

40th International Conference MSA'2022 joined with MASEP

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The jubilee 40th International Conference MSA'2022 joined with MASEP took place on November 7–9, 2022, at the Training and Conference Center of the University of Lodz, Kopcińskiego 16/18 St. The conference was organized by the Department of Statistical Methods of the University of Lodz. This edition of the conference was organized in cooperation with the MASEP (Measurement and Assessment of Social and Economic Phenomena) conference. The conference was co-organized by: the Institute of Statistics and Demography (University of Lodz), the Department of Economic and Social Statistics (University of Lodz), the Statistics and Econometrics Committee of the Polish Academy of Sciences, the Polish Statistical Association, branch in Lodz and the Statistical Office in Lodz. The honorary patronage over the conference was taken by: Rector of the University of Lodz – prof. Elżbieta Żądzińska and the President of Statistics Poland – Dominik Rozkrut. The substantive partner of the conference was also StatSoft Polska Sp. z o. o.

The head of the Scientific Committee was prof. Czesław Domański and the head of the Organizing Committee was prof. Alina Jędrzejczak. The scientific secretaries of the conference were Elżbieta Zalewska, Marta Małecka, Artur Mikulec and Łukasz Ziarko.

The main objectives of the MSA'2022 conference were twofold: first, the presentation of the latest achievements in the field of multidimensional statistical analysis, and second, exchange of experience resulting from its application.

The 40th International Conference MSA'2022 joined with MASEP was organized in a stationary mode. The conference was attended by 179 people (including 74 employees of the Statistical Office in Lodz, who participated only on the first day of

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the conference) from various academic centers in Poland, including Gdansk, Katowice, Cracow, Lodz, Poznan, Radom, Szczecin, Warsaw and Wroclaw, representatives of Statistics Poland, the Statistical Office in Lodz as well as guests from the Czech Republic, Italy and Ukraine. During the conference, three plenary and fourteen panel sessions were held, during which a total of 59 papers were presented.

The conference began on November 7 with an opening made by the head of the Organizing Committee, prof. Alina Jędrzejczak, Vice-Rector for External Relations of the University of Lodz, prof. Agnieszka Kurczewska, Vice-Dean for Scientific Research at the Faculty of Economics and Sociology of the University of Lodz prof. Ewa Kusideł, and the head of the Scientific Committee prof. Czesław Domański. Due to the jubilee edition of the MSA conference, during the opening of the conference, prof. Czesław Domański mentioned the first editions and reminded the history of the Lodz statistical conference.

After the official opening, the first plenary session took place. According to the conference tradition, the session was dedicated to the history of the Polish statistics and to memories of recently deceased statisticians. It was chaired by prof. Bronisław Ceranka, Poznan University of Life Sciences. The following papers were presented in this session:

- Integration of the statistician environment in the light of the ruby jubilee of the MSA – prof. Czesław Domański, University of Lodz, prof. Agata Szczukocka, University of Lodz,
- Tadeusz Gerstenkorn (1927–2021) – probabilist and statistician – Andrzej Łuczak, University of Lodz,
- Jan Kordos (1930–2021) – statistician, classical scientist, animator of scientific and organizational life on many levels – Czesław Domański, University of Lodz, Dominik Rozkrut, Statistics Poland, Włodzimierz Okrasa, Cardinal Stefan Wyszyński University in Warsaw,
- Tadeusz Bednarski (1949–2021) – an outstanding statistician from Wrocław, doctor of statistics at the University of California in Berkeley (USA) – Grzegorz Wyłupek, University of Wrocław.

The second plenary session was held after the historical session and was chaired by prof. Mirosław Szreder, University of Gdansk. The participants of the conference were given two invited lectures:

- Testing dependencies in time series – Marie Huskova, Charles University, Prague,
- Statistics in transition: five trends that accelerate the evolution of official statistics – Dominik Rozkrut, Statistics Poland.

The third plenary session was held on the third day of the conference, before its official closing. It was chaired by prof. Elżbieta Gołata, Poznan University of Economics and Business. The last session included two invited lectures entitled:

- Longevity dividend – multidimensional risk analysis – Grażyna Trzpiot, University of Economics in Katowice,
- Relative taxonomy method in data analysis – approaches, simulation studies, applications – Marek Walesiak, Wroclaw University of Economics and Business, Grażyna Dehnel, Poznan University of Economics and Business, Andrzej Dudek, Wroclaw University of Economics and Business.

The conference hosted a banquet on the occasion of the 80th birthday of prof. Mirosław Krzyżko, which was held on the first day of the conference. On the same day, there was also a jubilee of the 60th anniversary of the Statistical Office in Lodz, during which Anna Luchowska (Statistical Office in Lodz) gave a paper entitled "60 years of operations of the Statistical Office in Lodz", presenting the history and key information on the activities of the Office. The co-author of the speech was Piotr Ryszard Cmela (Director of the Statistical Office in Lodz).

During the ceremony, the President of Statistics Poland, Dominik Rozkrut, presented seventy-four employees of the Statistical Office in Lodz with the decorations "For merits for the statistics of the Republic of Poland", which are the honorary distinctions awarded for special achievements in the field of statistics. The jubilee session ended with thanks from the President of Statistics Poland and the Director of the Statistical Office in Lodz for the employees' work and commitment, which greatly contributed to the achievements and prestige of the Office.

