

# International Federation of Classification Societies Newsletter

**President:** Berthold Lausen Number 59 April, 2019

**Editor:** Katrijn Van Deun

The International Federation of Classification Societies, founded in 1985, is composed of:

Associação Portuguesa de Classificação e Análise de Dados, British Classification Society, Central American and Carribean Society of Classification and Data Analysis, The Classification Society, Classification and Multivariate Statistics Group of Hungarian Statistical Association, GfKl Data Science Society, Greek Society of Data Analysis, Irish Pattern Recognition and Classification Society, Japanese Classification Society, Korean Classification Society, Moroccan Classification Society, Société Francophone de Classification, Multivariate Data Analysis Group of the South African Association, Multivariate Statistical Statistics and Classification Group of the Spanish Society of Statistics and Operations Research, Società Italiana di Statistica, Statistical Society of Slovenia, Vereniging voor Ordinatie en Classificatie and Section of Classification and Data Analysis of the Polish Statistical Society.

The IFCS is a non-profit, non-political scientific organization, the aims of which are to further classification research. Among other activities, the IFCS organises a biennial conference, and supports two journals: Advances in Data Analysis and Classification and the Journal of Classification.

IFCS Homepage: http://www.ifcs.info

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**Upcoming Conferences and Meetings** 

# **Words from the IFCS President**

Dear friends and colleagues,

We are approaching the deadline for contributed papers, 5<sup>th</sup> May 2019, of our next IFCS conference in Thessaloniki, Greece, August 26-29, 2019. Theodore Chadjipadelis as conference chair, the scientific program committee, the local organizers and the company supporting the organization are working hard to organize a very successful IFCS conference. I like to encourage you to support the effort and join in, register and contribute, encourage participation and submission of papers by members of your society, by the classification and data science community at large and by scholars who are interested in general. Further information is provided in the Report by the conference organizers, see "IFCS2019: Report".

I like to propose that we discuss the IFCS publication strategy at the council meeting in Thessaloniki. The IFCS2019 will publish the post conference proceedings in *Studies in Classification*, *Data Analysis*, and *Knowledge* 

*Organization* by Springer. We may decide that IFCS publishes the conference proceeding of our biannual conference in the Springer Series in general.

We plan to decide on a new visualization of the worldwide distribution of IFCS Member Societies and their members. Note that not all Member Societies are organized in line with the borders of national states and many have an international membership. Please contact the Secretary Christian Hennig or me, if you have a proposal how to do this as a data scientist by 30 June 2019. I aim to have a presentation of a proposal or proposals at the IFCS council meeting in Thessaloniki.

The distribution of the member societies by continents is

Africa: 2
Americas: 2
Asia: 2
Australia: 0
Europe: 12

In my manifesto, when I stood as president for election, I suggested to support that IFCS should increase joint, regional or continental activities. Looking at the distribution of member societies by continents we should aim to find and to encourage (further) active classification and data science groups especially in Africa, Americas, Asia and Australia. How can we find new member societies in these regions? This year I plan to visit meetings and conferences in Africa, Americas and Asia to encourage and to support that groups are identified which may become member societies of IFCS in the future. If you have suggestions of existing groups in Africa, Americas, Asia and Australia, please, let me know. In addition, I like to suggest to strengthen our link to the European classification societies and agree that activities of IFCS and our European members should avoid clashes. For example, having had the ECDA2013 and IFCS2013 in consecutive weeks we should avoid such arrangements in the future, if one party ECDA or IFCS is not supportive. Moreover, joint regional meetings support the visibility of IFCS and its members as classification and data science societies. For example, ECDA discusses with DSSV of IASC a joint meeting in Rotterdam 6-9 July 2021, next to the WSC of ISI in The Hague, Netherlands, 11-15 July 2021.

I am looking forward to meet you and to discuss further at the IFCS2019 in Thessaloniki.

Very best wishes,

# Berthold Lausen IFCS President

# **News from the IFCS Secretary**

Since the last newsletter, the IFCS Executive Committee (EC) had Skype meetings on 23 November, 19 December 2018 and 8 March 2019. Once more much of the two meetings was devoted to the preparation of the IFCS 2019 conference in Thessaloniki. I assume that there will be more information on the IFCS 2019 elsewhere in the Newsletter. We hope that there will be many participants from all member societies.

