

REPORT

The XXIX Conference on Multivariate Statistical Analysis, MSA 2010, 8–10 November 2010 Łódź, Poland

The 29th Conference on **Multivariate Statistical Analysis** took place on November 8th-10th 2010 in Łódź, Poland. The organization of the conference was entrusted to **Professor Czesław Domański**, the Chair of Department of Statistical Methods in University of Łódź and the President of Polish Statistical Association. This year MSA Conference was dedicated to Professor Zdzisław Hellwig.

The conference presented the latest theoretical and empirical achievements in the field of the multivariate statistical analysis and its applications. This was a continuation of the issues undertaken on the past years conferences. The scientific programme of MSA 2010 covered a wide range of various statistical problems, such as multivariate distributions, statistical tests, non-parametric inference, discrimination analysis, Monte Carlo analysis, Bayesian inference, application of statistical methods for finance, insurance, capital markets and risk management.

This year MSA Conference began with the meeting of the Main Council of the Polish Statistical Association.

Altogether there were 70 participants from various academic and research centers in Poland and abroad. Concerning the papers, 41 papers were presented in 11 sessions.

The conference was opened by the Chairman of the Organizing Committee, **Professor Czesław Domański**. On the opening speech also spoke the Vice-rector in Charge of Research of the University of Łódź, **Prof. Antoni Różalski** and the Pro-Dean for Research of the Faculty of Economics and Sociology of the University of Łódź, **Prof. Jolanta Grotowska-Leder**.

For the first **plenary session** (The Chair of this session was **Prof. Eugeniusz Gatnar**) 4 papers were delivered:

Prof. Czesław Domański (University of Łódź) reported the paper titled “*Statistical tests based on empty cells*”.

Prof. Grażyna Trzpiot (University of Katowice) delivered a lecture titled “*Some properties of the robust trend tests*”.

Prof. Joanna Kisielińska (Warsaw University of Life Sciences) presented the paper about “*Bypassing the condition of normality in parametric tests*”.

Prof. Grzegorz Kończak (University of Katowice) reported the paper titled “*On testing the significance of the coefficients in the multiple linear regression model*”.

The second **plenary session** (chair: Prof. Mirosław Szreder) was devoted to famous Polish statisticians, including **Kazimierz Władysław Kumaniecki**, **Marek Fisz**, **Zbigniew Pawłowski**, **Jerzy Greń** and **Wiktor Oktała**.

Prof. Czesław Domański (University of Łódź) delivered a lecture about “*Kazimierz Władysław Kumaniecki – statistician, a founder of Polish Statistical Association*”. In March 1912 K.W. Kumaniecki submitted the documents to the Imperial and Royal Governance in Lviv, together with a statue, probably written by himself, asking for a permission to launch Polish Statistical Association with headquarter in Cracow. When had obtained the permission, after the election of the first Association’s Authorities, he was nominated to its Secretary. The Association’s main premises were located in Cracow’s Municipal Statistical Office headed by K.W. Kumaniecki.

Prof. Mirosław Krzyśko (Adam Mickiewicz University in Poznań) reported a paper titled “*Professor Marek Fisz (1910–1963). On the hundredth anniversary of his birth*”.

Marek Fisz was born on January 15, 1910 in Szydłowiec. He studied mathematics at the University of Warsaw from 1934 to 1939, and in June 1939 he received the Master Degree. On June 23, 1951 the degree of Doctor of Science was conferred on him by the University of Wrocław. From 1954 he was the Head of the Chair of Mathematical Statistics at the University of Warsaw and from 1958 he was the Chief of the Division of Mathematical Statistics in the Mathematical Institute of the Polish Academy of Sciences. In 1960 he moved to the United States. In the United States he held different scientific positions, respectively at the University of Washington (Seattle), Stanford University (Stanford), Columbia University and New York University (New York).

