APPLICATIONS OF MATHEMATICS AND STATISTICS IN ECONOMY. THE 13TH INTERNATIONAL CONFERENCE

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The 13th international conference Applications of Mathematics and Statistics in Economy (AMSE) 2010 was organized by Matej Bel University, Faculty of Economics, Banska Bystrica, Slovakia in Demanovska Dolina (Slovakia), 26-29 August 2010. This conference is alternately organized by the Department of Quantitative Methods and Informatics of the Faculty of Economics, Matej Bel University in Banska Bystrica, the Slovak Republic and by the Department of Statistics of Wrocław University of Economics, Poland and by the Department of Statistics and Probability of the Faculty of Informatics and Statistics of Economic University in Prague, the Czech Republic. The presentation of latest knowledge and applications of mathematics and statistics in economy and scientific results of participants from these universities was the main purpose of these conferences. The first such conference was held in Liptovsky Trnovec, the Slovak Republic in 1998. The initiator of the idea of AMSE was Professor M. Abraham from Matej Bel University.

There were the 51 contributions in 11 sessions at the l3th conference AMSE 2010. *Consumption and Indebtedness of Czech Households* presented by R. Hindls and S. Hronová opened the conference. They presented how the economic crisis changed behaviour of the Czech households. In this session more plenary lectures were presented by M. Luptacik about *DEA models in environmental economics* and by W. Ostasiewicz about *General view on QOL*. M. Luptacik presented the main problem for measuring the eco-efficiency and proposed using efficiency indicators obtained by the data envelopment analysis. W. Ostasiewcz presented general aspects of the quality of

life problems. During the next sections the results of research were presented one by one: A. Vernizzi about *A Gini and concentration index decomposition with an application to the APK reranking measure*, D. Blatná about *Bootstrapping in regression*, S. Ostasiewicz about *Some determinants of quality of living*, J. Trešl about *Behaviour of intraday variations of PX index*, S. Heilpern about *Discrete risk processes with dependent claims*, A. Dekrét and R. Zimka about *Sustainability in economy with non-renewable resources*, D. Švihlová, P. Král and M. Hužvár about *Analysis of economic-environmental disparities in Slovakia using data envelopment analysis*, P. Maličký about *Periodic points of the Lotka-Volterra map and some open problems in theory of numbers*, P. Medveďová about *Application of dynamic model of a small open economy under fixed and flexible exchange rates*, L. Striežovská about *The existence and stability of business cycles in a macroeconomic model under fixed exchange rate regime*. During the first day of the conference in the next section were presented the following contributions: *The identification of discontinuities for the jump-diffusion process by means of a modified threshold method* by A. Gardon, *Bayesian approach to the short-run process control* by E. Jarošová, *Household incomes in the Czech Republic* by A. Čabla, *Generalized linear model and finite mixture distributions* by I. Malá, *The decomposition of the redistribution effect and the robustness of the bandwidth choice* by E. Mazurek, *To the education level and unemployment rate: A lesson from the Czech recession* by J. Fischer, *Unemployment and education in the Czech Republic* (1993–2009) by M. Miskolczi, *Fiscal multipliers and automatic stabilizers in the Czech Republic* by V. Valenta, *Measuring returns to investment in human capital in the Czech Republic: Experimental computations based on study fields, sex and regions* by S. Firnandi, *Influence of crisis on convergence of selected countries to eurozone* by V. Úradníček and E. Zimková, *Selected aspects of robust regression and its application* by J. Černý, *Applicability of semiparametric regression models* by T. Marcinko, *The impact of dependence of the bivariate risk model on the ruin probabilities in case of property and social insurances* by A. Iwanicka, *Predicting financial distress of Slovak companies using data mining techniques* by M. Stachová and P. Král, *Price and volume measures for the euro area accounts* by

L. Valentová Pulpanová, *Administrative data in national accounts* by P. Musil and J. Zbranek, *Improvement of total factor productivity measurement* by J. Sixta and K. Vltavská, *Seasonality in time series of natality* by B. Nosková. The next day of the conference the presentations were held in 4 sections. *Alternative way to modelling mortality* was presented by P. Mazouch, *Do the numbers support the effectiveness of the strict Swedish and the loose Dutch system or regulations on prostitution and drug use* – by P. Sárkány, *Reserve risk modelling based on unaggregated data* – by P. Zimmermann, *Cash-flow at risk & earnings at risk* – by M. Boďa and M. Kanderová, *Modelling of wage distributions using the method of L-moments* – by D. Bílková, *The Commercial College 1919–1953* – by P. Závodský, *Charles Loewner* – by J. Coufal, *Estimation of age structure of the inhabitants of Bohemia in 1651 according to the list of serfs according to faith* – by E. Kačerová, *Financing of universities from public sources* – by M. Hužvár and Z. Rigová, *Data dimensionality reduction in R* – by M. Prokop, *Interest rate risk in life insurance* – by M. Perina, *Economic performance of different countries and life expectancy of their inhabitants* – by J. Hrevuš, *Structural model of household expenditures* – by A. Kaščáková, P. Král and G. Nedelová, *Structure of government expenditures: Comparison of selected countries* – by L. Hudrlíková, *Differences in the economic activity of men and women in the Czech Republic since 2001* – by T. Fiala, *Methods of cost management in health care* – by J. Butková, *Methods of assessing hospitals* – by M. Biernacki, *Food consumption behavior model in the old age* – by K. Véghová, *Data analysis in Hungary* – by M. Magyarics, *Gamma function and algebraic differential equation* – by R. Horský. The tradition of these conferences is special social program. The organizer of AMSE 2010 prepared a trip to Jasná resort and a trip to Chopok. The trips always are very good time for informal scientific conversation and an exchange of results of research.