One issue was the IFCS Awards. The EC decided (after discussion over email) to extend the deadline for Awards because by the original deadline 15 January there were not enough nominations for the Awards. Awards need to be competitive in order to be worthwhile. We will put a discussion on the IFCS Awards on the agenda of the Council meeting in Thessaloniki; the IFCS Awards in the current form require support and nominations from many member societies.

The EC received a bid for hosting the IFCS 2021. The bid is with the Council for discussion and voting soon.

Another issue for the Council meeting in Thessaloniki is the publication strategy regarding conference proceedings. Currently it is not clearly decided what form conference proceedings for future conferences should take or what is expected of conference organisers in this respect. The IFCS needs to decide how to respond to an increasing requirement for open access publication and the high costs that publishers charge for this.

I have moved from London to Bologna in December and needed some time to get started in Italy. Because of this I took a break from reminding member societies to update their data in the IFCS Directory for some time. I am now in the process to update this information. Please make in any case sure (reminded or not) that you tell me all relevant changes regarding the member societies

(Presidents, Treasurers, Council Delegates, Distributors of the IFCS Newsletter; I always need email addresses and the end of their terms so that I can remind the society again at that point).

Note that the IFCS Directory is published under "Governance" on the IFCS website, however names and email addresses of persons who don't explicitly consent to the publication of this information are not listed. I will ask everyone who takes up these positions in the member societies for such a consent (although consenting is not mandatory).

The IFCS Council has four "Additional Members", i.e., members who are not delegates of a member society. These are elected by the remaining Council members. Soon the IFCS council needs to elect two new Additional members, because the terms of Vincenzo Esposito Vinzi and Anne-Laure Boulesteix have ended.

With all the best wishes,

Christian Hennig IFCS Secretary

# **News from the IFCS Publication Officer**

There is not much news from my side. I would just like to take the opportunity to thank all of the member societies who have contributed to this newsletter.

Katrijn Van Deun IFCS Publication Officer

# IFCS 2019: Report

# **Pre-conference Workshops**

Two workshops are planned to be held sequentially on Monday, August 26, 2019 (from 8:30am to 4:30pm). The exact timetable and venue will be announced soon in the conference website.

- Compositional Data Analysis in Practice, by Prof. Michael Greenacre
- Symbolic Data Analysis: Parametric multivariate analysis of interval data, by Prof. Paula Brito and Prof. Pedro Duarte Silva

Further information can be found at <a href="http://ifcs2019.gr/workshops/">http://ifcs2019.gr/workshops/</a>. Fees for each workshop participant: € 50 (can be paid via the conference registration page or on-site).

# **Invited Speakers**

- Maria-Florina Balcan (Carnegie Mellon, USA)
- Vladimir Batagelj (University of Ljubljiana, Slovenia)
- Theodoros Evgeniou (INSEAD, France)
- Michael Greenacre (Pompeu Fabra University, Spain)
- David Hunter (Penn State University, USA)
- Julie Josse (Ecole Polytechnique, France)
- Andy Mauromoustakos (University of Arkansas, USA)
- Sofia Olhede (UCL, England)

#### **Invited Sessions**

- Theofanis Exadaktylos, Theodore Chadjipadelis (GSDA/ECPR): Analysis of European Parliament Elections
- Mohsen Farid (BCS): Mental health Classification and data science
- Anuška Ferligoj (SSS): Clustering Networks
- José Fernando Vera & Eva Boj del Val (SEIO-AMyC): New developments in clustering and scaling data
- Christian Hennig (BCS): Philosophy relevant to classification and data science.
- Christian Hennig (IFCS Cluster Benchmarking Task Force): Neutral Benchmarking Studies of Clustering
- David Hunter (BCS): Statistical theory of cluster analysis
- Salvatore Ingrassia (CLADAG): Advances in Mixture Modeling
- Krzysztof Jajuga (SKAD): Data Analysis in finance
- Daniel Jeske: Biostatistics applications of classification
- Alfonso Iodice D'Enza, Angelos Markos (GSDA): Dimension reduction and clustering
- Nataša Kejžar, Simona Korenjak-Černe, Andrej Srakar (SSS): Advances in classification analysis for complex data – compositional and symbolic approaches
- Koji Kurihara (JCS): Clustering for spatiotemporal data and its visualization
- Paul McNicholas (CS): Clustering, Classification and Data Analysis via Mixture Models
- Angela Montanari (CLADAG): Supervised classification with imprecise labels
- Iannis Papadimitriou (GSDA): Developments of data analysis in Greece

