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International Federation of Classification Societies Newsletter

Number 24 December 2002

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

Associaçáo Portuguesa de Classificaçào e Análise de Dados, British Classification Society, Central American and Carribean Society of Classification and Data Analysis, Classification Society of North America, Gesellschaft für Klassifikation, Irish Pattern Recognition and Classification Society, Japanese Classification Society, Korean Classification Society, Société Francophone de Classification, Società Italiana di Statistica, 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 the Journal of Classification.

Contents

I would like to give the greatest thanks to Paul de Boeck for his outstanding performance while serving as Publication Officer, as well for the valuable help he gave me during the period of transferring the duties.

Krzysztof Jajuga

From the President

Two relevant events for IFCS happened during my first year as IFCS President:

- the bi-annual scientific meeting in Krakow;
- the death of one of the most important IFCS Presidents we have ever had: Prof. Chikio Hayashi.

The meeting in Krakow was a great success from both the organizational and the scientific viewpoint. The crowded and qualified participation of about 200 delegates coming not only from all the societies of the Federation but also from national and international scientific societies, has allowed us to realize a comprehensive state-of-art of the important scientific achievements and developments realized in the last years in the field of classification and data analysis, computational statistics theory and all related applications.

The excellent social program and the great atmosphere created by our guests in the wonderful scenario of Krakow have certainly encouraged scientific exchanges and increased the feeling of membership to the IFCS. They also have consolidated the friendship and the brotherhood of people in this difficult period of our history where the worries related to the present political situation need strong hopes and beliefs.

In the name of all the participants at the IFCS-2002 I wish to express my warmest thanks and congratulations to the Scientific Committee and to the local Organizing Committee, in particular to Krzysztof Jajuga and Andrzej Sokolowski for their

efforts and quality of work done for the benefit of IFCS.

The IFCS Council, during a very interesting meeting hold in Krakow, has established to direct all the activities of the Federation along three important policies:

- to widen the scientific sphere of IFCS influence in the international community;
- to enlarge the participation of individual members to the activities promoted and run by the Federation;
- to realize a real and effective publication policy of the Federation.

Many committees have already been established and are already working in order to realize these aims. Some important results are already visible, many others are on the way.

Among the undertaken actions, the following are worth pointing out:

- in the Krakow meeting, the SDA (Symbolic Data Analysis) transversal group was created;
- the program of the next IFCS session (Chicago, USA, 2004) is going to show a high scientific profile thanks to the work of David Banks and Buck Mc Morris as well as of all the colleagues that are participating in the organization;
- direct participation of IFCS in the scientific committees of COMPSTAT 2004 (organized by Jaromir Antoch in Prague), CARME 2003 (organized by Michael Greenacre in Barcelona), IMPS 2003(organized by Jacqueline Meulman in Cagliari, Italy). These conferences will also include sessions offering applications and developments of the classification methodologies in different contexts. IFCS is starting to widen its sphere of influence by getting in touch and starting co-operation with other societies and groups of research;
- organization (by Helena Bacelar in Lisbon – July 2003) of a summer school and a workshop on the themes related to Classification and Data Mining as an IASC-IFCS joint event;
- at last, I want to highlight the big interest shown by the Chinese statistical researchers to be active as a part of the Federation.

The summer school in Portugal is jointly organized with IASC (International Association for Statistical Computing) section of ISI. A broader cooperation agreement has been recently established with IASC by means of its Chairman, Prof. J.C. Lee. IASC will participate with its delegates to the Chicago session of IFCS, while IFCS participates in the COMPSTAT 2004 scientific committee. A similar agreement has

been established with the President of the Psychometric Society (J. Meulman) for starting fruitful exchanges in occasion of IMPS'03 and IFCS '04.

Important contacts have also been started with the ISI: H. Bock is the organizer of a session concerning classification and clustering at the next ISI scientific meeting (Berlin, August 2003).

In this year, IFCS was struck by the terrible news of Prof. Hayashi's death. It was a very great sorrow to the International Federation of Classification Societies to learn of this death. He was one of the pioneers in the field of Classification, and one of the most outstanding leaders of IFCS. Besides his scientific brilliance and fresh ideas (among others, data theory really represents a breakthrough) I will always remember his distinction as well as his respect for any colleagues (with a special care and love for the youngest ones) and his interest in any novelty. His Presidency in IFCS was distinguished by a great capacity as an administrator and as a solver of many crucial matters but also as a great visionnaire. I feel honored to be among of its successors and now to carry the burden, as IFCS President, of aiming at accomplishing some of his dreams for the Federation.

Carlo Lauro
IFCS President

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PROFESSOR CHIKIO HAYASHI

Professor Chikio Hayashi and Multidimensional Data Analysis – Quantification Methods and Data Analysis, from Classification to Data Science

Professor Chikio Hayashi is no longer with us. We have lost a great man. To me, his death marks the loss of a valued mentor who acted as a guide not only in the field of statistics but also through the confusion that exists today in the fields of social research and data analysis.

In this tribute to Professor Hayashi, I have drawn upon thirty years of memories. I treasure the simple ones most – sharing a room on a tour of the Loire River in France, going on an excursion with the professor and his wife in the intense heat of Morocco, trying to decide how much to pay for a carpet, walking together in midday at Rome, and accompanying the professor on countless occasions to different restaurants overseas. I can still see him, wearing his trademark beret, encouraging me to do my best because he is relying on me. At such times I am overcome with emotion.

I cannot describe the full extent of Professor Hayashi's achievements. If I started, there would be no end. Instead I shall write about some of the memories I have of our long relationship. I hope this tribute to him will show the Professor Hayashi that I knew and some things that are not commonly known about him.

