



# International Federation of Classification Societies Newsletter

**President:** Akinori Okada

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**Editor:** Paul McNicholas

**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 Caribbean Society of Classification and Data Analysis, The Classification Society, Classification and Multivariate Statistics Group of the Hungarian Statistical Association, Gesellschaft für Klassifikation, 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 Statistical Association, Multivariate 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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## Words from the IFCS President

The IFCS conference, IFCS-2017 will be held from August 8 through 10 in Shinagawa, Tokyo, Japan, and more information is available at [https://ifcs.boku.ac.at/\\_conference/index.php/ifcs2017/ifcs2017](https://ifcs.boku.ac.at/_conference/index.php/ifcs2017/ifcs2017). The conference venue, Shinagawa, is one of the downtowns located in the southeast part of Tokyo, which has several downtowns. There will be tutorials on August 6, and three tutorials will be given. There will be five invited speakers, and details are given in the News from IFCS-2017 Organizing Team later in this newsletter.

The conference dinner will be on August 9 evening at Meiji Kinenkan, which was originally built about 140 years ago as one of the buildings of the imperial palace complex. It is famous for its Japanese garden. A bus will take you there and then back to the major hotels. During the conference, we will also have the awards ceremony where the following awards will be presented: IFCS Research Medal for outstanding research achievements, Chikio Hayashi Award, Helga and Wolfgang Gaul Stiftung Award, Student/Postdoctoral Fellow Paper Competition and Travel Award, and Student Poster Session Competition Award. The BRCA (Breast Cancer)

Data Analysis Award winner, Corinna Ernst, was conferred the award in February 2017 at the 40th anniversary of the German Classification Society and will present a lecture at the conference. I am looking forward to seeing all of you at IFCS-2017 in Tokyo. The IFCS-2017 is the first IFCS Conference hosted in Japan since IFCS-1996 in Kobe, Japan. The Japanese Classification Society, who will host IFCS-2017, decided to initiate the “Invited by the JCS (Japanese Classification Society)” sessions, where the JCS invites researchers to organize sessions mainly from Asian countries or countries that do not have societies joined the IFCS.

Recently, there was a change of the IFCS Treasurer. I would like to express my profound gratitude to Nema Dean for her excellent service in the last two terms as Treasurer. I am delighted to welcome Sugnet Lubbe, who has succeeded Nema as Treasurer. Sugnet is a prominent scientist, and an associate professor at the Department of Statistical Science of the University of Cape Town.

Akinori Okada  
IFCS President

### **News from the IFCS Secretary**

I hope you all had a good start into 2017. Since the last Newsletter, the Executive Committee (EC) had meetings on 6 October, 24 November, 15 December and 2 March. Much of this was about preparing the IFCS-2017 meeting in Tokyo. On 6 October we were made aware of a generous donation of a new Award, the Hildegard and Wolfgang Gaul Foundation Award, for researchers in the area of Data Analysis and related scientific directions, younger than 30 years old for IFCS conferences in the next 10 years. The Award guidelines were revised and updated to include this new award (among other updates). The list of invited speakers was finalised.

The IFCS Council elected Sugnet Lubbe (SAS-MDAG) as new Treasurer. In January 2017, the IFCS Council was balloted on some changes and clarifications of the IFCS Constitution and Election Rules. The proposed changes received 18 positive and no negative votes. This, however, was not enough to fulfill the number of at least

2/3 of the 32 Council members' votes required for such changes. As there were no negative votes, the EC will probably prepare a revised version of changes for another vote. Another thing that needs to be clarified are the rules according to which some societies have two representatives in the Council, for which the EC currently prepares a proposal.

