

International Scientific Conference

CROSS-BORDER EXCHANGE OF EXPERIENCE IN PRODUCTION ENGINEERING USING PRINCIPLES OF MATHEMATICS

January 22-24, 2018 Horní Lomná, Czech Republic

Monday

10.00-11.30 registration

12.00 lunch

13.15-13.30 opening

13.30-16:00 talks in section and discussion

Piotr Kaleta: **Profitability of gas microcogeneration use in buildings with calculated energy performance**

Petr Kovář, Augustin Židek: **Dense distance magic graphs**

Waldemar Paszkowski, Andrzej Loska: **Modelling of noise threat assessment in small rooms**

Jiří Krček, Jaroslav Vlček: **Mathematical modelling of periodic diffraction problems in optics**

Radosław Wolniak: **The impact of the implementation of the new production line on the order processing process**

Pavel Jahoda: **Systems of independent sets and systems of conditionally independent sets**

Monika Jahodová: **Systems of independent sets - some results and conjectures**

Zygmunt Korban: **Assessment of the realization quality of initial trainings (general instruction) in a coal mine**

16.00 coffee break

16.30-17.30 plenary talk

Jindřich Bečvář: **Benefits of mathematics history in Europe to present natural science: part I**

18.00 dinner

20.00-23.00 party

Tuesday

8.00 breakfast

9.00-10.00 plenary talk

Jindřich Bečvář: **Benefits of mathematics history in Europe to present natural science: part II**

10.00 coffee break

10.30-12.00 talks in sections and discussion

Section I – first floor

Pavel Ludvík: **Teaching of calculus - hidden gems students had never spot**

Paulina Major: **Quality in a traditional approach to project management**

Dagmar Dlouhá, Radka Hamříková, Liliana Nábělková, Michal Vokurka: **Mathematics in application tasks**

Stanisław Kowalik: **Digital simulation of modulation 16-QAM**

Section II – second floor

Radek Kučera, Jan Pacholek: **Semi-smooth Newton method for solving the Stokes problem with the stick-slip boundary condition**

Radek Kučera, Kristina Motyčková: **The semi-smooth Newton method for solving the Stokes flow under the leak boundary condition**

Petr Beremlijski, Nikola Plívová: **On solution of contact shape optimization problem by proximal bundle method**

Ivona Tomečková, Karel Frydryšek, Zuzana Morávková: **Numerical approaches for beams on nonlinear foundation: part 1 (theory)**

12.00 lunch

16.00-18.00 poster section and discussion

Witold Bialy, Ewa W. Maruszewska, Sabina Kołodziej: **Product defectiveness analysis using methods and tools of quality engineering**

Karel Frydryšek, Ivona Tomečková, Zuzana Morávková: **Numerical approaches for beams on nonlinear foundation: part 2 (applications)**

Sara Gruszka, Mariusz Ligarski: **Customer satisfaction survey and a possibility of using QFD method for satisfaction improvement: the analysis of the case**

Patrycja Hąbek: **Quality management tools in process improvement**

Jolanta Ignac-Nowicka: **Identification of gas hazards in a industrial company with using chain of events analyzes**

Andrzej Loska, Waldemar Paszkowski: **The way of use scenario methods in maintenance management of selected network technical systems**

Katarzyna Midor: **Use of a defectoscope as a tool for eliminating the hundred-percent quality control in a steelworks**

Elżbieta Milewska: **Organization improvement using IT systems to support the handling of cash register service complaints**

Michał Molenda: **Improvement the process of painting car cockpits' elements**

Marcela Rabasová, Ondřej Pavlík: **ACE-R tests results after CAS**

Gabriela Necasová, Petr Veigend, Václav Šatek: **Modern Taylor series method in numerical integration: part 2**

Jacek Sitko, Krzysztof Michalski: **Selected quality problems of mechanized enclosures**

Bożena Skotnicka-Zasadzien: **Use of the 8D method for the identification of quality problems in the production process**

Dana Smetanová: **Hamiltonian system in dimension 4**

Monika Stępień, Anna Gembalska-Kwiecień: **Modeling of production processes: review article**

Aleksandra Sulik-Górecka: **The role of standard costing methods in an exemplary IT company**

Bartosz Szczęśniak: **Spreadsheet as a means to support nonconformity analysis – data integrity in the tool**

Zbyněk Urban, Jana Volná: **Globally variational forms on the Mobius strip: examples**

Jana Volná, Petr Volný: **Solids and surfaces of revolution in GeoGebra**

Tomasz Wałek: **Analysis of the possibility of gas-fueled micro-cogeneration application in single-family dwelling buildings in Poland**

Michał Zasadzien: **Analysis of the reliability of selected machines in a production enterprise: case study**

18:00 dinner

20.00-23.00 party

Wednesday

8.00 breakfast

9.00-10.00 plenary talk

Jindřich Bečvář: **Benefits of mathematics history in Europe to present natural science: part III**

10.00 coffee break

10.30-11.30 talks in sections and discussion

Section I – first floor

Jarmila Doležalová, Zdeněk Boháč, Pavel Kreml: **Is a large amount of study materials a benefit?**

Dagmar Dlouhá, Radka Hamříková, Liliana Nábělková, Michal Vokurka: **Student videos for students**

Radka Hamříková, Arnošt Žídek, Jan Kotůlek: **Common day in the Math Support Centre**

Section II – second floor

Břetislav Krček, Michaela Bobková: **View factors for the crucible furnace**

Ladislav Foltyn: **Interactive 3D graphics generated by asymptote software to support lessons of differential calculus of functions consisting of two and more variables**

Viktor Dubovský: **Circulant matrices of degree l^2**

11.30-12.00 closing

12.00 lunch