The Teachings of a Highly Inquisitive Educator

Professor Hayashi had extraordinary knowledge in many areas. His diverse interests included music, sports, books, calligraphy and the tea ceremony. When a new topic came up, he would often telephone me at the laboratory and say: "Look, there's apparently some new research going on in such and such, do you know about it?" or "If you've got any information or materials on such and such, let me have them." Once he had read the latest information, he quickly formed an opinion, and thus followed the modern work in fractals, genetic algorithms, neural networks, rough set theory, complex systems, support vector machines, data mining, and knowledge discovery.

Professor Hayashi knew how to manage people efficiently. He had an extensive personal network through which he constantly gathered the latest information. One thing he taught me was that this kind of attention to detail is an essential for researchers, particularly in statistics and data analysis. Whenever I approach a problem from the professor's perspective I see it in a different light, and I am grateful for this gift of understanding. Looking back, I believe this approach was part of the professor's unique teaching method.

Multidimensional Data Analysis and Multivariable Analysis – These Are Two Different Things

Professor Hayashi strongly believed that reality is understood through the careful use of words. This is obviously true for a research paper but the professor went further in his approach to technical terms. For example, he would call "statistics" by that name alone and disliked the phrase "statistical science." Similarly, he insisted on the term "multidimensional data analysis" as opposed to "multivariate analysis". People with less insight often said that either term was acceptable but the professor would not allow this.

I once asked Professor Hayashi to read through an article I wrote on multidimensional data analysis. When he returned it I found that he had crossed out the phrase "multivariate analysis" everywhere and had even made a marginal note that "use of that term degrades your paper." Yet he had also written "you're quite right," and "this is good; it's consistent with my view" next to parts he liked. Nonetheless, he was never a nit-picker. He did not concern himself much over trivia such as misspellings, and he was happy as long as the essence of the analysis and the main points were conveyed. This was also true of his teaching style.

In any event, multivariate analysis for him was just an unnecessarily complex arithmetical operation based on Gaussian distributions that had too many restrictions for practical use and could only be applied in research papers. He lamented that there were too many cases where "you can't see the wood for the trees."

Quantification for Exploring Phenomena and Acquiring Information

Most researchers refer to Hayashi's quantification theory but in his books the professor simply called it "quantification." And although Professor Hiroshi Akuto's names for the quantification methods (Types I-VI) are now common, Professor Hayashi himself called them by different names, reflecting their respective ways of thinking. But Professor Hayashi frequently commented that Professor Akuto's names helped spread the quantification methods. I can only admire this kind of consideration for other people's feelings.

The origin of the quantification method derives from the idea that "numbers (numerical values) do not exist ahead of time but are allocated as appropriate

in accordance with our objectives." Thus we should make a clear distinction between (possibly non-numeric) raw measurements and numeric values used for analysis. While there are common ways to give numerical value to qualitative data, a different approach states that since many things in the world are nonlinear, we should approximate these in an easily manageable linear form, devise creative experiments, and solve problems through data collection and analysis methods appropriate to the phenomena. This approach requires detailed modeling, and is the antithesis of the approach (used by many statisticians) that fits data to a simple conventional model. I believe that the essence of Professor Hayashi's thinking on this is still not properly understood within mainstream statistics, and his efforts to explain this led him to emphasize "data science" in his later years.

First Acquaintance with Professor Benzécri and Correspondence Analysis

In the early 1960s, Professor Benzécri developed the AFC method (analyse des factorielle correspondances, or correspondence analysis). His work formed the basis for data analysis (analyse des données) in France. Professor Benzécri strongly criticized the existing mathematical statistical approach and his unique lectures at University of Paris VI became widely known.

Some people pointed out that AFC appeared to be the same as quantification method Type III. As expected, Professor Hayashi conducted a detective-like investigation, even going so far as to question the existence of Professor Benzécri and to wonder whether it wasn't a research organization like Bourbaki. His doubts were resolved, however, in 1979 when Professor Hayashi and Professor Benzécri met for the first time. Professor Benzécri subsequently wrote: "I was surprised that, of all places, it was the Far East where there was a researcher who had come up with the same ideas as me, and quite clearly earlier than I had." In this way it became known throughout Europe that quantitative method Type III was the same as correspondence analysis. However, Professor Hayashi insisted that although there were similarities in equations and formulation, the basic ideas and philosophies behind were different. Professor Hayashi's foresight in the analysis of qualitative information stood out and this approach became widely known overseas.

Research Exchange between Japan and France – International Exchange in Data Analysis

Data analysis, particularly EDA (Exploratory Data Analysis), is an approach advocated by Dr. J. Tukey in the early 1960s, at about the same time as the appearance of AFC. Professor Hayashi noted this early on but pointed out that although there were common aspects with his concept of data analysis, Tukey's EDA assumed only limited data. The analysis envisaged by the Professor Hayashi was linked more closely to practical application, and took a more integrated approach.

As Professor Hayashi's quantification methods (particularly quantification method Type III) spread internationally, a growing body of researchers in France wished to invite him to speak. In 1979, a group from INRIA (Institut National de la Recherche en Informatique et en Automatique), including Professor Diday, asked Professor Hayashi to be the guest speaker at the international research meeting of "Data Analysis and Informatics" held biannually in Versailles. I still vividly remember the professor's lecture at that time. To put it bluntly, the professor's delivery of his lecture in English was not particularly impressive but it was full of his trademark philosophical significance. The audience was restless when he began but by the time he had finished there was resounding applause as the audience recognized the charisma of this figure from the Far East. Professor Benzécri's disciples flocked to shake Professor Hayashi's hand and this was clearly the moment that his ideas on quantification were seen as being in common with the data analysis of France.

Professor Hayashi tried to invite Professor Benzécri to work in Japan on several occasions, but Benzécri refused to travel by airplane. Instead, Benzécri sent his disciple Professor M. Roux. This led to exchanges with many French researchers, all of whom are today at the forefront of data analysis in France, including Lebart, Jambu, Diday, Nakache and Escoufier. Professor Hayashi established a particularly strong bond with Professor Lebart that included joint work in international comparative research. Professor Hayashi invited Professor Lebart and many other researchers to Japan. My colleagues and I were among those who benefited from the extensive research contacts between our countries. These exchanges and the joint research that was undertaken advanced both the field of data analysis and the area of international comparative studies.