- Jozef Pociecha (SKAD): Classification methods in economics and business
- Mark de Rooij (VOC): Crossroads of Statistical Learning and Psychometrics
- Niel le Roux (SASA-MDAG): Classification, visualisation and dimension reduction
- Thanos Thanopoulos (GSDA/HSA): Official Statistics
- Cristina Tortora (GSDA): Clustering categorical and mixed-type data

#### President's invited session

Berthold Lausen, Theodore Chadjipadelis: Data Science Education

### **Presidential Address**

Berthold Lausen: Predictive Ensemble Methods for Event Time Data

# **Post Conference Proceedings**

Post conference proceedings will be published in Studies in Classification, Data Analysis, and Knowledge Organization. Single papers can be made open access on payment of the open access to Springer.

# **Accommodation & Transportation**

Hotel accommodation and transportation options from/to Thessaloniki Makedonia Airport are available through the abstract submission webpage.

# **Important Dates (updated)**

Sunday, May 05, 2019	Deadline for abstract submission		
Sunday, May 19, 2019	Notification of acceptance for abstract submission		
Sunday, May 26, 2019	Deadline for early bird registration		
Sunday, June 23, 2019	Deadline for standard registration		
Sunday, July 21, 2019	Deadline for late registration		
Monday, August 26, 2019	Pre-conference workshops and conference opening		
August 27-29, 2019	IFCS-2019 conference sessions		

### **Conference Fees**

	Early Bird until May 5, 2019	Standard until June 23, 2019	Late until July 21, 2019	On Site
IFCS Societies Member*	260,00 €	300,00 €	340,00 €	370,00 €
Non-	340,00	380,00	420,00	450,00
Member	€	€	€	€
Student	150,00	150,00	150,00	150,00
	€	€	€	€

<sup>\*</sup> IASC members are entitled to IFCS societies members reduced fees

### **Further information**

Further information will be posted on the conference website <a href="http://www.ifcs2019.gr">http://www.ifcs2019.gr</a>

Contact: ifcs2019@polsci.auth.gr

We look forward to seeing you in Thessaloniki in August 2019.

# Second Call for Cluster Benchmarking Challenge (extended deadline): Neutral Benchmarking Studies of Clustering

The Cluster Benchmarking Task Force of the International Federation of Classification Societies (IFCS) is calling for neutral benchmarking studies in cluster analysis. This call is part of a challenge connected with the 2019 IFCS conference in Thessaloniki, Greece, August 26-29.

To achieve a cumulative building of knowledge on clustering and classification, careful attention to benchmarking (performance comparison of methods) is very important. New methods of data pre-processing, new data-analytic techniques, and new methods of output post-processing, should be extensively and carefully compared with existing alternatives, and existing methods should be part of neutral comparison studies. Benchmarking studies can frequently been found in supervised learning, but are less common in unsupervised learning.

The Task Force has written a white paper (for a preprint, see: <a href="https://arxiv.org/abs/1809.10496">https://arxiv.org/abs/1809.10496</a>) that addresses the theoretical and conceptual

underpinnings of benchmarking in cluster analysis, and some practicalities for performing sound benchmarking studies. The Task Force is now calling for individuals to contribute neutral benchmarking studies on cluster analysis as part of a challenge.

### **Rules for submission:**

- Contributions for the challenge must be emailed to <a href="Iven.VanMechelen@kuleuven.be">Iven.VanMechelen@kuleuven.be</a>.
- A contribution should comprise a report on a benchmarking study in the context of cluster analysis. This report should have a length of between 5 and 15 pages, including text, tables, figures and references; other materials can be submitted as separate files.
- The benchmarking study may compare methods of data pre-processing, clustering (potentially but not necessarily including the estimation of cluster parameters such as the number of clusters), and/or output postprocessing, and may use empirical or simulated data.
- Contributors should have a neutral point of view with respect to the methods studied in the contribution. This means that they should not be an author or co-author of one or more of the studied method(s). It is also expected that the contributors do not have a personal interest to promote any of the involved methods in particular.
- The **extended deadline** for submissions is **April 20, 2019, 12:00 pm CET**.

