyke Hüllermeier: *An Analysis of Classifier Chains for Multi-Label Classification* (98)  
**15:45** Igor Vatolkin, Bernd Bischl, Günter Rudolph and Claus Weihs: *Statistical Comparison of Classifiers for Multi-Objective Feature Selection in Instrument Recognition* (102)
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**Coffee break 16:10 – 16:40**

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**Statistics and Data Analysis: Model selection (HS 52, Room 001)**

Chair: C. Weihs

- 16:40** Eckhard Liebscher: *A universal method for model selection in parametric regression models based on statistical tests* (44)  
**17:05** Hans-Joachim Mucha and Hans-Georg Bartel: *Soft Bootstrapping and Its Comparison with Other Resampling Methods* (46)

**Data Analysis and Classification in Marketing (HS 1, Room 007)**

Chair: R. Decker

- 16:40** Anneke Minke and Klaus Ambrosi: *Approach to Predicting Changes in Market Segments Based on Customer Behavior* (62)  
**17:05** Andrzej Bak, Marcin Pelka and Aneta Rybicka: *Discrete Choice Methods and Their Applications in Preference Analysis of Vodka Consumers* (57)

**Interdisciplinary Domains: Language & Education (HS 2a, Room 004)**

Chair: S. Krolak-Schwerdt

- 16:40** Andreea Beica and Liviu P. Dinu: *Computational Aspects of Natural Languages' Similarities* (109)  
**17:05** Sergiu Nisioi and Liviu P. Dinu: *The Author in Translation: A Computational Method* (125)

**17:30** Ali Ünlü, Daniel Kasper and Matthias Trendtel: *The OECD's Programme for International Student Assessment (PISA) Study: A Review of Its Basic Psychometric Concepts* (131)

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**Break 17:30 – 18:00**

**18:00** General meeting of the German Classification Society  
(Building: HS 52, Room: 001 (Theater), End: 19:30)

**Social events**

**20:15** Conference dinner in the Novotel (Bahnhofsallee 38, 31134 Hildesheim, admittance: 19:30)

**Friday, August 03, 2012**

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**08:15** Registration (Building: HS 52, Foyer)

**09:00** Semi Plenary (Building: HS 52, Room: 001 (Theater)),

Hillol Kargupta: *Connected Cars, Machine-to-Machine Environments, and Distributed Data Mining* (6), Chair: L. Schmidt-Thieme

**09:00** Semi Plenary (Building: HS 27, Room 003),

Dirk Van den Poel: *On the value of incorporating sequential information into predictive analytics classification models for analytical CRM* (7),

Chair: W. Steiner

**Break 09:45 – 09:55**

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**Statistics and Data Analysis: Applications (HS 52, Room 001)**

Chair: H. Mucha

**09:55** Jaime Santos and Orlando Belo: *Introducing Analytical Methods and Predictive Models in Project Management Activities* (48)

**10:20** Florian Klapproth, Sabine Krolak-Schwerdt and Thomas Hörstermann: *Predictive validity of tracking decisions: Application of a new validation criterion* (41)

**10:45** Mariana Carvalho, Paulo Sampaio and Orlando Belo: *Discovering Process Certification Tendencies* (35)

**Data Analysis and Classification in Marketing (HS 1, Room 007)**

Chair: D. Van den Poel

**09:55** Pascal Kottemann, Martin Meiner and Reinhold Decker: *Measuring Consumers' Brand Associations in Online Market Research* (60)

**10:20** Michel Ballings and Dirk Van den Poel: *The Dangers of using Intention as a Surrogate for Retention in Brand Positioning Decision Support Systems* (58)

- 10:45** Friederike Paetz and Winfried J. Steiner: *Finite Mixture MNP vs. Finite Mixture IP Models: An Empirical Study* (63)

**Machine Learning and Knowledge Discovery: Opinions and marketing (HS 52, Room 101)**

- 09:55** Hyunsup Ahn, Markus Weinmann and Christoph Lofi: *Classification and definition of contextual vicinity from emotional words for sentiment analysis* (86)
- 10:20** Alina Sinelnikova, Eirini Ntoutsi and Hans-Peter Kriegel: *Sentiment analysis in the Twitter stream* (99)
- 10:45** Ralf Wagner: *The Dark Side of Marketing Communication: Grouping Consumers with Respect to Their Reactance Behavior* (104)

**Machine Learning and Knowledge Discovery: Distributed and Temporal Data Analysis (HS 27, Room 003)**

Chair: J. Gama

- 09:55** Umer Khan, Alexandros Nanopoulos and Lars Schmidt-Thieme: *Experimental Evaluation of Communication Efficient Distributed Classification in Peer-to-Peer Networks* (92)
- 10:20** István Dávid and Krisztian Buza: *On the relation of cluster stability and early classifiability of time series* (91)
- 10:45** Maheen Bakhtyar, Lena Wiese, Katsumi Inoue and Nam Dang: *Using Conceptual Inductive Learning for Cooperative Query Answering* (87)

**Interdisciplinary Domains: Quality (HS 2a, Room 004)**

Chair: C. Hennig

- 09:55** Dirk Thorleuchter and Dirk Van den Poel: *Espionage Risk Assessment for Security of Defense based Research and Technology* (128)
- 10:20** Kay F. Hildebrand: *Supporting Selection of Statistical Techniques in Research* (116)
- 10:45** Dominik Rozkrut: *Differentiation of innovation strategies across regions* (126)

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**Coffee break 11:10 – 11:25**

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**Invited Session: Ensemble methods in clustering and classification (HS 52, Room 001)**