Professor Hayashi regarded these researchers as important human resources. He sought to promote contacts such as the Japanese-French Scientific Seminar, which was held on two occasions: in 1987 in Tokyo and in 1992 in Montpellier, under the auspices of JSPS (Japan Society for the Promotion of Science) and CNRS (Centre National de la Recherche Scientifique). The professor played an active role in academic activities such as these and I will never forget how he constantly encouraged and inspired us.

From Classification Research to the Data Science

The international research exchange initiated by ProfessorHayashi expanded from France to the U.K., Italy, Germany, Portugal and Eastern Europe. He built fruitful personal connections with Professors Gower, Lauro, Rizzi, Bock, and many others. Part of the reason behind this expansion was classification research. For a long time, the professor believed that "classification" was a "fundamental thought process in all science" and he spoke of the importance of classification even when considering quantification. Groups of researchers working in this field began to emerge in many different countries, resulting in the establishment of classification societies in North America, Great Britain, France, Germany, Italy, and other countries. When Japan decided to establish a classification society in 1983, the professor, perhaps because he was a naturally curious and competitive man, first set it up in the form of a research group. In 1991, the research group became a society and has continued to this day. The society's activities blossomed through its participation in the International Federation of Classification Societies (IFCS) and the hosting of the 5th IFCS International Conference in Kobe in 1996. It was here that the professor gave the keynote address, where he spoke about the principles and importance of data science. This talk laid out his view of exploratory data analysis, and was seminal in prompting new research in this area.

Professor Hayashi's achievements were recognized internationally. He was appointed to several positions, including an honorary membership of the Royal Statistical Society, a regular membership in the ISI (International Statistical Institute), and the presidency of the IFCS.

In the last ten years of his life, Professor Hayashi asserted the importance of "data science as a theory of scientific methods." The starting point was the meaning of the words "data science;" this arose in 1992, when the professor was discussing the titles and introductions of a collection of papers to be published at the 2nd Japanese-French Scientific Seminar. The professor used a Japanese phrase that translates as "data science" and for the rest of his life explored the concept behind this phrase. When the papers at the seminar were published, it was proposed for the first time that the term referring to quantification be standardized as "quantification method" and the subsequent English terms were standardized as such. I can recall the professor reprimanding us with the words "you are talking about different concepts" when we referred to "deta kagaku" while another group called it "deta no kagaku" (data science).

The basis of data science is an extremely straightforward concept; the fact that it needed to be expressed is an indication of the chaos that exists today in statistical data analysis and the deteriorating research environment. I am certain that the professor had intended to lead the way in achieving a breakthrough on these problems.

Professor Hayashi's great achievements over a period of many years were recognized when he was awarded the Purple Ribbon Medal in 1981, followed by the Order of the Sacred Treasure, Gold and Silver Star in 1989. Following his death, he was posthumously conferred with "Shou-shi-i" in Japan's official court rank.

The professor was 84 years old when he passed away. It was too soon – we still need his wisdom. But his friends must continue without him, working as evangelists to spread the concepts of data science. I pray for the professor's happiness in the next world.

May he rest in peace.

 Noboru Ohsumi

Professor Hayashi eulogy

Dear Family and Friends of Professor Hayashi,
It is a very great sorrow to the International Federation of Classification Societies to learn of the death of Professor Chikio Hayashi. He was one of the pioneers in our field, and one of the most outstanding leaders of our society.
I know only parts of Professor Hayashi's life – I know him as a scientist, a mentor, and a leader. You all are more fortunate, because you have also known him as a teacher, a collaborator, and an intimate friend, father, or husband.
But because Professor Hayashi was a very modest man, it is possible that I can tell you a few things that you do not already know about him. For example:
1) He was one of the great statesmen of Japanese science, and worked tirelessly and selflessly to ensure that world statistics advanced, and that his colleagues and students got the international recognition they deserve (but which is still too often overlooked, because of language barriers and other publication obstacles).
2) He was a great administrator, with a unique gift for vision, for detail, and for the human aspects that are essential for an organization to succeed. I believe he was the most effective president the International Federation of Classification Societies has ever had; he led us from 1998 to 2000, and did many crucial things for the IFCS. Among his many leadership accomplishments, he averted some conflicts within the Federation between different member societies,

he organized two major meetings and was a host for one of them, he established a committee structure that continues to serve as the basis for the regular work of the Federation, and he laid the foundation for the establishment and recognition of two new member societies (one from Central America, and the other from Ireland). But I think the accomplishment of which he was most proud, and which best shows his commitment to young researchers and world science, was his establishment of the Travel Awards Program. This provides funds so that new researchers, just beginning their careers, can attend the Federation meetings and participate in the research life of international statistical research. Without Professor Hayashi's energy and determination and fund-raising skills, this excellent program would never have happened.

3) He was an eminent international scientist, and is particularly remarkable for the great range of his research contributions. He made fundamental discoveries in multidimensional analysis and multidimensional scaling, but also did important work in sampling theory, the estimation of population sizes, categorical data, psychological statistics, Simpson's paradox, density estimation, and the philosophical foundations of statistical inference.

Over the years, from conversations with the friends and students of Professor Hayashi, I have learned that he has done many other things for scientific research in Japan.

There are many ways that one can measure a man's life – a statistician will tell you that this is a problem in multidimensional analysis, a field in which Chikio Hayashi was an expert. One can measure it in terms of his prestige in the world, or in terms of scientific accomplishments, or in terms of the number of friends that one has. Professor Hayashi was outstanding in all of these dimensions, and his death is a great loss.