# **Competition guidelines:**

- Contributions to the challenge will be evaluated by the IFCS Task Force on Benchmarking.
- Major evaluation criteria will be:
  - the technical correctness and clarity of the report,
- that the study shows a critical reflection on principles on which a sound benchmarking study should be based (which may be either in line or at odds with the principles outlined in the white paper contributed by the Task Force),
- a detailed specification of the choices made in the benchmarking study at issue along with a justification of these based on the principles referred to above.
- Up to 8 contributions will be selected for a short presentation during one or two invited sessions at the 2019 IFCS conference in

Thessaloniki, Greece (such a presentation will not conflict with giving another presentation at that conference). The authors of the selected contributions will be notified no later than May 6, 2019. Authors of selected contributions who cannot attend the conference will be invited to prepare a few slides on their contribution.

- During the closing session of the IFCS conference one or two of the selected contributions will be proclaimed winners of the challenge. The winners will receive a CRC/Chapman and Hall book voucher.
- Contact for questions: Iven.VanMechelen@kuleuven.be.

# All researchers interested in clustering and classification are most welcome to participate in this challenge!

Anne-Laure Boulesteix, Rainer Dangl, Nema Dean, Isabelle Guyon, Christian Hennig, Friedrich Leisch, Douglas Steinley, Iven Van Mechelen, and Matthijs Warrens.

# **News from CLAD**

### CLAD's 25 Years

2019 In the Associação Portuguesa de CLassificação e Análise de Dados (CLAD) completes 25 years. In fact, CLAD was born in 1994 after a historical first JOCLAD meeting grouping more than 250 people the previous year at LEAD/FPCE at the University of Lisbon. All of them were interested in the new methods and applications related to what we now call data science. The following year, by the hand of the IFCS President Allan Gordon, CLAD became the 10<sup>th</sup> IFCS member. The 25<sup>th</sup> CLAD anniversary will then be celebrated during the next 26<sup>th</sup> JOCLAD Annual Meeting. A special short session is planned, where the participation of the current, the last and the first CLAD President is expected.

### **CLAD's Book Series**

CLADMAP III, the third issue of CLAD's Book Series "Classificação e Análise de Dados. Métodos e Aplicações" will be published soon and distributed during JOCLAD 2019. Authors of the best research papers presented at JOCLAD 2019 are invited to submit full papers for publication in CLADMAP IV.

### **JOCLAD 2019**

The XXVI Annual Meeting of the Associação Portuguesa de CLassificação e Análise de Dados (CLAD) will be held April 11-13 2019, at the School of Technology and Management of Viseu of Polytechnic Institute of Viseu. The meeting is addressed to researchers, teachers, students and users who share interests in the area of Classification and Data Analysis and related methods. It aims to promote and develop research in data science; increase scientific dialogue, cooperation, discussion and exchange between data scientists and companies; and stimulate the national scientific production in data science.

JOCLAD 2019 scientific program will include plenary and thematic sessions, contributed papers and poster sessions. Two short courses will take place on April 10th.

JOCLAD 2019 scientific program includes plenary and thematic sessions, contributed papers and poster sessions.

JOCLAD 2019 program and further information is available at <a href="http://www.joclad.ipt.pt/joclad2019/">http://www.joclad.ipt.pt/joclad2019/</a>, as well as at CLAD's website <a href="http://www.clad.pt/">http://www.clad.pt/</a>.

Helena Bacelar-Nicolau

# **News from CLADAG**

### **CLADAG 2019**

CLADAG 2019, the 12 biannual Conference of the Classification and Data Analysis Group (CLADAG) of the Italian Statistical Society, will be held on 11 - 13 September 2019, in Cassino, hosted by the University of Cassino and Southern Lazio (Italy).

We are glad to announce a rich list of keynotes and invited speakers:

- Keynotes: Christophe Biernacki, University of Lille; Adrian Bowman, University of Glasgow; Bettina Grün, Johannes Kepler Universitat Linz; Francesco Mola, University of Cagliari; Sylvia Richardson, University of Cambridge
- Invited (amongst many others): Alan Agresti, Anthony Atkinson, Rasmus Bro, Mia Hubert, Karel Hron, Geoffrey McLachlan, Irene Moustaki, Brendan Murphy, Peter Rousseeuw,

Michael G. Schimek, Linda D. Sharples, Weixin Yao.

- Deadlines: Abstract/Short paper submission:
   12 April, 2019
- Call for papers: <a href="http://cladag2019.unicas.it/">http://cladag.it/</a> or <a href="http://cladag.it/">http://cladag.it/</a>
- Watch the video! http://cladag2019.unicas.it/download-files/cladag-promo-video.mp4

Bring your own contribution to CLADAG 2019!