Prof. Janusz Wywiał (University of Katowice) presented a lecture about the following topic: “*On selected scientific works of Zbigniew Pawłowski on the occasion of the 80th anniversary of the birthday*”. Professor Zbigniew Maria Pawłowski lived in the years 1930-1981. His scientific career began in the Central School of Planning and Statistics in Warsaw (now known as The Warsaw School of Economics), where he had studied and then began working as a deputy assistant in the Department of Statistics. There he obtained the PhD degree in 1957, and in 1962 - a postdoctoral degree. Since 1962 he continued his career in the Higher School of Economics (later renamed The University of Economics) in Katowice, where he took the position of the Head of the Department of Statistics. In 1957 he received the title of an associate professor and respectively in 1972 – of professor ordinarius. The opinion that prevails in the environment of Polish econometricians, mathematicians and statisticians is that Professor Zbigniew Pawłowski was one of the pioneers of econometrics in Poland.

Prof. Jan Kordos (Warsaw School of Economics) reported the paper “*In memory of Professor Jerzy Greń (1936–1985)*”. This year it is 25th anniversary

of Professor Jerzy Greń's death, who was one of the most famous Polish statisticians and a researcher of the Institute of Econometrics, Warsaw School of Economics. Professor Jerzy Greń was born on 14 March 1936 in Ciężyn, in working-class family. University Diploma of the Warsaw School of Economics-received with honors in 1958. The academic title of Professor was given to Jerzy Greń by the President of Poland in 1979. In the years 1962-1981 he worked at the Commission Mathematical of the Central Statistical Office of Poland.

In years 1981–1984 he worked in Ethiopia as an international expert in econometrics, preparing the Integrated System of Food and Agricultural Statistics in Ethiopia. He trained in econometrics Ethiopian statisticians, prepared project documentation, and published:

- Handbook on Applied Econometrics, Central Statistical Office in Ethiopia, Addis Ababa, 1983, 210 pages;
- Forecasting in Agricultural Statistics, Statistical Techniques in Developing Countries No 2., ESS/STDC/2, FAO, Rome 1983, p. 21.

He died early, at the age of 49, but left a significant legacy of scientific books, scientific articles, different analysis and opinions.

Prof. Bronisław Ceranka (University of Life Sciences in Poznań) delivered a lecture about "*Wiktor Oktaba*". Wiktor Oktaba (born on April 16, 1920 in Kiev, died on September 6, 2009 in Lublin) was a Polish mathematician and statistician. One of the champions of biometry science in Poland. Oktaba studied mathematics at the University of Warsaw and Maria Curie-Skłodowska University of Lublin. Oktaba was professor and the Chair of Department of Mathematical Statistics and Institute of Application of Mathematics Academy of Agricultural of Lublin.

Dr. Milda Maria Burzala (Adam Mickiewicz University in Poznań) reported the paper titled "*In memory of Professor Bogusław Guzik*". Professor Bogusław Guzik unexpectedly passed away on 6th of July 2009, at the age of 63, when he was in his prime. Since the beginning of his studies, he was connected with University of Economics in Poznań. In 1969 he achieved Master of Science degree there. In 1975, he obtained the degree of Doctor of Economic Science, and in 1980 - the postdoctoral degree. The title of professor was given to him in 1991. He was the author of about 300 scientific publications in the area of econometrics, forecasting, multidimensional comparative analysis and also analysis of economic efficiency.

Titles of the papers of the next sessions of the MSA Conference, with the authors' names are presented respectively below:

9 November 2010**Session III A:**

The Chair: Prof. **Janusz Wywiał**

- *Methodology and example of Discriminant Analysis to separate a study population by treatment subgroups in a Phase 2 clinical trial* (**Lev Sverdlov, Merck Research Labs, USA**)
- *Theory of multiple sequences and series. A review of the elements, which might be useful in works on discrete distribution* (**Janusz Kupczun, Łódź**)
- *Some remarks on bootstrap, confidence interval and calibration in social surveys* (**Jan Kordos, Warszawa**)
- *Assessment of entropy based methods for choosing uniformly distributed variables noisy in the context of cluster analysis* (**Jerzy Korzeniewski, Łódź**)

Session III B:

The Chair: Prof. **Walenty Ostasiewicz**

- *The integration of data in statistics of Entrepreneurship* (**Grażyna Dehnel, Elżbieta Gołata, Poznań**)
- *Test of independence among random vectors based on copula functions* (**Joanna Tomanek, Katowice**)
- *Territorial differentiation in dynamics of enterprises' population in Poland – cluster analysis* (**Aneta Ptak-Chmielewska, Warszawa**)
- *Attempt to use administrative registers in the study of commuting* (**Hanna Gruchociak, Poznań**)

Session IV A:

The Chair: Prof. **Grażyna Trzpiot**

- *On generation of correlated pseudo-random binary numbers* (**Wojciech Gamrot, Katowice**)
- *On pseudo-EBLUP under some model for longitudinal data with auxiliary variables* (**Tomasz Żądło, Katowice**)
- *Sampling with SAS for practical use* (**Dorota Bartosińska, Warszawa**)
- *On the Data Imputation using R* (**Malgorzata Misztal, Łódź**)

Session IV B:

The Chair: Prof. **Wojciech Zieliński**

- *Subjective methods of extraction and data visualization in factor analysis* (**Piotr Tarka, Poznań**)
- *Applicability of the multi group confirmatory factor analysis to constructing sentiment measures* (**Piotr Białowolski, Warszawa**)

- *Principal component analysis method for symbolic interval data* (**Andrzej Dudek, Wrocław**)
- *About adaptation of unfolding analysis for symbolic data* (**Artur Zaborski, Marcin Pelka, Wrocław**)

Session V A:

The Chair: Prof. **Mirosław Krzyśko**

- *Comparison of stability of classical taxonomy bagging method with bagging based on co-occurrence data* (**Dorota Rozmus, Katowice**)
- *Dynamic Grouping on the basis of self-learning network GNG* (**Kamila Migdał Najman, Krzysztof Najman, Gdańsk**)
- *Evaluation of post-secondary school students' preferences, using the analysis of hidden classes* (**Marcin Pelka, Aneta Rybicka, Wrocław**)

Session V B:

The Chair: Prof. **Marek Walesiak**

- *Hierarchical log-linear models for contingency tables* (**Justyna Brzezińska, Katowice**)
- *Feature selection in high dimensional regression problem* (**Mariusz Kubus, Opole**)
- *Using permutation test in multiple correlation investigation* (**Jacek Stelmach, Katowice**)

10 November 2010:

Session VI A:

The Chair: Prof. **Jan Kordos**

- *Special cases of some general formula for price indices* (**Jacek Bialek, Łódź**)
- *Review of selected applications of domes in finance and insurance* (**Krzysztof Janas, Agnieszka Świerczyńska, Łódź**)
- *Statistical properties of a control design Supreme Chamber of Control* (**Wojciech Zieliński, Warszawa**)
- *Multiple decision procedures* (**Dariusz Parys, Łódź**)

Session VI B:

The Chair: Prof. **Bronisław Ceranka**

- *Bayesian exponential survival model in the analysis of unemployment duration determinants* (**Wioletta Grzenda, Warszawa**)
- *Convergence of food share expenditures as a problem in welfare analysis* (**Hanna Dudek, Warszawa**)
- *Modified soft model of sustainable development* (**Dorota Perlo, Białystok**)

Plenary Session VII

The Chair: Prof. **Zofia Rusnak**

- *On some construction of regular A-optimal spring balance weighing design* (**Małgorzata Graczyk, Poznań**)
- *Notes on the optimum chemical balance weighing design* (**Bronisław Ceranka, Małgorzata Graczyk, Poznań**)
- *Selected Variance Estimation Methods and their Application in the Case of Income Concentration Measures* (**Alina Jędrzejczak, Łódź**)

The next Conference *on Multivariate Statistical Analysis* has been planned on November 7th-9th, 2011 and will take place in Lodz. The Chairman of the Organizing Committee, Professor **Czesław Domański** informs it will be the 30th anniversary edition of the Conference and kindly invites all interested Scientists, Researchers and Students to take part in it. If interested, please send an application to the Scientific Secretary of the MSA 2011 Conference at the following address:

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