But at this time, the greatest loss is to his family. I was privileged to have met Hayashi Reiko-sama in Rome and again in Belgium; I hope she will accept my personal condolences. I also send my respectful sympathy to his two sons, Hayashi Sachio-sama and Hayashi Yukio-sama, and to his grandchildren, of whom I know he was very proud. Your father and grandfather was a great man of science, but he was also a man of great humanity, and a model to us all.

Sincerely,

David Banks
IFCS Secretary

IFCS Activity Update

The IFCS meeting at Krakow was a great success. All the participants owe Andrzej Sokolowski, Krzysztof Jajuga, and the other organizers sincere thanks for their excellent management of the meeting and the superb hospitality.

At the IFCS Council meeting in Krakow, the President proposed a number of new initiatives and appointed several committees to help realize those programs. Some of the key committees include:

1. A Committee of Sages, co-chaired by Jean-Paul Rasson and Hans Bock and consisting of past-presidents of the IFCS, to propose changes and updates to the IFCS Constitution and By-Laws.
2. A Nominations Committee, chaired by Alfredo Rizzi, to propose new officers – the next round of elections will choose a President-Elect, two new Additional Members, and a Secretary of the Group-at-Large.
3. An Education Committee, chaired by Helena Bacelar-Nicolau, to explore workshops, distance learning, satellite meetings, and other ways to foster the kind of knowledge that the IFCS supports.
4. A Publications Committee, chaired by Krzysztof Jajuga, to examine issues relating to journals, monographs, the newsletter, and other potential IFCS publications.
5. A Communications Committee, chaired by David Dubin, to explore ways to improve IFCS use of the Internet and other communications channels.
6. Andrzej Sokolowski was appointed to be the new chair of the Travel Awards Program Committee.

Most of these committees still have openings, and so many IFCS members will soon be asked to participate on these. Volunteers are invited to contact Carlo Lauro, the IFCS President, at clauro@unina.it

The IFCS Council also approved a proposal from the Classification Society of North America to host the IFCS-2004 meeting in Chicago. More details appear elsewhere in this newsletter.

The Travel Award Program at IFCS-2002 was successful, with seven people winning travel support: Ingo Ruczinski from CSNA, Nobuo Shimizu from JCS, Francois Brucker from SFC, Laura Bocci and Dominca Fiodistella from SIS, and Eva Ceulmans and Jose Manuel Goncalves Dias from VOC.

Carlo Lauro proposed a vote of thanks to recognize the contributions of Jean-Paul Rasson, Phipps

Arabie, Jacqueline Meulman, and Anuska Ferligoj, who are stepping down at the end of this year, and to Paul De Boeck, whose term finished at the beginning of this year. The vote carried unanimously.

On a sadder note, we have learned that Chikio Hayashi, a past-president of the IFCS, died in Japan on August 6, 2002. Those who knew him loved him, for his humanity, his leadership, and his intellect. He accomplished many wonderful things for the IFCS. Noboru Ohsumi is organizing a memorial service for him that will take place in December.

David Banks

IFCS-2004 Update

Buck McMorris and David Banks are pleased to report that plans are proceeding well for the 2004 meeting in Chicago of the International Federation of Classification Societies. We hope that everyone can come.

Our program will be modeled after the excellent arrangements made by Krzysztof Jajuga and Andrzej Sokolowski at the Krakow meeting. There will be a mix of plenary talks, invited speakers, and invited and contributed sessions. The host institution will be the Illinois Institute of Technology, famous for the architecture developed by Mies van der Rohe. Participants will have a choice of accommodations: a first class hotel, a good hotel of moderate price, or very nice student dormitory rooms (information on these will be forthcoming – the Local Arrangements Committee is finalizing the details). There will be a wide range of activities in the social program, and many of those will be announced shortly.

The Scientific Program Committee is also being formed. The IFCS President has approved the list, and most of the people have agreed to serve. It is an onerous job, especially the production of the conference's proceedings papers in advance of the meeting, and we are very grateful to all those who have agreed to help in this effort.

In about a month, we plan to have the conference website up and available. We shall have a link from the IFCS homepage to the conference website.

IFCS-2004 Call for Papers

People who would like to submit a paper for the refereed proceedings that will be published in advance of the IFCS-2004 conference should send four copies of the paper and electronic copy to:
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Chicago, IL 60616, USA
E-mail: mcmorris@iit.edu

IFCS-2002 Conference
"Data Analysis, Classification and Related Methods"

The Eighth Conference of the International Federation of Classification Societies took place in Cracow, at the campus of Cracow University of Economics, on July 16-19, 2002. It was organized by the team chaired by Andrzej Sokolowski (official chairman of Local Organizing Committee). Krzysztof Jajuga was the official chairman of Scientific Program Committee, consisting of about 35 professors from many countries.

More than 200 persons coming from more than 30 countries participated in the conference in Cracow. During the conference almost 150 papers were presented. They can be classified to 4 groups.

1. Keynote Lectures.
They were presented by:
Hans-Hermann Bock – "Clustering Methods: from Classical Models to New Applications"
Frank Hampel – "Some Thoughts about Classification"
Wojtek J. Krzanowski – "Orthogonal Components for Grouped Data – Review and Applications"

2. Invited Lectures.
They were presented by:
Henk A.L. Kiers – "Should We Use Standard Errors or Cross-Validation in Component Analysis Techniques?"
Edwin Diday – "From Data to Knowledge: Symbolic Data Analysis, Mixture Decomposition and Spatial Pyramidal Clustering"
Jean-Paul Rasson – "Divisive Classification and Segmentation Trees with the Poisson Processes Hypothesis"
Maurizio Vichi – "Clustering and Reduction of Three-way Data"
Hamparsun Bozdogan – "A New Generation Multivariate Mixture-model Cluster Analysis of Normal and Nonnormal Data Using Information Measure of Complexity"
Klaus Obermayer – "New Methods for the Clustering, Visualization, and Classification of Proximity Data"
Yoshiharu Sato – "The Performance of an Autonomous Clustering Technique"