Please note that the IFCS Directory needs to contain updated information on the societies' Presidents, Treasurers, Council Representatives (names, email addresses and terms of office). Any change should be emailed to the IFCS Secretary ([c.hennig@ucl.ac.uk](mailto:c.hennig@ucl.ac.uk)). Currently some information is outdated despite having sent reminder emails; can I please ask the corresponding societies to send me the updated information? With all the best wishes,

Christian Hennig  
IFCS Secretary

### **News from the IFCS Publication Officer**

There is not much news to report from my side. As usual, thanks to everyone who contributed to this newsletter. I also want to welcome Sugnet Lubbe to the IFCS Executive Committee. I hope to see you in Tokyo in August!

Paul McNicholas  
IFCS Publication Officer

### **News from IFCS-2017 Organizing Team**

#### **Deadline Extended**

The deadline for the abstract submission and for early bird registration is extended to 30<sup>th</sup>, April, 2017.

#### **Tutorials**

As of 18<sup>th</sup>, March, 2017, we organized three tutorials as follows. These tutorials will be on 7<sup>th</sup> August, 2017 at the conference venue. Each fee will be paid on site.

- Daniel Oberski, Utrecht University, Latent Class Modeling: Basics, Extensions, and Recent Advances
- Fionn Murtagh and Mohsen Farid, University of Derby, Survey Analytics from

Questionnaires and Textual Social Media Analytics. With Accompanying Practical Sessions, Examples and Case Studies in English and Other Languages

- Max Kuhn, RStudio Inc, Predictive Modeling in R(Tentative)

### Invited Speakers

- Christian Henning, UCL, *Decisions that are needed when using Cluster Analysis, and Research that helps with making them.*
- Tomoyuki Higuchi, The Institute of Statistical Mathematics, *Smart Simulation and Smart Experimental Design.*
- Irini Moustaki, London School of Economics & Political Science, *An Overview of Hybrid Latent Variable Models and how they can be used to address Outliers, Flexible Distributions of Latent Variables and Issues of Data Dimensionality.*
- Marieke E. Timmerman, University of Groningen, *Mixture Modelling of Multivariate and/or Longitudinal Data: Arriving at Insightful Representations.*
- Cinzia Viroli, University of Bologna, *Classification by Quantiles.*

### Invited by the JCS

Japanese Classification Society want to promote an existing scientific Society or an organized Group of Asian country or the other country/region to be interested in IFCS activities. And we organized "Invited by the JCS":

- Yuan-chin Ivan Chang, Chinese Culture University, *Robustness and Active Learning with Logistic Models.*
- Shizuhiko Nishisato, University of Toronto, *Cluster Analysis and Quantification.*
- Shizuhiko Nishisato, University of Toronto, *Perspectives of Contingency Table Analysis*

### Invited Sessions

- Sugnet Lubbe, Stellenbosch University, *Challenges in Visualisation and Classification.*
- Paul McNicholas, McMaster University, *Clustering with Mixture Models.*
- Christian Hennig, UCL, *Cluster Validation: New Developments and Issues.*
- Theodore Chadjipantelis, Aristotle University of Thessaloniki, *Methods of Data Analysis and Statistical Measures in the Social Sciences.*
- Éva Laczka, Hungarian Statistical Association, *Changing Environment, New Challenges, New Responses.*

