

14th Conference “Mathematics in Technical and Natural Sciences”

Kościelisko, 18th-24th September, 2015

Agenda

FRIDAY, 18TH SEPTEMBER, 2015

16.00	Departure of the conference bus (from AGH-UST to Kościelisko)
18.30-19.30	Dinner
19.30-21.00	On-site registration (conference office)

SATURDAY, 19TH SEPTEMBER, 2015

8.00-9.00	Breakfast	
9.00-9.15	Opening of the Conference	
Session I, Chairperson: M. Marvan		
9.20-10.00	A. Nikitin	<i>Superintegrable and supersymmetric systems with position dependent mass</i>
10.05-10.45	I. Tsyfra	<i>On application of generalised symmetry method to some nonlinear mathematical physics equations</i>
10.50-11.10	coffee break	
11.10- 11.35	A. Lelito, O. Morozov	<i>Group-invariant solutions of Gibbons-Tsarev equation</i>
11.40-12.05	V. Fedorchuk, V. Fedorchuk	<i>On symmetry reduction and invariant solutions of some $P(1,4)$-invariant differential equations</i>
12.10-12.35	W. Rzeszut, I. Tsyfra	<i>Lie-Bäcklund symmetries of nonlinear ODEs and their application to nonlinear PDEs</i>
12.40-13.05	I. Yehorchenko	<i>Symmetry-induced generalisations of wave equations in higher dimensions</i>
13.15-14.15	Lunch	
14.15-15.30	Free time	
Session II, Chairperson: A. Nikitin		
15.30-16.10	M. Pavlov	<i>Two-dimensional dispersive reductions of integrable multi-dimensional quasilinear systems of first order</i>
16.15-16.40	M. Marvan	<i>An integrable class of Chebyshev nets</i>
16.45-17.05	coffee break	
17.05-17.45	R. Kersner	<i>Stability of periodic patterns and of constant solutions for a cross-diffusion system</i>
17.50-18.15	A. Gryboś	<i>Event-based signal processing and signal reconstruction with adaptive weights method</i>
18.30-19.30	Dinner	

SUNDAY, 20TH SEPTEMBER, 2015

8.00-9.00	Breakfast
9.30	Trip (bus departure at 9.30, comfortable sport shoes and warm, rainproof clothes highly recommended)
	Hot dinner (after the trip)

MONDAY, 21ST SEPTEMBER, 2015

8.00-8.45	Breakfast	
8.45	Bus trip to Siwarne	
Session III (Joint session with the KZM Conference in the Siwarne Hotel, Zakopane-Kościelisko)		
9.00-9.50	K. Rudnicki	
9.50-10.30	F. Bagarello	<i>Applications of quantum tools for macroscopic systems</i>
10.30-11.00	M. Elaeva, M. Zhukov, E. Shiryayeva	<i>The Goursat problem and hodograph method</i>
11.00-11.30	coffee break	
11.30-12.15	Z. Peradzyński	<i>Hydrodynamic type of systems—methods and results</i>
12.15-13.00	El-Haj Laamri, M. Pierre	<i>Global existence for reaction-diffusion systems with nonlinear diffusion and control of mass</i>
13.15-14.15	Lunch	
14.30	Bus trip to the Marymont Hotel	
14.45-15.30	free time	
Session IV, Chairperson: O. Makarenko		
15.30-16.10	M. Danielewski, B. Bożek, K. Tkacz-Śmiech	<i>Symmetrical Ion channel: from NPP to Darken-Nernst-Planck-Poisson model</i>
16.15-16.40	H. Leszczyński, E. Puźniakowska-Gałuch	<i>Semidiscretization methods for molecular ion channels</i>
16.45-17.10	K. Tkacz-Śmiech, B. Bożek, M. Danielewski, M. Zajusz	<i>Darken interdiffusion in Onsager matrix representation</i>
17.15-17.35	coffee break	
17.35-18.00	M. Zajusz, B. Bożek, K. Tkacz-Śmiech, K. Berent, M. Danielewski	<i>Diffusion in multiphase systems: A comparison of mathematical models with experimental data</i>
18.05-18.30	L. Sapa	<i>Global existence and uniqueness of a classical solution to some differential evolution system</i>
18.35-19.00	J. Goncerzewicz	<i>Porous media equation in tubular domains: large time behavior of solutions</i>
19.00-20.00	Dinner	

TUESDAY, 22ND SEPTEMBER, 2015

8.00-9.00	Breakfast	
Session V, Chairperson: R. Kersner		
9.00-9.40	V. Vladimirov	<i>On the dynamics of one-dimensional pre-stressed lattice and its continual analog</i>
9.45-10.10	S. Skurativskiy, I. Skurativska	<i>Localized wave structures in media with oscillating inclusions</i>
10.15-10.40	E. Kutafina, P. De Maesschalck, N. Popovic	<i>Complex periodic oscillation patterns in a three time scale model</i>
10.45-11.05	coffee break	
11.05-11.45	O. Makarenko	<i>Anticipatory (advanced) systems: the models, sources of research problems, and objects of control</i>
11.50-12.15	P. Oprocha	<i>Attractors, inverse limits, and indecomposable continua</i>
12.20-13.00	T. Tyranowski	<i>Variational principles for stochastic soliton dynamics</i>
13.15-14.15	Lunch	
14.15-15.30	free time	
Session VI, Chairperson: P. Oprocha		
15.30-19.00	Special session	
19.00	Banquet	

WEDNESDAY, 23RD SEPTEMBER, 2015

8.00-9.00	Breakfast	
Session VII, Chairperson: F. Bagarello		
9.00-9.40	S. Kužel	<i>Mathematical aspects of PT-symmetric quantum mechanics</i>
9.45-10.25	U. Guenther	<i>Exceptional points, spectral singularities, vector field singularities, and discriminant varieties</i>
10.30-10.50	coffee break	
10.50-11.15	A. Pudelko	<i>Two-dimensional fractal Burgers equation with step-like initial conditions</i>
11.20-11.45	J.B. Stochel, J. Stochel	<i>Composition operators on Hilbert spaces of entire functions with analytic symbols</i>
11.50-12.15	W. Majdak, J.B. Stochel	<i>Weighted shifts on directed semi-trees: an application to creation operators on Segal-Bargmann spaces</i>
12.20-12.45	A. Arnaudon	<i>On a Lagrangian reduction and a deformation of integrable systems</i>
13.00-14.00	Lunch	
14.00-15.30	free time	
Session VIII, Chairperson: S. Kužel		
15.30-15.55	H. A. Peker	<i>A numerical approach for a free convection boundary layer flow</i>
16.00-16.25	P. Morkisz, L. Plaskota	<i>Approximation of piecewise smooth functions from inexact information</i>
16.30-16.55	B. Peker	<i>Special sequence solutions of some Diophantine equations</i>
17.00-17.25	C. Kurujiyiwami, P. Basarab-Horwath, R. O. Popovych	<i>Group classification of linear Schroedinger equations with algebraic method</i>
17.30-17.45	Closing of the Conference	
18.00-19.00	Dinner	
19.00-20.00	Slideshow of the conference photos	
20.00-22.00	Jazz concert	

THURSDAY, 24TH SEPTEMBER, 2015

8.00-9.00	Breakfast
10.00	Departure of the conference bus to Cracow (AGH-UST)