3. Invited Sessions.
Here some professors were asked to organize the session of the specialized area. Here are the titles and the organizers of the sessions:
"Optimization Heuristics in Data Analysis": Javier Trejos

"Dissimilarities in Clustering and Data Analysis": Jean-Pierre Barthélemy

"Probability Models for Clustering": Hans-Hermann Bock

"Classification and Regression Trees": Eugeniusz Gatnar

"Application of Classification and Data Analysis in Marketing": Reinhold Decker, Daniel Baier

"Optimization Methods and Algorithms in Classification and Clustering": Patrick Groenen, Hamparsun Bozdogan

"Bioinformatics and Classification": Berthold Lausen

"The WEB Mining Challenge": Wolfgang Gaul

4. Contributed Papers.

All other papers (more than 100) are contributions of participants. They were divided into 27 contributed sessions, namely:

Multivariate Data Analysis (2 sessions)
Classification and Clustering Methods (4 sessions)
Applications of Classification and Data Analysis in Economics
Applications of Classification and Data Analysis in Medicine
Classification and Regression Trees
Categorical Data Analysis
Dissimilarities and Similarities
Neural Networks and Related Topics
Mixture Models
Symbolic Data Analysis
Classification and Data Analysis – General and Special Problems
Correspondence Analysis
Phylogenetic Methods
Clustering – Evaluation and Validation
Multiway Data Analysis (2 sessions)
Applications of Classification and Data Analysis in Social and Behavioral Sciences (2 sessions)
Multivariate Statistics (2 sessions)
Graphs
Applications of Classification and Data Analysis in Environmental and Biological Sciences

53 papers were published in the proceedings of the conference:
Jajuga K., Sokolowski A., Bock H.-H. (editors), Classification, Clustering, and Data Analysis. Recent Advances and Applications,
Springer, 2002, p.492, ISBN 3-540-43691-X.
In addition, the book of abstracts was published:
Sokolowski A., Jajuga K. (editors), IFCS 2002, Data Analysis, Classification and Related Methods, Program and Abstracts.
Cracow University of Economics Publishers, Kraków 2002, p.208. ISBN 83-7252-134-4.

The conference was one of the most important events in the area of statistics, not only in Poland. It is worth to mention that this conference was accompanied by the one-day conference, celebrating the 90th anniversary of Polish Statistical Association.

Krzysztof Jajuga
Wroclaw University of Economics
Andrzej Sokolowski
Cracow University of Economics

News from CSNA

1. CSNA 2002

The annual meeting of CSNA was held from Thursday to Sunday, 13 to 16 June, at the University of Wisconsin, Madison, WI. The host was Professor Bernard Harris of the Statistics Department at Madison; the Program Committee Chair was Dr. David Banks. About 65 persons were in attendance. There were 18 in the short course presented by Professor Mel Janowitz on combinatorial aspects of cluster analysis and 16 in that presented by Professor Stan Sclove on the finite mixture model. The contributed and invited papers, on a wide range of topics, including for example such different subjects as Authorship and Protein Structure, were excellent. There were memorial sessions in honor of John Van Ryzin, who had organized a conference on classification in Madison a quarter century ago, and Mark Rorvig, a very active recent member who passed away during the past year. The full program will be published in Vol. 19 (2002), No. 2 of the Journal of Classification.

2. CSNA 2003

Next year's CSNA meeting is planned for Thursday to Sunday, 12 to 15 June, 2003, at Florida State University, Tallahassee, Florida, hosted by Professor Mike Brusco. Immediately preceding there will be a follow-up meeting for a previous MDS Algorithms Workshop, which will be sponsored by DIMACS, the Center for Discrete Mathematics and Theoretical Computer Science, Rutgers University. The DIMACS workshop will begin on Wednesday, one day before the CSNA meeting begins. The workshop will continue (and conclude) on Thursday, independent of the usual Thursday workshops associated with the CSNA meetings. There may be an invited session on MDS, perhaps jointly sponsored by CSNA and DIMACS.

3. CSNA 2004

The 2004 CSNA meeting will be combined with that of the International Federation of Classification Societies. The Chicago arrangements committee is headed by Professor Buck McMorris, Chair of the Mathematics Department at Illinois Institute of

Technology (I.I.T.). Professor Buck McMorris and Dr. David Banks (U.S. Food and Drug Administration and Past President of CSNA) are the Program Co-Chairs. The meeting is scheduled for Thursday to Monday, 15 to 19 July, 2004. Further details appear elsewhere in this Newsletter.

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News from SKAD

The annual conference of Section of Classification and Data Analysis of Polish Statistical Association took place on September 10-12 in Miedzyzdroje. The conference was organized by the Department of Econometrcs and Statistics of University of Szczecin About 80 persons participated in the conference. In the conference 63 papers were presented. They will be presented in the volume published by Wroclaw University of Economics Publishers.

The following papers were presented during plenary sessions in English:

Krzysztof Jajuga, Andrzej Sokolowski – IFCS-2002 – facts and remarks

Daniel Baier – Classification and Marketing Research

Krzysztof Jajuga, Katarzyna Kuziak – Modeling Relationships in Multivariate Data

Jan Owsinski – Group choices: opinion structures, consensus and cluster analysis

Dominik Rozkrut – Application of X-12-ARIMA procedure in time series analysis

During the conference the elections took place. The Council of SKAD was elected for years 2003-2004:

Andrzej Sokolowski – chairman
Krzysztof Jajuga – vice-chairman
Eugeniusz Gatnar – secretary
Zdzislaw Hellwig – member
Kazimierz Zajac – member
Waldemar Tarczynski – member
Marek Walesiak – member.

In addition, Marek Walesiak was elected as the representative of SKAD in IFCS Council.