- Jozef Pocięcha, Cracow University of Economics, *Classification Models in Finance and Business.*
- Jean Diatta, Université de La Réunion, *Clustering and Recommendation Systems.*
- Tom Wilderjans, Leiden University, *Advanced Techniques for Analyzing (Big) Multi-set/Multi-subject Data.*
- Salvatore Ingrassia, University of Catania, *Advances in Latent Variable Modeling.*
- Brian Franczak, MacEwan University, *Cluster Analysis Using non-Gaussian Mixtures.*
- J. Fernando Vera, Universidad de Granada, and Eva Boj del Val, University of Barcelona, *Classification and Representation for Non Metric and Symbolic data.*
- Yuko Araki, Shizuoka University, *Functional Data Analysis.*
- Yasunori Endo and Sadaaki Miyamoto, Tsukuba University, *Leading-edge Research of Clustering and its Applications.*
- Masahiro Mizuta and Shin-ichi Minato, Hokkaido University, *Enumeration Algorithm and Data Science.* (Tentative)
- Kazuhisa Takemura, Waseda University, *Judgment and Decision Making.*
- Michiko Watanabe, Keio University, *New Development of Application of Latent Class Models in Healthcare Management.* (Tentative)
- Hiroshi Yadohisa, Doshisha University, *New Topics with related to Classification Problems.*
- Hiroe Tsubaki, National Statistics Center, *Recent Problems of Big Data Handling in Official Statistics.*
- Yutaka Kano, Osaka University, *Causal Inference and related Topics.*
- Yutaka Kano, Osaka University, *Bayesian Inference and Model Selection.*
- Yuichi Mori, Okayama University of Science, *Advances in Sparse Regression, Dimension Reduction and related Computations.*
- Yasumasa Baba, The Institute of Statistical Mathematics, *Analysis of Micro Official Statistics.*
- Yusuke Matsui and Masahiro Nakatochi, Nagoya University, and Yuichi Shiraishi, The University of Tokyo, *The Cutting Edge of Biomedical Big Data – from Bioinformatic Methodologies to Data Analysis.*
- Junji Nakano, The Institute of Statistical Mathematics, *Analysis and Clustering of Complicated Data.*

### Travelling from Airports

From Tokyo(Haneda) International Airport

<http://www.haneda-airport.jp/en/>

By rail:

(1) Keikyu Line through Shinagawa Station.  
25~30 minutes

<http://www.haneda-tokyo-access.com/en/>

(2) Tokyo Monorail Line to JR Hamamatsu-cho Station, then take the trains through JR Shinagawa Station, 30 minutes.

<http://www.tokyo-monorail.co.jp/english/>

By Bus: Take the limousine bus to Ebisu and Shinagawa Area.

<https://www.limousinebus.co.jp/en/>

From Narita International Airport

<http://www.narita-airport.jp/en/>

By rail:

(1) JR Narita Express Line through JR Shinagawa Station, 70 minutes

<http://www.jreast.co.jp/e/nex/>

(2) Keisei Line to Keisei Ueno Station, walk to JR Ueno Station, take the trains through JR Shinagawa Station, 90 minutes

<http://www.keisei.co.jp/keisei/tetudou/skyliner/us/>

By bus: Take the limousine bus to Ebisu and Shinagawa Area.

<https://www.limousinebus.co.jp/en/>

### **Accommodation**

Please reserve by yourself on the website such as “Hotels.com”, “Booking.com”, “TripAdvisor”, “JAPANiCAN.com” as they will offer lower prices than we can offer. The following hotels are near to the conference venue.

- The Prince Sakura Tower Tokyo, Autograph Collection (4.5 star)
- The Strings by InterContinental Tokyo (4.5 star)
- Grand Prince Hotel New Takanawa (4 star)
- Shinagawa Prince Hotel (3.5 star)--- Shinagawa station, 18 minutes’ walk from Conference site
- APA Hotel Shinagawa Sengakuji (3 star)--- Sengakuji Station, 10 minutes’ walk from Conference site.
- Keikyu EX Inn Shinagawa-Ekimae (3 star)--- Shinagawa station, 16 minutes’ walk from Conference site
- Hotel MyStays Gotanda Station (3 star)
- Hotel Jal City Tamachi Tokyo (3 star)
- Tamachi BAY HOTEL (2 star)---Mita Station, next to Sengakuji Station

### **Social Program**

Welcome Reception (free of charge)

We will have a welcome reception at the conference site on August 8.

### Conference Dinner

We will have a conference dinner at Meiji Kinenkan on August 9, followed by a small tour to Asakusa for applicants. The fee of the dinner is 8,000 yen, and the dinner with the small tour is 12,000 yen.