During the fourteen parallel sessions of the conference a broad area of topics was covered. The scope of the topics included, in particular, the following groups of issues:

1. Theory of statistical methods. A very wide range of topics were discussed in this group, including: multivariate measures, in particular asymmetry measures, statistical tests, the problem of optimal sample size, concept of noise according to Daniel Kahneman, the question of measuring dissimilarities, estimating multivariate stochastic volatility models, breakpoint detection, multimodel prediction, Bayesian procedures. Within the presented studied dedicated to statistical theory, there was also a line of discussions on current problems, challenges and solutions related to national censuses.
2. Macroeconomic applications. The main macroeconomic topic discussed in accordance with a number of papers presented during the conference was inflation, which is currently an important social issue. Within this topic, modern

methods of measuring inflation based on scrapped data were also discussed. Moreover, the conference debates included topics such as consumer confidence index and development measures.

3. Demographic and social issues. The range of socio-demographic issues discussed in the papers presented at the conference was very wide. In the field of demography, there were papers on current demographic problems and methods of mortality forecasting. Many papers concerned the labor market: the status of young people on the labor market, sectoral and spatial differentiation of the employment rate in the COVID-19 era, labor demand, duration of the young workers' first job. Other topics concerned income and poverty, including: modeling the distribution of income, material situation and life satisfaction, income expectations in families, poverty lines. The problem of seniors' social activity and spatial accessibility were also discussed. Moreover, the conference participants presented papers on current problems such as estimating the length of stay of foreigners in Poland or integration of immigrants in the European Union.
4. Sustainable development. Among the economic and social topics, a group of topics closely related to the problems of sustainable development and ecology was distinguished. In this regard the conference papers included the implementation of the goals of sustainable development in EU countries, sustainable energy in European countries, forecasting demand for water for households and the relationship between non-ferrous metals and the green bond market.
5. Business applications. Many papers covered the application of statistical methods to business. Presented topics included, among others, the strategic dimensions of corporate entrepreneurship, the development of organizations based on the logic of effectuation, document grouping with respect to their sentiment or the issue of using data coming from Internet sources.
6. Financial market. Topics in the field of statistical methods used in financial markets included, among others: the use of a kernel estimator to measure the extreme risk of returns on the Warsaw Stock Exchange, estimation of value at risk, liquidity measures in cryptocurrency markets, measures of insurance market integration, the use of models of artificial intelligence in commercial banks and predicting consumer insolvency.

In addition to topics closely related to statistical methods, the conference also featured a discussion on teaching statistics at universities. This discussion was based on a paper joining issues of new academic program creation, educational assessment, labor market, national committee of accreditation and econometric model.

The parallel sessions were chaired by:

November 7th

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| SESSION IIIA | prof. Andrzej Sokołowski (Cracow University of Economics, Collegium Humanum – Warsaw Management University) |
| SESSION IIIB | prof. Krzysztof Jajuga (Wroclaw University of Economics and Business) |
| SESSION IVA | prof. Danuta Strahl (Wroclaw University of Economics and Business, WSB University) |
| SESSION IVB | prof. Grażyna Dehnel, prof. UEP (Poznan University of Economics and Business) |

November 8th

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| SESSION IA | prof. Grzegorz Kończak (University of Economics in Katowice) |
| SESSION IB | prof. Iwona Bąk, prof. ZUT (West Pomeranian University of Technology in Szczecin) |
| SESSION IIA | prof. Iwona Markowicz, prof. US (University of Szczecin) |
| SESSION IIB | prof. Maria Grzelak (University of Lodz) |
| SESSION IIIA | prof. Eugeniusz Gatnar (University of Economics in Katowice) |
| SESSION IIIB | prof. Elżbieta Roszko-Wójtowicz (University of Lodz) |
| SESSION IIIC | prof. Józef Dziechciarz (Wroclaw University of Economics and Business) |

November 9th

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| SESSION IA | prof. Wojciech Zieliński (Warsaw University of Life Sciences) |
| SESSION IB | prof. Dominik Krężolek (University of Economics in Katowice) |
| SESSION IC | prof. Alina Jędrzejczak (University of Lodz). |

A detailed list of presenting authors and topics is available at <https://www.uni.lodz.pl/msa>.

The social program of the conference included a trip to the Museum of Cinematography, which was organized after the sessions on the second day of the conference. In addition to visiting the museum, the participants listened to a lecture on "Special effects in cinematography", thanks to which they learned about the most popular techniques of creating trick shots, their use in cinema and television, and followed their development over the years. The lecture was illustrated with photos and fragments of selected films using special effects. The story began with the first productions at the turn of the 19th and 20th centuries, and ended with today's films.

The conference was summed up and closed officially by the head of the Scientific Committee – prof. Czesław Domański and the head of the Organizing Committee - prof. Alina Jędrzejczak. They thanked all the participants for their active participation in the conference. They also thanked the co-organizers, partners and all institutions cooperating in the organization of the conference. They emphasized the fact that, thanks the joint efforts of participants and organizers, the jubilee edition of the conference turned out to be a great success.

Finally, all participants were invited to the 41st Conference on Multivariate Statistical Analysis (MSA'2023), which is planned to take place on November 6–8, 2023, at the Training and Conference Center of the University of Lodz.