

# 15<sup>th</sup> Conference “Mathematics in Technical and Natural Sciences”

## Kościelisko, 17<sup>th</sup>-22<sup>nd</sup> September, 2017

# Agenda

### SUNDAY, 17<sup>TH</sup> SEPTEMBER, 2017

15.00	Departure of the conference bus (from Kraków, AGH-UST to Kościelisko)
18.30-19.30	Hot dinner
19.30-20.30	On-site registration (conference office)

### MONDAY, 18<sup>TH</sup> SEPTEMBER, 2017

8.00-9.00	Breakfast	
9.00-9.15	Opening of the Conference	
<b>Session I, Chairperson: A. Nikitin</b>		
9.20-10.00	A. Sergyeyev	<i>Recursion Operators for Multidimensional Integrable Systems</i>
10.05-10.45	I. Tsyfra	<i>Generalized Symmetry Method and Construction of Nonclassical (Non-Invariant) Solutions to Nonlinear Mathematical Physics Equations</i>
10.45-11.15	coffee break	
11.15-11.40	M. Pavlov	<i>Multi-Dimensional Conservation Laws and Integrable Systems</i>
11.45-12.10	O. Morozov, <u>A. Lelito</u>	<i>Nonlocal Symmetries of Plebanski's Second Heavenly Equation</i>
12.30-13.30	Lunch	
13.30-16.00	Free time	
<b>Special Session, Chairperson: V. Vladimirov</b>		
16.00-19.00	V. Vladimirov I. Tsyfra A. Nikitin I. Yehorchenko S. Spichak	<i>Special Session</i>
19.00	Banquet	

## TUESDAY, 19<sup>TH</sup> SEPTEMBER, 2017

8.00-9.00	Breakfast	
<b>Session II, Chairperson: O. Makarenko</b>		
9.00-9.40	<u>M. Danielewski</u> , L. Sapa	<i>Quaternionic Quantum Wave and Klein-Gordon Equations in Cauchy-Navier Elastic Solid</i>
9.45-10.25	<u>R. Kersner</u> , M. Klincsik	<i>The Gray-Scott System and Elliptic Functions</i>
10.25-10.55	coffee break	
10.55-11.35	<u>K. Tkacz-Śmiech</u> , B. Bożek, L. Sapa, M. Danielewski	<i>Interdiffusion and Plastic Deformation</i>
11.40-12.05	<u>M. Zajusz</u> , K. Tkacz-Śmiech, M. Danielewski	<i>Determination of Concentration Dependent Intrinsic Diffusion Coefficients in Multicomponent Systems</i>
12.10-12.35	<u>S. Skurativskiy</u> , I. Skurativska	<i>Existence of Propagation of Quasi-Harmonic Wave Packets in Nonlocal Media with Oscillating Inclusions</i>
12.40-13.05	A. Karczewska, <u>M. Szczeciński</u>	<i>Existence of Martingale Solution to Stochastic Extended Korteweg - de Vries Equation</i>
13.15-14.15	Lunch	
14.15-15.00	Free time	
<b>Session III, Chairperson: M. Pavlov</b>		
15.00-15.40	Z. Peradzyński	<i>Waves in Biological Systems</i>
15.45-16.25	A. Nikitin	<i>Supersymmetric and Superintegrable Systems with Position Dependent Mass</i>
16.25-16.55	coffee break	
16.55-17.35	S. Kužel	<i>Abstract Wave Equation</i>
17.40-18.05	U. Guenther	<i>PT Quantum Mechanics: Finite-Dimensional and Infinite-Dimensional Matrix Models and their Lie Group Structures</i>
18.10-18.35	<u>V. Rusov</u> , I. Sharph, V. Smolyar, T. Zelentsova, M. Beglaryan, M. Eingorn	<i>Axion Mechanism of Solar Luminosity Variations and Coronal Heating Problem Solution</i>
18.40-19.05	<u>V. Rusov</u> , V. Tarasov, S. Chernenchenko, A. Kakaev, S. Kosenko, T. Zelentsova, V. Urbanevich, V. Smolyar, V. Stremenovskiy, M. Eingorn	<i>Epithermal Traveling Wave Reactor: Problems and Perspectives</i>
19.15-20.15	Dinner	

## WEDNESDAY, 20<sup>TH</sup> SEPTEMBER, 2017

8.00-9.00	Breakfast	
9.00-19.00	Free time	
19.15-20.15	Hot dinner	

## THURSDAY, 21<sup>ST</sup> SEPTEMBER, 2017

8.00-9.00	Breakfast	
<b>Session IV, Chairperson: V. Vladimirov</b>		
9.00-9.40	A. Aksenov	<i>Symmetries of Fundamental Solutions in Continuum Mechanics</i>
9.45-10.10	S. Spichak, <u>V. Stogniy</u>	<i>Group Classification of a Class of Nonlinear Kolmogorov Equations and Exact Solutions</i>
10.10-10.40	coffee break	
10.40-11.05	S. Spichak	<i>Classification of Realizations of Lie Algebras of Vector Fields on a Circle</i>
11.10-11.35	<u>W. Rzeszut</u> , I. Tsyfra	<i>Lie-Bäcklund Symmetries of nonlinear ODEs and solutions of nonlinear evolution PDEs</i>
11.40-12.05	I. Yehorchenko	<i>General Solution for Coupled System of Eikonal Equations</i>
12.30-13.30	Lunch	
13.30-15.00	Free time	
<b>Session V, Chairperson: S. Kužel</b>		
15.00-15.40	Z. Jackiewicz	<i>Strong Stability Preserving General Linear Methods for Differential Systems</i>
15.45-16.25	<u>L. Sapa</u> , B. Bożek, M. Danielewski	<i>Weak Solutions to Interdiffusion Models with Vegard Rule</i>
16.25-16.55	coffee break	
16.55-17.35	<u>O. Makarenko</u> , L. Facchetti, D. Krushinski, V. Zavertanyy	<i>Cellular Automata: Models, Properties and Applications</i>
17.40-18.20	<u>V. Vladimirov</u> , C. Mączka, S. Skurativskiy	<i>Multi-Hump Patterns Describing Nerve Impulse Propagation</i>
18.25-18.50	M. Braś	<i>Implicit-Explicit General Linear Methods</i>
18.50-19.00	Closing of the Conference	
19.00-20.00	Dinner	
21.00-22.00	Slideshow of the conference photos	

## FRIDAY, 22<sup>ND</sup> SEPTEMBER, 2017

8.00-9.00	Breakfast
9.30	Departure of the conference bus to Kraków (AGH-UST)