### Optional Tours and Activities

We do not provide you a service for the optional tours. However, you can find many tours and activities on travel agencies’ websites. These include tours to Mt. Fuji, Kyoto, Kyoto, Kanazawa, etc. Activities of kimono, tea ceremony, wagashi sweets etc. Experiences of cuisine and cooking of sushi, tempura, sukiyaki etc., Shows and cultural experiences of sumo wrestling, ninja training, samurai armor etc. You can find more detail information on the IFCS-2017 website. It is your own responsibility to research, make a booking and pay for the service provided directly with the supplier. Any issues relating to tour bookings are not the responsibility of the conference or the conference organizers.

We are looking forward to seeing the member of each society in Tokyo.

Tadashi Imaizumi

## **BRCA Data Analysis Award Winner**

The *BRCA Data Analysis Award* was been created in Spring 2016 to honour innovative scientific work in the framework of statistics and data analysis that focuses on, or can advance, the prevention of inherited cancer associated with BRCA gene mutations. Tendering of the award was jointly conducted by the *International Biometric Society* (German Region, IBS-DR), the German *Gesellschaft fuer Klassifikation – Data Science Society* (GfKl), the *International Federation of Classification Societies* (IFCS), the non-profit research and development organization *HeritX* (Santa Monica, USA), and the *Center for Familial Breast and Ovarian Cancer* (Cologne, Germany).

An international team of reviewers has evaluated the submitted applications and finally conferred

the price to **Corinna Ernst**, a bioinformatician from Cologne at the early stage of her career who has submitted a paper on “*A generalized additive model framework for CNV detection on multi gene panels*”. In this framework, Corinna Ernst developed an algorithm for identifying so-called Copy Number Variations (CNVs), i.e., genetic rearrangements that allow to find new risk genes beyond the well-known BRCA1/2 genes, and this directly from observed data obtained from Next Generation Sequencing (NGS) and without additional experiments. This analysis was possible by using generalized additive models. Former work by Corinna Ernst was devoted to the optimization of various algorithms for analyzing NGS data, the development of a data structure for the storage of pan-genomes, and to a study on relapses of neuroblastomas.

The *BRCA Data Analysis Award*, combined with a prize sum of 1,000 Euro, has been conferred to Corinna Ernst by Prof. Dr. Hans Kestler (Ulm) on February 24, 2017, during a ceremony celebrating the 40<sup>th</sup> anniversary of GfKI in the Castle of Karlsruhe (Baden, Germany) and in cooperation with the Karlsruhe Institute for Technology (KIT). Ms. Ernst will present her scientific results to an international audience during the 15<sup>th</sup> Conference of the IFCS in Tokyo (Japan) in August 2017. We cordially congratulate her on this award and wish her plenty of success for her future research activities.

Hans-Hermann Bock

## News from CLAD

### JOCLAD 2017

The XXIV Annual Meeting of the Associação Portuguesa de Classificação e Análise de Dados (CLAD) will be held April 20-22 2017, at the Faculdade de Engenharia - Universidade do Porto. The main objectives of this annual conference, addressed to teachers, researchers, students and users who share interests in the area of Classification and Data Analysis, are: promote and develop research as well as stimulate the national scientific production in that area, both in theoretical and applied fields; enhance scientific dialogue, cooperation, discussion and exchange between data scientists and companies; strengthen CLAD's role and cohesion. The meeting will also be an opportunity to visit the city of Porto, one of Europe's oldest tourist destinations, with its

historical core proclaimed a World Heritage Site by UNESCO, having been voted the Best European Destination in 2017. The JOCLAD 2017 scientific program includes two short courses, three plenary sessions, three thematic sessions, contributed papers and poster sessions.

Both short courses will take place April 20: *Análise em Componentes Principais, Robustez e Detecção de Outliers: Uma Introdução em R* (Maria do Rosário Oliveira, Instituto Superior Técnico, Portugal) and *Supervised classification methods* (Pedro Larrañaga, Universidad Politécnica de Madrid, Espanha). Plenary sessions are the following: *Bayesian networks in neuroscience* (Pedro Larrañaga, Universidad Politécnica de Madrid, Espanha), *Distributional data clustering and visualization for official statistics* (Rosanna Verde, Università della Campania "Luigi Vanvitelli", Italia), *Análise de Dados Geoespaciais utilizando Mapas Auto-Organizados* (Victor Lobo, ISEGI / UNL and Escola Naval, Portugal).