Chair: B. Lausen

- 11:25** Andreas Ziegler and Jochen Kruppa: *Probability Machines: Estimating individual probabilities using machine learning methods* (15)  
**11:50** Harald Binder: *Tailoring componentwise boosting for prediction with a huge number of molecular measurements* (13)  
**12:15** Silke Janitza and Anne-Laure Boulesteix: *An AUC-based Permutation Variable Importance Measure for Random Forests* (14)  
**12:40** Werner Adler, Zardad Khan, Sergej Potapov and Berthold Lausen: *Diversity Based Weighting to Improve the Performance of Classifier Ensembles* (12)

**Data Analysis and Classification in Marketing (HS 1, Room 007)**

Chair: A. Rese

- 11:25** Alexander Sänn and Daniel Baier: *Complex Product Development: Using a Combined VoC Lead User Approach* (68)  
**11:50** Sebastian Selka, Daniel Baier and Peter Kurz: *An Validity Analysis of Recent Commercial Conjoint Analysis Studies* (66)

**Machine Learning and Knowledge Discovery: Social networks (HS 27, Room 003)**

Chair: P. Symeonidis

- 11:25** Zied Yakoubi and Rushed Kanawati: *Applying Leaders Driven Community Detection Algorithms to Data Clustering* (106)  
**11:50** Christian Wartena and Rogier Brussee: *Evaluating Tag Similarity Measures by Clustering Bibsonomy Tags* (105)  
**12:40** Krisztian Buza: *Feedback Prediction for Blogs* (89)

**Interdisciplinary Domains: Maps & Images (HS 2a, Room 004)**

Chair: I. Herzog

- 11:25** Andre Busche, Ruth Janning, Tomas Horvath and Lars Schmidt-Thieme: *A Unifying Framework for GPR Image Reconstruction* (110)  
**11:50** Irmela Herzog: *Testing Models for Medieval Settlement Location* (115)  
**12:15** Martin Loidl and Christoph Traun: *The balance of value and space - Merging classification and regionalization to make more sense out of spatial data* (121)

**Break 13:05 – 13:15**

**13:15** Closing Plenary (Building: HS 52, Room: 001 (Theater)),

Shai Ben-David: *Universal Learning vs. No Free Lunch results - can there be learners that do not require task-specific knowledge? (2)*, Chair: C. Hennig

**14:00** Farewell (Beverages/snacks, Building: HS 52, Foyer)

**End 14:30**



**Workshop on Classification and Subject Indexing in Library and  
Information Science (LIS'2012)  
im Rahmen der Jahrestagung der Deutschen Gesellschaft für  
Klassifikation**

**Mittwoch, August 01, 2012**

09:00	Eröffnung der Tagung (HS 52)
10:45	<i>Kaffeepause</i>
	Moderation: Frank Scholze
11:15	Heidrun Wiesenmüller: Resource Discovery Systeme – Chance oder Verhängnis für die bibliothekarische Erschließung?
	Karl Rädler: Instrumentalisierung der klassifikatorischen Sacherschließung im neuen Suchportal mit AquaBrowser in der Vorarlberger Landesbibliothek
12:30	<i>Mittagspause</i>
13:30	Uwe Geith: Die sachliche Suche in Schweizer Online-Katalogen und Discovery-Systemen
14:15	Pause
	Moderation: Michael Mönnich
14:30	Dominique Ritze, Kai Eckert: Data Enrichment in Discovery Systems using Linked Data
	Elmar Haake: Verarbeitung von Sacherschließungselementen in Discoverysystemen: auf dem Weg zu einer nutzergerechten Verwendung von inhaltlicher Erschließung in der E-LIB Bremen.
15:45	<i>Kaffeepause</i>
16:15	Jan Frederik Maas: Entwicklung eines Werkzeugs zur Visualisierung der SWD/GND
	Alice Spinnler: Sacherschließung mit GND/RSWK im Verbund Basel : eine erste Bilanz
17:30	<i>Bibliotheksführungen</i>
20:30	<i>Abendessen (auf Selbstzahlerbasis)</i>

<b>Donnerstag, August 02, 2012</b>	
09:00	Plenarsitzung (HS 52)
09:45	<i>Pause</i>
	Moderation: Ewald Brahms
10:00	Debora Daberkow, Petra Mensing, Irina Sens, Claudia Todt: LinSearch – Effiziente Indizierung an der Technischen Informationsbibliothek, Hannover
	Monika Lösse, Mathias Lösch: Sachliche Einordnung von Dokumenten in Bibliotheken: praktische Erfahrungen mit maschinellen Lernverfahren
11:15	<i>Kaffeepause</i>
11:30	Magnus Pfeffer: Abgleich von Titeldaten zur Übernahme von Sacherschließungsinformationen über Verbundgrenzen
	Uwe Geith, Wolfgang Giella: Herausforderung "Neue Klassifikation für Freihandbestände" - 3 Praxis-Beispiele aus der Schweiz
12:45	<i>Mittagspause</i>
14:00	Semiplenarsitzung (HS 52/27)
14:45	<i>Pause</i>
	Moderation: Heidrun Wiesenmüller
14:55	Andreas Ledl: Blogs als Thesaurus-Datenbanken
	Michael Schwantner, Silke Rehme, Helmut Müller, Elke Bubel, Mario Quilitz, Peter König, Nadejda Nikitina, Achim Rettinger, Nils Elsner: Semiautomatische Ontologiegenerierung – ein Erfahrungsbericht
16:10	<i>Kaffeepause</i>
16:40	Bernd Lorenz: AG Dezimalklassifikationen - Literaturbericht 2011
17:30	<i>Pause bzw. Treffen des LIS PC</i>
18:00	Versammlung der Gesellschaft für Klassifikation (HS 52)
19:30	Ende

**The LIS'2012 workshop will take place at Building HS 31, Room 012.**