

18.09.2017

- 16.00 – 18.00 **Registration (lobby of *Leśna Radość*)**
 18.00 – 22.00 **Welcome barbecue**

19.09.2017

- 8.00 – 9.30 **Breakfast**
 9.30 – 9.45 **Conference opening address** – Andrzej Grzybowski

Session A

Chair: Zbigniew Domański, Andrzej Drzewiński

- 9.45 – 10.30 **Zhibing Li**: EDGE ELECTRONIC PROPERTIES OF NANO-MATERIALS BASED ON LARGE-SCALE FIRST-PRINCIPLE COMPUTATIONS (*invited lecture*)
 10.30 – 10.45 **William Steingartner, Valerie Novitzká**: LEARNING TOOLS IN COURSE ON SEMANTICS OF PROGRAMMING LANGUAGES
 10.45 – 11.00 **Mariusz Ciesielski**: ANALYTICAL AND NUMERICAL SOLUTIONS OF DIFFERENT TYPES OF EQUATIONS USED FOR MODELING HEAT CONDUCTION UNDER LASER PULSE HEATING
 11.00 – 11.15 **Dariusz Asendrych, Paweł Niegodajew**: MODELLING INTERFACIAL HEAT TRANSFER IN A 2-PHASE FLOW IN A PACKED BED
 11.15 – 11.45 **Coffee break**

Poster Session B

Chair: Stanisław Kukła, Antoni Pierzchalski

- 11.45 – 12.30 *Presentation of posters*
Lena Caban: THE EIGENFACES METHOD
Oliwia Fertacz, Agata Paluszewska: FUNCTIONS OF BOUNDED VARIATION AND THEIR PROPERTIES: PART I, PART II
Katarzyna Freus, Sebastian Freus: ALGORITHM OF REBUILDING A BOUNDARY OF DOMAIN DURING CREATION OF AN OPTIMAL SHAPE
Katarzyna Freus, Sebastian Freus: A DESIGN OF AN OPTIMAL SHAPE OF DOMAIN DESCRIBED BY NURBS CURVES USING THE TOPOLOGICAL DERIVATIVE AND BOUNDARY ELEMENT METHOD
Aneta Idziak-Jabłońska, Karolina Karczewska, Olga Kuberska: MODELING OF MECHANICAL PHENOMENA IN THE PLATINUM-CHROMIUM CORONARY STENTS
Anna Jurczyńska, Janusz Szmidla: AN INFLUENCE OF A ROD OF A VARIABLE CROSS-SECTION AS A PART OF GEOMETRICALLY NONLINEAR COLUMN SUBJECTED TO THE SPECIFIC LOAD ON A VALUE OF BIFURCATION LOAD
Bartłomiej Macherzyński, Maria Włodarczyk-Makula, Ewa Ładyga, Władysław Pękała: COMPARISON OF PARAMETERS CO-FERMENTATION PROCESS OF MUNICIPAL SEWAGE SLUDGE WITH EXCESS SEWAGE SLUDGE FROM TREATED COKING WASTEWATER
Magdalena Scherer: MULTI-LAYER NEURAL NETWORKS FOR SALES FORECASTING
Dorota Smorawa, Mariusz Kubanek: FEATURE EXTRACTION OF FOREARM-VEIN PATTERNS BASED ON REPEATED LINE TRACKING
Ewa Węgrzyn –Skrzypczak, Tomasz Skrzypczak: ANALYTICAL AND NUMERICAL SOLUTION OF THE HEAT CONDUCTION PROBLEM IN THE ROD

Paweł Zając, Oleg Tikhonenko: QUEUEING SYSTEMS WITH LIMITED BUFFER SPACE AND LIMITED QUEUEING TIME

Session C

Chair: Jan Čapek, Andrzej Grzybowski

12.30 – 13.00 Antoni Pierzchalski: DIFFERENTIAL OPERATORS: THE ELLIPTICITY AND ITS APPLICATIONS (*invited lecture*)

13.00 – 13.15 Piotr Puchała: ON A WEAK L^1 CONVERGENCE OF DENSITIES OF HOMOGENEOUS YOUNG MEASURES

13.15 – 13.30 Grzegorz Biernat: THE PROOF OF REMARK ON THE JACOBIAN CONJECTURE

14.00 – 15.00 Dinner

Session D

I have a problem ...