Thematic Sessions are presented on behalf of: Instituto Nacional de Estatística – INE (*Session organizer: Carlos Marcelo*), Banco de Portugal – BdP (*Session organizer: Filipa Lima*), Associação Portuguesa de Demografia – APD (*Session organizer: Sónia Pintassilgo*). Like in preceding conferences, authors of the best research papers presented at JOCLAD 2017 will be invited to submit full papers for publication in the next issue of CLAD's Book Series, CLADMAp III. The JOCLAD 2017 program and further information is available at the CLAD website <http://www.clad.pt/>.

Helena Bacelar-Nicolau

## News from JCS

### (I) The 35th Annual Meeting of the Japanese Classification Society

The 35th Annual Meeting was held on March 6 and 7, 2017 at Hosei Business School of Innovation Management, Hosei University, Tokyo. The chairperson of the organizing committee was Yuki Toyoda (Hosei University). The speakers and the titles of their talks were as follows:

- Classification model of Convenience Stores: by problem types and problem solving



- methods, Kenji Mizoguchi (Hosei University Graduate School of Innovation Management)
- Prediction of the dweller awareness using the data of the national census, Chiho Mito (Tokyo Gas Co., Ltd.), Katsuyuki Inagaki (Tokyo Gas Co., Ltd.), Hitomi Tanizawa (Tokyo Gas Co., Ltd.), and Yuki Toyoda (Hosei University)
- Support Marketing Decision Using Sequential Probability Ratio Test, Kentaro Matsumoto (LOCKON CO., LTD. / MARKETING METRICS Lab.)
- Extraction and classification of the useful information from Tweet data after the Kumamoto Earthquake, Takamitsu Funayama (Tokai University), Yoshiro Yamamoto (Tokai University), and Osamu Uchida (Tokai University)
- Association Rule Analysis and Comparison between Quantification Technique for Visualization, Sanetoshi Yamada (Graduate School of Science and Technology, Tokai University) and Yoshiro Yamamoto (Tokai University)
- Data analysis and classification for the text data regarding radiation, Takafumi Kubota (Tama University)
- To categorize batters in Nippon Professional Baseball Organization by the batted ball direction, Kazuki Konda (Graduate School of Tokai University) and Yoshiro Yamamoto (Tokai University)
- Evaluation of the JSSC Examination Using Multi-dimensional Polytomous Item Response Theory, Jun Tsuchida (Graduate School of Culture and Information Science, Doshisha University) and Hiroshi Yadohisa (Department of Culture and Information Science, Doshisha University)
- Customer segmentation with Qualitative Comparative Analysis, Yuki Toyoda (Hosei University)
- Constrained Principal Component Analysis for Nonmetric Data, Yuki Yamagishi (Faculty of Culture and Information Science Doshisha University), Kensuke Tanioka (Clinical Study Support Center Wakayama Medical University), and Hiroshi Yadohisa (Faculty of Culture and Information Science Doshisha University)
- Questionnaires and response pattern of the Cross national survey research, Hiroko Tsunoda (Nihon Wellness Sports University) and Ryozo Yoshino (The Institute of

Statistical Mathematics)

- Two Theoretical Issues on Ward's Method, Sadaaki Miyamoto (University of Tsukuba)
- Investigation Changes of Political Party Support From 2009 to 2013 III: Non-hierarchical Asymmetric Cluster Analysis, Akinori Okada (Rikkyo University) and Satoru Yokoyama (Teikyo University)

A seminar about data analysis was held on March 6 in the meeting. The organizer was Yuki Toyoda (Hosei University) and the lecturers were Naohiro Tsuchida (Nippon Research Center Ltd.) and Yuki Toyoda (Hosei University).