Krzysztof Jajuga

News from the SFC

1.   SFC'2002 – Toulouse

The 9th annual conference of the Francophone Classification Society took place at the Mirail University of Toulouse on September 16-18, 2002. It was a successful event with the organizers R. Lafosse, F. Ferraty, A-M. Mondot, S. Mercier, B. Jouve, S. Jmel, B. Lenseigne, and with Louis Ferré as the chairman of the scientific program committee. About 120 participants attended the meeting, and some of them came from Belgium, Canada, Congo-Brazzaville, Great Britain, Italy, Netherlands, Morocco, Romania, Spain, Switzerland and USA.

An interesting and versatile program was presented, with 14 invited plenary and semi plenary lectures given by A. Appriou (Châtillon), J-P. Barthélemy (Brest), A. Ciampi (Canada), F. Critchley (UK), A. Degenne (Caen), G. Govaert (Royallieu), S. Holmes (USA), V. Makarenkov (Canada), J-P. Rasson (Belgium), F. Rossi (Paris), T. Snijders (Netherlands), J. ten Berge (Netherlands), S. Thiria (Paris), B. Victorri (Paris).

The "Simon Régnier" award was given to Vladimir Makarenkov for his results on additive trees and phylogenetic applications.

The correspondent CD of 55 papers may be obtained from lafosse@cict.fr, after a glance on the titles of the conferences on the web ("Thèmes" heading): www.irit.fr/sfc2002

2.   SFC'2003 Neuchâtel

The 10th annual meeting of the SFC will take place on September 10-12, 2003 at Neuchâtel, Switzerland. This Francophone meeting is organized by the statistics group of the University of Neuchâtel. The chair of the scientific program committee is Prof. Yadolah Dodge. The chair of the local organizing committee is Dr. Giuseppe Melfi.

Further information on themes, invited speakers, accommodation, deadlines, will appear soon on the web site of the conference

http://www.unine.ch/statistics/classification/welcome.htm

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3.   11th Annual meeting of the SFC – Bordeaux

The 11th SFC annual meeting will be held in Bordeaux (France), on September 2004. It will be organized by members of the team "Stochastic Processes, Operational Research and Statistics" of the MAB (Applied Mathematical Laboratory of Bordeaux) of Bordeaux1 and Bordeaux 2 Universities.

 André HARDY
SFC Secretary andre.hardy@fundp.ac.be

News from IPRCS, Irish Pattern Recognition and Classification Society

In the past few months, IPRCS was actively involved in a number of major conferences.

The 22nd Conference on Applied Statistics in Ireland, CASI 2002, was held at the Marine Hotel, Ballycastle, Co. Antrim, Northern Ireland, from Wednesday 15th May to Friday 17th May 2002, under the auspices of the Irish Statistical Association. The conference was hosted by the University of Ulster, Faculty of Informatics. Keynote speakers were Professor Malcolm Faddy, (Birmingham), Professor Michael Goldstein, (Durham) and Dr Joanne Lamb (Edinburgh).

Plans for the 23rd conference are well underway. The meeting will be hosted by Dublin City University at the Bloomfield House Hotel, Mullingar, near Dublin, from May 14-16 2003. Professor Adrian Bowman (Glasgow), Professor John Hinde (Galway) and Professor Edward Wegman (George Mason) have accepted invitations to give keynote presentations. A call for contributed papers and posters will be issued in January 2003. Contact Dr. Lynn Killen at DCU (lkillen@compapp.dcu.ie) for more information.

Information about CASI conferences and other ISA activities is available from the ISA website http://www.maths.may.ie/isa/isa.html

IPRCS organizes the annual IMVIP – Irish Machine Vision and Image Processing conference. This year, this was held as part of Opto-Ireland, a regional meeting of the SPIE, the premier optical engineering society worldwide. The meeting was held at the Radisson Hotel, Galway, on 5-6 September 2002. In all there were over 300 papers presented, and over 100 industrial exhibits.

Our IMVIP proceedings will be published as SPIE Proceedings, Volume 4877, "Optical Metrology, Imaging, and Machine Vision", eds. A. Shearer, F. Murtagh, J. Mahon and P. Whelan, in late 2002.

In 2003, IMVIP will be organized by the University of Ulster at Coleraine. Information will be provided on the IPRCS web pages at http://www.iprcs.org

A new book has been published on data analysis in astronomy: J.L. Starck and F. Murtagh, "Astronomical Image and Data Analysis", Springer-Verlag, 2002.

Finally, a new book series on "Computer Science and Data Analysis" was recently launched by Chapman and Hall / CRC Press. Fionn Murtagh is a series editor, and can be contacted for further details if you would like to discuss the possible publication in this book series of your work. Other editors: David Madigan, Rutgers; Padhraic Smyth, University of California, Irvine; and John Lafferty, Carnegie Mellon University.

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News from the GfKl

The traditional Fall Meeting of the Working Group ``Data Analysis and Numerical Classification'' (AG-DANK) , this year on 29. and 30. November at the University of Bonn/Germany, was already announced in the IFCS Newsletter No. 23. There will be two foci, robustness and stability in classification and data analysis on Friday, and mean field techniques on Saturday.