Chair: Zbigniew Domański

15.30 – 16.00 Presentation of unsolved problems and open questions

15.00 – 18.00 Discussion

18.00 – 18.30 Session Summary

19.00 – 24.00 Conference banquet

20.09.2017

8.00 – 9.30 Breakfast

Session E

Chair: Mariusz Kubanek, Zhibing Li

9.30 – 10.00 Jan Čapek, Martin Ibl: UNCERTAINLY MEASUREMENT (*invited lecture*)

10.00 – 10.15 Sabina Szymoniak, Olga Siedlecka-Lamch, Mirosław Kurkowski: SAT-BASED VERIFICATION OF NSPKT PROTOCOL INCLUDING DELAYS IN THE NETWORK

10.15 – 10.45 Mirosław Kurkowski: DIRECT SAT-BASED CRYPTANALYSIS OF SOME SYMMETRIC CIPHERS

10.45 – 11.15 Coffee break

Poster Session F

Chair: Mirosław Kurkowski, Jerzy Winczek

11.15 – 12.00 *Presentation of posters*

Kamila Bartłomiejczyk: MODELLING OF QUASI-COHERENT DISPLACEMENT IN CHAIN-LIKE BODIES' MOVEMENT

Janusz Bobulski: FACIAL ASYMMETRY IN 3D FACE RECOGNITION

Jolanta Borowska: TRIDIAGONAL TOEPLITZ SYSTEMS: APPROACH BASED ON LINEAR RECURRENCES VERSUS THOMAS METHOD

Andrzej Grosser, Grzegorz Michalski: PEGCPP: AN EFFICIENT IMPLEMENTATION OF PARSER GENERATOR IN C++

Grzegorz Michalski, Andrzej Grosser: IMPROVE COMPUTATIONAL EFFICIENCY WITH THE LATEST PROGRAMMING LANGUAGES

Stanisław Kukła, Urszula Siedlecka: MODELLING OF HEAT CONDUCTION IN A COMPOSITE SPHERE USING FRACTIONAL CALCULUS
Maria Lupa: SOLUTIONS OF SOME FUNCTIONAL EQUATIONS IN A CLASS OF GENERALIZED HOLDER FUNCTIONS
Lena Łacińska: LINEAR RECURRENCES ALGORITHM FOR SOLVING TRIDIAGONAL SYSTEMS WITH IMPLEMENTATION IN MAPLE
Yuriy Povstenko, Joanna Klekot: THE DIRICHLET PROBLEM FOR THE TIME-FRACTIONAL HEAT CONDUCTION EQUATION WITH HEAT ABSORPTION IN A MEDIUM WITH SPHERICAL CAVITY
Jowita Rychlewska: FREE VIBRATION OF EULER-BERNOULLI BEAMS MADE OF AXIALLY FUNCTIONALLY GRADED MATERIALS
Wioletta Tuzikiewicz: THE PROBLEM OF FDM EXPLICIT SCHEME STABILITY

Session G

Chair: Zbigniew Domański, Valerie Novitzká

- 12.00 – 12.30** **Andrzej Drzewiński:** QUANTUM ENTANGLEMENT IN AVIAN NAVIGATION
(invited lecture)
- 12.30 – 12.45** **Joanna Kulawik:** COMPARISON OF FREAK AND SURF ALGORITHMS FOR RECOGNIZING KEY ELEMENTS FOR TIME-VARYING IMAGES
- 12.45 – 13.00** **Katarzyna Gospodarek:** THE USE OF THE IMAGE PROCESSING AND ANALYSIS METHODS FOR OPTIMIZATION OF EQUATIONS OF MOTION FOR A QUADRUPEL ROBOT
- 13.00 – 13.15** **Tomasz Starczewski:** REMARKS ON THE IMPACT OF THE ADOPTED SCALE ON QUALITY OF PRIORITY ESTIMATION