Satoru Yokoyama

## News from The Classification Society

### 2017 Annual Meeting of The Classification Society

The 2017 Annual Meeting of the Classification Society will be at the Silicon Valley Campus of the University of California, Santa Cruz, June 21-24. We are lining up a great program, headed by Robert Tibshirani of Stanford University and Michael Jordan of the University of California, Berkeley. The conference banquet will be at a local winery. The conference site is very close to the San Jose Airport, and the San Francisco and Oakland airports are also options. We have a special deal with the nearby Embassy Suites. All these details and more are available at the conference website: <http://academicaffairs.ucsc.edu/classification-society-conference/index.html> The submission deadline for contributed talks is May 1. The Early Bird Registration deadline is May 15. The deadline for the Hotel group rate at the Embassy Suites is May 31. Hope to see you all in California!

### The Classification Society Distinguished Dissertation Award Winner 2017

The 2017 winner of the Classification Society's Distinguished Dissertation Award is **Paula Murray** of McMaster University, for her thesis "Detecting Non-Elliptical Clusters", co-supervised by Paul McNicholas and Ryan Browne. Paula will present her work at the 2017 Annual Meeting of the Classification Society in Santa Cruz this June.

Hans Friedrich Köhn

## SDA 2017

You are cordially invited to participate at the Symbolic Data Analysis Workshop SDA 2017, which will be held in Ljubljana from 12th to 14th June 2017. More detailed information is available at the web page <http://vladowiki.fmf.uni-lj.si/doku.php?id=sda:meet:lj17>. Welcome. The Local Organizing Committee is Simona Korenjak-Černe, Vladimir Batagelj and Nataša Kežžar.

Simona Korenjak-Černe

## CLADAG 2017

The eleventh biennial international meeting of the CLAssification and Data Analysis Group (CLADAG) of the Italian Statistical Society will take place at the University of Milano-Bicocca, from September 13rd to 15th, 2017. Researchers interested in classification, clustering, data analysis, multivariate analysis and computational statistics and their applications are invited to participate. A Springer book of selected papers will be published after the Conference. Authors are, in alternative, invited to submit to special issues of the journals Statistical Analysis and Data Mining: The ASA Data Science Journal.

Francesca Greselin

## Upcoming Conferences and Meetings

### April 2017

JOCLAD 2017, the XXIV Annual Meeting of the Associação Portuguesa de CLassificação e Análise de Dados (CLAD), April 20-22 2017, <http://www.clad.pt/>

### June 2017

Symbolic Data Analysis Workshop SDA 2017, Ljubljana, Slovenia, June 12-14, [vladowiki.fmf.uni-lj.si/doku.php?id=sda:meet:lj17](http://vladowiki.fmf.uni-lj.si/doku.php?id=sda:meet:lj17)

The Classification Society Annual Meeting, University of California, Santa Cruz, Silicon Valley Campus, June 21-24, [www.theclassificationsociety.com](http://www.theclassificationsociety.com)

### August 2017

IFCS 2017, Tokyo, August 8-10, [ifcs.boku.ac.at/\\_conference/index.php/ifcs2017/ifcs2017](http://ifcs.boku.ac.at/_conference/index.php/ifcs2017/ifcs2017)

### September 2017

[CLADAG 2017](http://www.unimib.it/go/49084/Home/Italiano/CLadag-2017), the 11th Scientific Meeting of the CLAssification and Data Analysis Group of the Italian Statistical Society, Milano-Bicocca University, September 13-15, <http://www.unimib.it/go/49084/Home/Italiano/CLadag-2017>

ECDA2017, the Fourth European Conference on Classification and Data Analysis, Wroclaw, September 27-29.

### Looking Ahead to IFCS Newsletter Number 56

Contributions for the forthcoming issue of the IFCS newsletter should be sent to Paul McNicholas, IFCS Publication Officer, at [mcnicholas@math.mcmaster.ca](mailto:mcnicholas@math.mcmaster.ca) by October 20, 2017.

Plain text or Word files are preferred.

Thanks!

Paul McNicholas

IFCS Publication Officer