

CONFERENCE PROGRAM



QUANTITATIVE METHODS IN ECONOMICS (Multiple Criteria Decision Making XXI)

25th - 27th May 2022

25th MAY, 2022 (Wednesday)

11:30 – 13:30 *Registration*

14:00 – 15:00

Plenary Session ***Chair:*** Juraj Pekár

Manuel Alberto M. Ferreira: RANDOM WALK AND RESERVES MODELING IN STUDYING PENSIONS FUNDS SUSTAINABILITY

Ľudmila Jánošíková, Peter Jankovič, Marek Kvet: THE HIERARCHICAL PQ-MEDIAN MODEL FOR AMBULANCE LOCATION IN A CITY

Petr Fiala, Renata Majovská: MODELS OF CO-OPETITION

15:00 – 15:30 Coffee break

15:30 – 17:30

Session ***Chair:*** Marek Kvet

Josef Jablonský: PROGRESS IN OPTIMIZATION SOFTWARE IN THE LAST DECADE

Jaroslav Janáček, Marek Kvet: QUALITY MEASURE OF PARETO FRONT APPROXIMATION

Kateřina Svítková, Martina Kuncová, Jana Sekničková: FINDING THE OPTIMAL FOOTBALL TEAM BASED ON GPS DATA AND MULTI-CRITERIA DECISION MAKING

Dušan Teichmann, Denisa Mocková, Michal Dorda, Pavel Edvard Vancura, Ivana Olivková, Vojtech Graf: DESIGN OF OPTIMIZATION MODEL FOR NETWORK COORDINATION OF TRANSFERS BETWEEN CONNECTIONS - LINE NETWORK WITH APPLICATION OF HOMOGENEOUS HEADWAY

Miroslava Jánošová, Veronika Miťková: GAME THEORY AS AN APPROACH TO THE ANALYSIS OF THE INDIVIDUAL DECISIONS AGAINST POPULATION

17:40 – 18:30 Meeting of SSOR

18:30 – 22:00 RECEPTION

26th MAY, 2022 (Thursday)

8:30 – 10:00

Session **Chair:** Tomáš Majer

Jiří Hoříňka, Lenka Kontriková, Dušan Teichmann: OPERATION CONTROL PROBLEMS OF THE AIRLINE CARRIERS IN THE EVENT OF IRREGULARITIES DURING FLIGHT OPERATIONS

Jakub Čilecek, Dusan Teichmann: MATHEMATICAL MODEL FOR OPTIMIZING STAFFING OF AIRCRAFT GROUND HANDLING

Dalibor Gonda, Tomáš Majer: MODELING OF UNCERTAINTY OF CONNECTION ARRIVAL USING FUZZY NUMBERS

Jan Pelikán: VEHICLE ROUTING PROBLEM WITH OPTIONAL NODES

Ondřej Sokol, Tomáš Formánek, Michal Černý: QUANTIFYING THE ATTRACTIVENESS OF A LOCATION: THE CASE OF A BRICK-AND-MORTAR STORE

Jakub Hanousek: DEA CLUSTERING AND MONTE CARLO APPROACHES

10:00 – 10:30 Coffee break

10:30 – 12:00

Session **Chair:** Veronika Miřková

Marek Kvet, Jaroslav Janáček: EVALUATION OF DYNAMICS OF HEURISTICS USED FOR PARETO

Karel Jeřmen, Daniel Pilát, Dušan Teichmann, Olga Mertlová: COMPARISON OF TWO SELECTED APPROACHES TO THE TRANSPORT INFRASTRUCTURE INVESTMENT PROJECTS PORTFOLIO SELECTION FOR IMPLEMENTATION

Andrea Hrníčková, Matúš Kováč, Dušan Teichmann, Denisa Mocková: MATHEMATICAL MODEL FOR LOCALIZATION OF THE FINAL SHIPMENT DISTRIBUTION WAREHOUSE AT A DISTRIBUTOR OPERATING IN VIRTUAL REALITY

Lubica Bartová, Peter Fandel: A METAFRONTIER APPROACH AND FARM PERFORMANCE BY THEIR MEMBERSHIP IN PRODUCER'S ORGANIZATIONS

Dušan Hrabec: TIME-DEPENDENT VEHICLE ROUTING PROBLEM OF CONTAINER COLLECTION ON THE REAL CITY NETWORK

13:00 – 18:00 Social program trip

27th May, 2022 (Friday)

8:30 – 10:00

Session **Chair:** Karol Szomolányi

Karol Szomolányi, Martin Lukáčik, Adriana Lukáčiková: LINEAR-EXPONENTIAL ADJUSTMENT COSTS IN THE FORM OF LINEAR SPECIFICATION

Andrea Furková: THE ROLE OF PROXIMITY MEASUREMENT IN THE EVALUATION OF REGIONAL INNOVATION PROCESSES

Patrícia Holzerová, Zuzana Čičková: SPATIAL MODEL WITH THE INFLUENCE OF THE REGULATOR ON THE DECISIONS OF DUOPOLISTS

Michaela Chocholatá: ANALYSIS OF STOCK RETURNS WITH RESPECT TO COVID-19 PANDEMIC AND WAR IN UKRAINE

Juraj Pekár, Ivan Brezina, Marian Reiff: PORTFOLIO SELECTION MODEL USING CVaR AND MDD RISK MEASURES

10:00 – 10:30 Coffee break

10:30 – 12:00

Session **Chair:** Zuzana Čičková

Nenad Bjelić, Milorad Vidović, Branislava Ratković: SET-COVERING BASED FORMULATION OF THE DYNAMIC CONTAINER DRAYAGE PROBLEM WITH MODULAR CONCEPT AND LONGER COMBINATION VEHICLES

Milica Mitrović, Dražen Popović, Gordana Radivojević: APPLICATION OF PREDICTIVE ANALYSIS METHOD TO OPTIMIZE WAREHOUSE WORKFORCE IN A 3PL COMPANY USING WEKA SOFTWARE TOOLS

Natalie Pelloneová: MEASURING THE EFFICIENCY OF THE SLOVAK FIRST AND SECOND LEAGUE FOOTBALL CLUBS

Brian König: DOES THE EFFECT OF ACCESSION TO THE EUROPEAN UNION VARY ACROSS COUNTRIES? CROSS COUNTRY ANALYSIS OF SLOVAKIA AND THE CZECH REPUBLIC BASED ON THE STRUCTURAL GRAVITY MODEL

13:00 – 14:30

Closing Speech to Conference