Francesca Greselin and Giovanni Porzio (chairs of the Scientific and the Organizing Committees)

# ECDA2020 in Napoli (Italy), from September 16th to September 18th 2020

Following previous editions in Luxembourg (2013), Bremen (2014), Colchester (2015), Wroclaw (2017), Paderborn (2018) and Bayreuth (2019) the next European Conference on Data Analysis (ECDA2020) meeting will be held in Napoli (Italy), from September 16th to September 18th jointly organized by University of Naples Federico II under the auspicies of the Classification and Data Analysis Group (ClaDAG) of the Italian Statistical Society. The University of Naples, was established on 5 June 1224, by the King of Sicily and Holy Roman Emperor Frederick II of Hohenstaufen. It is most likely the oldest public university in the World, since it was established by a head of State. Nowadays, the University of Naples is the third largest university in Italy and is the first in the southern Italy. The city of Naples does not need any presentation. The city is experiencing an extraordinary touristic season. The whole region has significantly increased its touristic reception reaching 20 millions of tourists per year.

Professors Francesco Palumbo (University of Naples Federico II, department of Political Sciences) and Hans A. Kestler (University of Ulm, Germany) co-chair the Program Committee. ECDA conferences are supported by GfKl Data Science Society, the European Association for Data Science (EuADS), British Classification Society (BCS), Section on Classification and Data Analysis of the Polish Statistical Association (SKAD), Classification and Data Analysis Group (ClaDAG) of the Italian Statistical Society.

The symposium will focus on a multidisciplinary approach to data analysis, with special interest on classification, computer science, data mining. Information about the program and on the deadlines for the submission of the papers will be available soon on the conference web pages at the following URL <a href="http://www.ecda2020.unina.it/">http://www.ecda2020.unina.it/</a>.

For any further information, please contact Francesco Palumbo at the email address fpalumbo@unina.it.

Francesco Palumbo

# **News from MDAG**

The Multivariate Data Analysis Group (MDAG) welcomes Renette Blignaut on the executive committee. She was elected as an additional member on the committee for the 2018-2022 term at the annual meeting in November 2018.

# **Report on CARME 2019**

MDAG hosted the first Correspondence Analysis and Related Methods (CARME) conference outside of Europe in Stellenbosch, South Africa, from 4-6 February 2019.

The three day conference was attended by 68 delegates from 17 different countries. Plenary presentations were presented by Angela Montanari (University of Bologna), Peter Filzmoser (Vienna University of Technology), Riaan de Jongh (North-West University), Frederic Lebaron (University Paris-Saclay), Cajo ter Braak (Wageningen University) and John Gower, via Skype (The Open University).

The scientific programme consisted of a wide variety of correspondence analysis applications: big data, compositional data analysis, CARME in finance, multivariate applications, CARME in the social space, principal component analysis, CARME in ecology, classification, biplots and bilinear models.

Networking opportunities were also a highlight of the conference which started with a pre-conference excursion of the Cape Peninsula, a welcoming reception in the Botanical Gardens of Stellenbosch with Marimba (percussion) entertainment. The conference was concluded with a picturesque wine tasting outside of Stellenbosch and a gala dinner with traditional South African dishes.

CARME will return to Europe at the University of Bonn in 2022.

Johané Nienkemper-Swanepoel

# **News from JCS**

# Report of the Japanese Classification Society 2018 Symposium

The 2018 Symposium of the Japanese Classification Society was held at the Okinawa Prefecture Youth Center on Oct. 24-25, 2018. The program of the 27th Annual Research Meeting comprised 25 presentations in all, divided into 2 student sections and 3 general sessions.

### Awards and Fellows of JCS in 2018

In 2018, award winners of contribution award, paper award, encouraging award and fellows of JCS were selected as follows:

- Distinguished Career Award: Yasumasa Baba (The Institute of Statistical Mathematics)
- Outstanding Paper Award: Shuji Ando (Tokyo University of Science) and Kouji Tahata (Tokyo University of Science)
- Young Researcher Award: Kohei Uno (Osaka University)
- Fellows: Tatsuzo Suzuki (The Institute of Statistical Mathematics)

# Data analysis seminar for Web scraping with R: open data, application of web information

The Data analysis seminar for Web scraping with R was held at Tokai University, Takanawa Campus on March 4th, 2019. The seminar consisted of two parts. The first part and the second part are an introduction to R, and Web Scraping with R, respectively.