The program is now fixed. Talks will be delivered in German:

Friday, Nov. 29, 2002

G. Ritter, Passau: Robustness of the determinant criterion

C. Hennig, Zürich: Breakpoints for cluster analysis and mixed models

G. Herden, Essen: Consistency and stability in ordinal data analysis

M.T. Gallegos, Passau: Estimation of parameters for ambiguous objects by means of the method of variants

F. Mörchen, Marburg: A proof of the Pareto 80/20-rule

A. Ultsch, Marburg: Distance measures for density-based clustering

Discussion of the data set "hoaxan" (provided by Peter Ihm)

Saturday, Nov. 30, 2002

J. Buhmann, Bonn: Introductory thoughts about mean field approximation and deterministic annealing

M. Opper, Birmingham: Beyond the naive mean field method

F. Hamprecht, Heidelberg: Statistical analysis of correlograms

T. Lange, Bonn: Estimating the number of clusters by cluster stability

Gunter Ritter

GfKl Annual Conference in Cottbus

The German Classification Society (GfKl, Gesellschaft für Klassifikation) will hold its 27th Annual Conference in Cottbus, Germany, under the title: **Innovations in Classification, Data Science, and Information Systems**

The scientific program will include plenary and semi plenary lectures as well as contributed paper sessions on special topics. This year, the conference is organized with strong support of the Polish classification society, SKAD (Sekcja Klasyfikacji i Analizy Danych). The conference will emphasize interdisciplinary research and the interaction between theory and practice. The broad range of relevant topics from classification, data science, information systems, and innovative applications is illustrated by the following list of sessions: **Innovations in Classification and Data Science; Innovations in Information Systems, Applications in Business Administration and Economics, Applications in Medicine and Health Services**

Conference languages are German and English. Accepted abstracts will be included in a summary volume that will be distributed to conference participants. Speakers will be notified of acceptance by January 15th 2003. Upon acceptance, a complete manuscript for the proceedings can be submitted. It will have to pass a review process. Interested persons can obtain further information and formatting instructions for abstracts and manuscripts from www.gfkl2003.de and from the organizers. Online registration is also possible.

Participants intending to present a talk are requested to submit an abstract by November 15, 2002 to the chair of the program committee, Prof. Dr. K.-D. Wernecke, Institut für Medizinische Biometrie, Universitäts- Klinikum Charité; Campus Virchow-Klinikum; D-13344 Berlin.

Local organizer: Prof. Dr. Daniel Baier, Lehrstuhl für Marketing und Innovationsmanagement, Institut für Wirtschaftswissenschaften, BTU Cottbus, Postfach 10 13 44, D - 03013 Cottbus, Phone: ++49/355/69-2923, Fax: ++49/355/69-2921, e-mail: gfkl2003@gfkl.de

Cottbus is situated in the Lausitz, half the way between Berlin and Dresden. Famous parks in the city (e.g. the Branitz park) are still today an evidence of Fürst Pückler's influence. Near-by are nice castles, forests, rivers, and lakes. The conference will take place in the Audimax building of the Brandenburg University of Technology Cottbus which is located in the northwest of the historical town center.

Report on the 26th GfKl annual conference

From July 22nd to 24th, the 26th annual conference of the *Gesellschaft für Klassifikation e.V.* took place at the University of Mannheim. More than 250 participants attended the conference. The intended cooperation with the colleagues of the Italian affiliate association CLADAG (Classification and Data Analysis Group of the Società Italiana) has been very fruitful. This year the conference, which was traditionally designed as an interdisciplinary event, again provided a large number of scientists and experts from home and abroad with an attractive forum for discussions and the mutual exchange of knowledge.

Program committee and section chairs – financially supported by *Deutsche Forschungsgemeinschaft*, the University of Mannheim, and generous donations from various foundations and enterprises – were able to recruit eighteen notable and internationally renowned invited speakers for plenary and semi-plenary talks on their current research works regarding the conference topic *Between Data Science and Everyday Web Practice* or, respectively, on the GfKl members' general fields of interest: "Classification, data analysis and their application". Besides on traditional subjects, the talks in the different sections focused on topics like methods of data analysis for finance, capital market and risk management, marketing and market research, data and web mining as well as new media and recommender systems.

As usual, the GfKl's special working groups' meetings and the annual general meeting (in order to accept the managing committee's and treasurer's reports etc.) were held within the scope of the conference. Moreover, the archeology working group held a two day computer-based tutorial in order to give an introduction to the GEO information systems MapInfo and Idrisi.

The social program of the conference comprised a reception in the *Rittersaal* of the Castle of Mannheim hosted by the Mannheim University's president. The traditional conference dinner was combined with an excursion to Heidelberg. After a walk over the "Alte Brücke" and the marketplace to the terrace of the Castle of Heidelberg, the dinner took place in the castle's "Königssaal".

As in the past years, the conference proceedings will be published by Springer-Verlag as part of the series *Studies in Classification, Data Analysis, and Knowledge Organization*. Over 80 papers were submitted. Editors of the proceedings volume are M. Schader (Mannheim), W. Gaul (Karlsruhe), and M. Vichi (Rome).

Martin Schader

September 2002 issue Journal of Classification - editorial commentary

The September 2002 issue of the *Journal of Classification* is the first one under my editorship, and I would like to make a few comments on this propitious occasion. First and foremost, thanks are due to Phipps Arabie, founding editor of the *Journal*, for leaving his brainchild (which was conceived, as Phipps never stopped reminding us, by J. Douglas Carroll) in my care. I will continue in his footsteps, but following my own path, to serve the Classification community by facilitating scholarly communication of new methodological results and insights, across a variety of disciplines. I am very grateful to the Board of Directors of the Classification Society of North America (CSNA) for their confidence in me, and praise their broad-mindedness in appointing someone from overseas to run this operation.

All Members of the Editorial Board most graciously resigned upon termination of Phipps' editorship, enabling me to make changes and invite new people. Fortunately, nineteen of the old Members accepted my invitation to stay on the Board. They are the ambassadors of the *Journal of Classification*, and my safeguard for continued high-quality reviewing and advice. I look forward to receiving the benefit of their extensive experience and expertise. It is also my pleasure to introduce ten new Board members, from eight different countries. In alphabetical order, these are: Jean-Pierre Barthélemy (France), Wayne DeSarbo (USA), Anuska Ferligoj (Slovenia), Wolfgang Gaul (Germany), Henk Kiers (The Netherlands), Fred McMorris (USA), Akinori Okada (Japan), Philippa Pattison (Australia), Roberta Siciliano (Italy), and Michel Wedel (The Netherlands). Having worked personally with all of these excellent colleagues on various previous occasions, I am delighted that they enthusiastically agreed to serve the *Journal*, and I trust that we will have a smooth and fertile cooperation.