13.15 – 14.15 **Dinner**

Session H

15.00 – 18.00

Research grants – how to apply successfully

Chair: Andrzej Grzybowski

20.00 – 21.00 **Supper**

21.09.2017

8.00 – 9.30 **Breakfast**

Session I

Chair: Grzegorz Biernat, William Steingartner

- 9.30 – 10.00** **Zbigniew Pozorski:** NUMERICAL ANALYSIS OF SANDWICH PANELS SUBJECTED TO TORSION *(invited lecture)*
- 10.15 – 10.30** **Sebastian Uzny, Łukasz Kutrowski:** EFFECT OF TORSIONAL RIGIDITY BETWEEN ELEMENTS ON FREE VIBRATIONS OF A TELESCOPIC HYDRAULIC CYLINDER SUBJECTED TO EULER'S LOAD
- 10.30 – 10.45** **Zbigniew Pozorski, Łukasz Janik:** NUMERICAL ANALYSIS OF SANDWICH PANEL SUBJECTED TO MULTIPLE STATIC CONCENTRATED LOADS
- 10.45 – 11.15** **Coffee break**

Poster Session J

Chair: Nadiya Gubareni, Maria Lupa

11.15 – 12.00 *Presentation of posters*

Marek Blasik: A REVIEW OF NUMERICAL METHODS FOR FRACTIONAL ORDINARY DIFFERENTIAL EQUATIONS

Tomasz Błaszczyk, Jarosław Siedlecki: APPROXIMATION OF FRACTIONAL INTEGRALS BASED ON B-SPLINE INTERPOLATION

Tomasz Błaszczyk, Jarosław Siedlecki: THE SIMPSON'S RULE FOR FRACTIONAL INTEGRAL OPERATORS

Anita Ciekot: THE POLYNOMIAL INTERPOLATION BY THE KRONECKER TENSOR PRODUCT

Tomasz Derda: MIXED-MODE LOAD TRANSFER IN THE FIBRE BUNDLE MODEL OF NANOPILLAR ARRAYS

Sylwia Lara – Dziembek: ALGEBRAIC DEPENDENCE OF POLYNOMIAL MAPPINGS HAVING TWO ZEROS AT INFINITY

Edyta Pawlak: THE JACOBIAN HAVING NON - GENERIC DEGREES

Krzysztof Sokół: AN INFLUENCE OF THE PARAMETERS OF LOADING HEADS ON THE LOADING CAPACITY OF A DAMAGED COLUMN SUBJECTED TO A SPECIFIC LOAD

Katarzyna Szota: EXTENDED THE TEMPERATURE ACTIVATION OF CARBON SATURATION STEEL PROCESS

Jerzy Winczek, Krzysztof Makles: INFLUENCE OF GROOVE WELD ON RESIDUAL STRESSES IN SINGLE-PASS BUTT WELDED JOINTS WITH THOROUGH PENETRATION

Session K

Chair: Tomasz Błaszczyk, Zbigniew Pozorski

12.00 – 12.30 **Valerie Novitzká, William Steingartner:** COALGEBRAS FOR MODELLING BEHAVIOUR (*invited lecture*)

12.30 – 12.45 **Nadiya Gubareni:** REPRESENTATIONS OF RIGHT HEREDITARY TENSOR ALGEBRAS OF BIMODULES

12.45 – 13.00 **Bohdan Kopytko, Roman Shevchuk:** ON TWO-PARAMETER FELLER SEMIGROUP WITH NONLOCAL CONDITION FOR ONE-DIMENSIONAL DIFFUSION PROCESS

13.00 – 13.15 **Conference closing** – Zbigniew Domański

13.30 – 14.30 **Dinner**