# Joint seminar of JCS and Hosei Business School of IM: Marketing data analysis with R, 2019

The purpose of this seminar was to deal with marketing data analysis with R. These seminars were conducted at Tokai University, Takanawa Campus on March 2nd and 9th. On March 2nd, the

seminar on an introduction for the analysis of sales data was held. On March 9th, analysis methods of purchase history data such as market basket analysis, decision tree, and logistic regression were explained.

#### Kensuke Tanioka

# **News from The Classification Society**

# The 2019 Annual Meeting of The Classification Society

The 48th annual meeting of The Classification Society will be held at MacEwan University in Edmonton, Alberta, Canada. The meeting starts on Wednesday, June 19, late afternoon/early evening with an informal get-together (location TBA) and ends Saturday, June 22, 2019, at noon.

The meeting will be hosted by our current secretary/treasurer, Brian Franczak. He is chairing the organizing committee with Paul McNicholas, the current president of The Classification Society. Paul McNicholas is the chair of the Scientific Program Committee (SCP); other members of the SCP are Brian Franczak, Stephen France, and Abby Flynt.

- The list of confirmed speakers is: President's Invited Address: Claire Gormley, University College Dublin, Ireland;
- Invited Lectures: Brianna Heggeseth, Macalester College, St. Paul; Hans Friedrich Köhn, University of Illinois, Urbana-Champaign; Antonio Punzo, University of Catania, Italy;
- Invited Session Speakers: Guangliang Chen, San Jose State University; Brian Franczak, MacEwan University, Canada; Bei Jiang, University of Alberta, Canada; Rebecca Nugent, Carnegie Melon University, Pittsburgh; Irene Vrbik, University of British Columbia-Okanagan, Canada; Meredith Wallace, University of Pittsburgh;
- Special Session in Honour of Professor Stanley Sclove: Stanley Sclove, University of Illinois at Chicago; Stephen France, Mississippi State University; Herbie Lee, University of California, Santa Cruz; Paul McNicholas, McMaster University, Canada.

There will also be a special invited session for the Distinguished Dissertation Award.

Contributed abstracts for talks and posters are most welcome!

- The organizing committee is now accepting abstracts for oral and poster presentations. If you are interested in presenting your work at the upcoming meeting, please email a pdf file with a title and abstract containing no more than 300 words to Brian Franczak, franczakb@macewan.ca.
- Alternatively, abstracts can also be submitted through:
   https://docs.google.com/forms/d/e/1FAIpQLSd22
   fch9WzdDn-zfg4rS8yIUGHqrizneAaT b5r3GpInN0I6Q/viewf orm?usp=sf\_link
- Please indicate whether you would like to be considered for an oral or poster presentation.
- The submission deadline for contributed abstracts is March 31, 2019

The Early Bird Registration deadline is May 1, 2019.

Further information concerning accommodation, travel, and transportation can be found at the website of The Classification Society: <a href="https://tcs.wildapricot.org/Meeting">https://tcs.wildapricot.org/Meeting</a>.

# The 2019 Distinguished Dissertation Award of The Classification Society

Anjali Silva is the winner of the 2019 Distinguished Dissertation Award for an outstanding Ph.D. dissertation on clustering, classification, or related areas of data analysis, sponsored by The Classification Society. The title of Anjali's dissertation is "Bayesian Clustering Approaches for Discrete Data." Here is the abstract of Anjali's dissertation:

"Unsupervised classification or clustering uses no a priori knowledge of the labels of the observations in the process of categorizing data. The research contained in this thesis focuses on the machine learning of discrete-valued gene expression datasets using clustering, with the aim of co-expression identifying gene networks. Specifically, a number of topics surrounding the use of mixture models and Markov chain Monte Carlo (MCMC) methods in clustering of discrete high-throughput transcriptome from sequencing technologies is presented. After outlining current challenges and gaps in research with respect to clustering approaches, three mixture model-based clustering methods are presented: mixtures of multivariate Poisson-log normal distributions, mixtures of multivariate Poisson-log normal factor analyzers and mixtures of matrix-variate Poisson-log normal distributions. Significance, innovation, limitations and a number of future directions stemming from this research are discussed."