The editorial office is being run in a friendly and firm manner by my Editorial assistant Ellen Imthorn, who also answers all your E-mails. I am very grateful to Springer Verlag for having sponsored us financially to get started. Our Technical Editor, Eva Whitmore, has been a really great help in getting this issue together, and our communication already has that fine quality as if it had existed for years. There currently is a vacancy for the Book Editorship, and I would very much welcome suggestions for candidates to run this section of the *Journal.*

Apart from announcements and acknowledgements, this issue consists of five articles. The papers by Stanley Sclove, Kohei Adachi, and Christian Hennig were still processed under the editorial responsibility of Phipps Arabie, while the paper by Meulders, De Boeck, Kuppens and Van Mechelen and the paper by Hubert, Arabie and Meulman are the first products of the new editorship. The first of the latter papers builds a nice three-way bridge between the probabilistic world of latent class analysis and the deterministic worlds of overlapping clustering and three-way methods. The second, which is a reworked version of a paper presented at the *DIMACS Working Group Meeting on Algorithms for Multidimensional Scaling* (DIMACS Center, Rutgers University, Piscataway, NJ, August 6-9, 2001), compares several approaches to least squares unidimensional scaling in terms of speed and local minima, and introduces the first working nonmetric (or ordinal) method of that kind. Together, this fascinating collection of five papers covers quite a wide range of distinct areas of our field. I sincerely hope that it will encourage prospective authors to submit their work in similar areas to this *Journal.* My objective is to have the *Journal of Classification* operate on the broadest possible basis.

October 25, 2002

Willem J. Heiser

New publications

The German Classification Society (GfKl) held its 25th Annual Conference in Munich (Germany) in March 2001, with an international audience of about 250 participants and with 150 papers. The Proceedings of this conference have just been published by Springer Verlag under the title:
Manfred Schwaiger, Otto Opitz (eds.):
Exploratory Data Analysis in Empirical Research.
Proc. of the 25th Annual Conference of the GfKl, University of Munich, March 14 – 16, 2001.
Springer-Verlag, Heidelberg-Berlin, 2002. 536 pp.
ISBN 9-783540-441830
This volume contains 53 selected and refereed papers from an international range of authors.
They are clustered into the following main sections:
Classification, Data Analysis and Statistics (23)
Web Mining, Data Mining and Computer Science (9)
Medicine, Biological Sciences and Health (9)
Marketing, Finance and Management Science (12).
In the preface, the editors present a brief summary on each paper, and an index of subjects and authors concludes the volume.

Hans-Hermann Bock

Classification and Clustering

A Session during the 26th Session of the International Statistical Institute

The 26th Conference of the International Statistical Institute will be held in Berlin (Germany) on August 13-20, 2003. Usually, this conference is attended by more than 1500 participants and deals with all facets of statistics and data analysis, from mathematical theories to real-case applications, from organizational problems in statistical offices to the teaching of statistics. In about 80 Invited Sessions renowned authors present surveys on the most recent research in special topics.

Also in classification: There will be an Invited Session on "Classification and Clustering" with the following program:

Maurizio Vichi, Roma, Italy:
Clustering and reduction of three-way data
Klaus Obermayer, Berlin, Germany:
Clustering and classification of pairwise data using information theory and learning theory approaches
Samuel Kaski, Helsinki, Finland:
Discriminative clustering
Jean-Paul Rasson, Namur, Belgium
Invited discussion

This Session is organized by H.-H. Bock on the initiative of the Gesellschaft fuer Klassifikation (GfKl) and the International Association for Computational Statistics (IASC). It continues the series of IFCS sessions during ISI conferences organized in Istanbul (1997) and Seoul (2001). This may motivate the members of IFCS societies to participate in the ISI Conference 2003 in Berlin. For more information see the website *isi@destatis.de*.

Hans-Hermann Bock

Call for papers

**The First French National Conference on Web Research
(in French: Journées Francophones de la Toile, JFT'2003)**
from June, 30th to July, 2nd, 2003
located at the Polytechnic School of the University of Tours, France

The aim of this conference is the meeting of researchers who are working on all theories and applications related to the Web, in both academic and industrial area. We wish to let the attendees share new and relevant work dealing with the Web in an scientific and convivial way. This will be a good occasion to favor discussions between researchers from different fields who share a common research interest : the Web. The topics of the conference are mainly the following ones (but the conference program is widely open to all scientific research dealing with the Web):

Users and Interfaces: non visual interfaces, adaptive web sites and interfaces, aesthetics, audience and users profiles analysis, behavioral analysis, human factors

Semantic Web: languages, ontologies, Meta-data and annotations, data and knowledge basis

Global computing and Web Services: global computing and mobility, peer to peer architectures, data and services, services description

Web and 3D: visualization, virtual reality, 3D data servers

Documents and multimedia: hypertexts for the web (generation, analysis, usages), numerical art, electronic and multimedia documents, formats, accessibility to handicapped people

Web mining: search engines, information extraction, strategic watch, text mining, data mining

Hosting and Automatic Generation of Web Sites: sites generators, portal sites, automatic evaluation, usability Submission of Papers and demonstrations in English from non French speaking researchers are encouraged (but please note that the official language of this conference is French). Papers can be short or long (up to 6 or 10 pages) and demonstrations should be described with 1 page. Submission deadline is February the 8th. For more details (dates, proceedings, tutorials, invited talks, program committee, local organization), please consult our web site:

http://www.antsearch.univ-tours.fr/jft2003

Contributions for the coming issue of the IFCS newsletter can be sent to:

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Text files are by preference in ascii or word, with pc format. For graphical materials, by preference GIF is used.

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