The award committee consisted of Katrijn Van Deun, Tilburg University, Holland; Hans Friedrich Köhn, University of Illinois, Urbana-Champaign; and Volodymyr Melnykov, University of Alabama, who served as chair.

Hans-Friedrich Köhn

# **News from VOC**

The Dutch/Flemish classification society (VOC) will be celebrating its 35th anniversary with a two-day Jubilee Meeting November 21-22 2019 at the Wageningsche Berg, Wageningen, The Netherlands. The programme will cover exciting topics related to classification and ordination reflecting the width of the field. Please keep an eye on www.voc.ac for more information.

Katrijn Van Deun

# News from GfKl

# Short report on GPSDAA2019 in Bayreuth

On March 17, 2019, one day before the European Conference on Data Analysis 2019 (ECDA2019), the fifth German-Polish Seminar on Data Analysis and Applications took place in the RW I building of the University of Bayreuth (www.gpsdaa2019.de).

A total of 13 lectures were given by German and Polish speakers, with more than 40 participants taking part.

The very small frame compared to the ECDA2019 allows a close binational exchange (as it has been maintained for years with the Italian and the Japanese classification society in the context of seminars). The seminar followed previous German-Polish seminars in Aachen (2009), Krakow (2011), Dresden (2013) and Wroclaw (2017).

The seminar was organized by Prof. Dr. med. Daniel Baier (University of Bayreuth, Chair of Marketing & Innovation) and his team and Prof. Dr. med. Jozef Pociecha (University of Economics Krakow, Department of Statistics).

Selected contributions to the symposium are published in the Archives of Data Science.

# Short report on the ECDA2019 in Bayreuth

The European Conference on Data Analysis (ECDA) 2019 took place at the University of Bayreuth from March 18 to March 20, 2019 - together with the 43rd Annual Conference of the GfKl (see <a href="www.ecda2019.de">www.ecda2019.de</a> or <a href="the agenda">the agenda</a> of the conference).

Joint organizers were next to the University of Bayreuth:

- the German-speaking Society for Classification ( GfKl ) Data Science Society,
- the Section on Classification and Data Analysis of the Polish Statistical Association (SKAD),
- the Classification and Data Analysis Group of the Italian Statistical Society (CLADAG),
- the Japanese Classification Society (JCS),
- the British Classification Society (BCS) and
- the European Association for Data Science (EuADS).

More than 240 registered participants and 160 high-quality scientific lectures speak for an exciting conference, which was unanimously described as very successful by the participants. There were 10 plenaries and (semi) plenaries of invited well-known speakers (in alphabetical order):

- Jan Baumbach, TU Munich, "Big Data Science in Systems Medicine: A Disruptive View of Current Medicine",
- Hans-Herrmann Bock, RWTH Aachen University, "Co-clustering: A Survey on Models, Algorithms and Applications",
- Harald Hruschka, University of Regensburg, "Analyzing Retail Market Basket Data by Unsupervised Machine Learning Methods",
- Masahiro Mizuta, Hokkaido University, "Meta-Analysis and Symbolic Data Analysis",
- Francesco Palumbo, University of Naples Frederick II, Italy, "Archetypes, Prototypes and Other Types: The Current State and Prospects for Future Research",

- Marko Sarstedt, Otto von Guericke University Magdeburg, "CB-SEM or PLS-SEM? Five Perspectives and Five Recommendations",
- Matthias Schmid, University of Bonn, "Discrete Time-to-Event Analysis: Methods & Recent Developments",
- Andrzej Sokolowski, University of Krakow, "Composite Indicators and Rankings",
- Rainer Spang, University of Regensburg, "Zero Sum Regression",
- Dirk Van den Poel, University of Ghent,
   "Using Microblogging to Predict IPO Success by Means of Apache Spark Big Data Analytics"

In addition, numerous sessions and lectures were given on the well-known topics of ECDA (e.g., Clustering, Classification, Data Science, Image Analysis and Computer Vision, Social Network Analysis, Sybolic Data Analysis, Biostatistics, Marketing, Medicine and Health Care, Social Sciences ) as well as several dedicated colleagues thankfully organized special sessions, Bioinformatics Statistics (organized and Dominik Heider), Complexity, Data Science and **Statistics** Through Visualization Classification (Carmela Iorio, Roberta Siciliano), Consumer Preferences and Marketing Analytics (Reinhold Decker, Winfried Steiner), Data Analysis in Finance (Krzysztof Jajuga, Herrmann Locarek-Young), Data Analysis Models in Economics and Business (Józef Pociecha), Interpretable Machine Learning ( Johannes Fürnkranz, Eneldo Loza Mencia, Ute Schmid), Statistical Learning (Angela Montanari) and a tutorial on Partial Least Squares Structural Modeling (PLS-SEM) by Equation Marko Sarstedt.

The venue was the University of Bayreuth, a "young" campus university close to the city center with 240 professors, 2,406 employees and 13,300 students. Approximately € 45 million in third-party funding (of which about half are from the DFG), one DFG Cluster of Excellence (for African research) and three DFG Collaborative Research Centers (on microplastics and its risks for ecosystems, biofabrication and particulate nanosystems) and 30th place in the Times Higher Education Ranking of universities under 50 years of age and top rankings in the CHE ranking (e.g., in business administration) speak a clear language.

The conference was held in the new building (RW I) of the Faculty of Law and Economics. There were two large lecture theaters with 266 and 199 seats, eight seminar rooms each with 50 to 80 seats and a large fover available. But also for the physical well-being and for sightseeing was provided: There was - for those interested - a city tour through the Hofgarten with new and old castle, with the UNESCO World Heritage listed opera house and the baroque Friedrichstrasse. In the Wagner Museum with the residence of Richard Wagner (Villa Wahnfried) there was a Welcome Recpetion. The conference dinner took place after a brewery tour for those interested - in the historically protected headquarters of the Maisel's brewery from 1887, which was modernized as an event gastronomy.

Daniel Baier and his team around Mrs. Karolina Ewers and Benedikt Brand - as well as the other Program Chairs (Berthold Lausen and Angela Montanari), the 45-member Program Committee and the Special Sessions have done a great job and a great scientific Organized conference in Bayreuth, to which all participants will long and gladly remember. The results of the conference will be published in Special Issues of the Archives of Data Science and the Springer-Journal Advances in Data Analysis and Classification (see www.ecda2019.de for hints).

# Daniel Baier

# Report on the 7<sup>th</sup> German-Japanese Symposium on Classification and Data Science in Dortmund (Germany)

On the 2<sup>nd</sup> and 3<sup>rd</sup> of July 2018, Claus Weihs organized the 7<sup>th</sup> German-Japanese Workshop in Dortmund (Germany). The scientific program enclosed 16 talks, 8 of Japanese, 8 of German researchers, in 6 sessions on "Clustering and Classification", "Marketing", "Medicine and Biostatistics", "Matrix Properties", "Image Processing", and "Data Science: Education and Applications". Besides the speakers, another 14 researchers attended the workshop. The Social Program enclosed an informal get-together, a dinner, as well as a guided tour through the German Football Museum in Dortmund.

### Sabine Bell

# **Upcoming Conferences and Meetings**

# **April 2019**

JOCLAD 2019, the XXVI Annual Meeting of the Associação Portuguesa de CLassificação e Análise de Dados (CLAD), the School of Technology and Management of Viseu, Portugal, 11-13 April 2019, <a href="http://www.joclad.ipt.pt/joclad2019/">http://www.joclad.ipt.pt/joclad2019/</a>.

# **June 2019**

CS2019, the annual meeting of The Classification Society, MacEwan University in Edmonton, Alberta, Canada, June 19-22, 2019, www.theclassificationsociety.org

# August 2019

IFCS 2019, conference of the International Federation of Classification Societies (IFCS), Thessaloniki, Greece, August 26-29, <a href="http://www.ifcs2019.gr">http://www.ifcs2019.gr</a>.

# September 2019

The 28th Annual Conference of the Section of Classification and Data Analysis of the Polish Statistical Society, University of Szczecin, Poland, September 2019.

### November 2019

The 35th Anniversary meeting of the Dutch/Flemish Classification Society, Wageningen, Netherlands, November 21-22, 2019.

### September 2020

European Conference on Data Analysis, Napoli, Italy, September 16-18, 2020, <a href="http://www.ecda2020.unina.it/">http://www.ecda2020.unina.it/</a>.

# **Looking Ahead to IFCS Newsletter Number 60**

Contributions for the forthcoming issue of the IFCS newsletter should be sent to Katrijn Van Deun, IFCS Publication Officer, at k.vandeun@uvt.nl by September 16.

Plain text or Word files are preferred. Thanks!

Katrijn Van Deun IFCS Publication Officer