

Program RRNR 2018

Thursday, September 20, 2018

	9:00-9:45	<i>Conference Opening and Plenary Lecture</i>				Room 12 B
		Piotr Ostalczyk				
		<i>Short historical review of Fractional Calculus Research in Poland</i>				
Plenary Lecture	9:45-10:45	Chairman: Jerzy Klamka	Plenary Lecture:			Room 12 B
			Rudolf Hilfer			
			<i>Anomalous Bochner-Levy-Riesz Diffusion</i>			
	10:45-11:15	<i>Anniversary Coffee Break</i>				
Plenary Lecture	11:15-12:15	Chairman: Tadeusz Kaczorek	Plenary Lecture:			Room 12 B
			Małgorzata Klimek			
			<i>Homogenous boundary conditions and the spectral properties of fractional eigenvalue problems</i>			
Sessions	12:15-12:35	Dumitru Baleanu , Amin Jajarmix, Dorota Mozyrska <i>On the new mathematical model of tumor-immune surveillance with non-singular fractional operator</i>	Chairman: Adam Czornik	12:15-12:35	Elpida Kaskouta , Themis Kamlaris, Roman Sotner, Jan Jerabek, Costas Psychalinos <i>Generalized Fractional-Order Filter Designs</i>	Chairman: Jaroslav Koton
	12:35-12:55	Rafał Stanisławski , Marek Rydel, Krzysztof J. Latawiec <i>Frequency weighted model order reduction of linear discrete-time fractional-order systems</i>	Room 12 B	12:35-12:55	Piotr Ostalczyk <i>On a supercapacitor dynamics mathematical optimal modelling due to different measures</i>	Room 6 B
	12:55-13:15	Riccardo Caponetto <i>State of art on the realization and application of FOCs</i>		12:55-13:15	Jerzy Baranowski <i>Impulse responses of fractional systems in L2-spaces and their approximations</i>	
	13:15-14:45	<i>Lunch break</i>				
Sessions	14:45-15:05	Paolo Lino, Guido Maione <i>Non-integer order control of PMSM drives with two nested feedback loops</i>	Chairman: Ricardo Caponetto	14:45-15:05	Józef Wióra , Alicja Wióra <i>Problems related to the propagation of measurement uncertainties through a closed-loop fractional-order control system</i>	Chairman: Łukasz Sajewski
	15:05-15:25	Bohdan Datsko <i>Complex dynamics in basic two-component auto-oscillation and auto-wave systems with fractional derivatives of different orders</i>	Room 12 B	15:05-15:25	Piotr Oziabło <i>Numerical simulations for fitting parameters of fractional-, variable-order equations - comparison of methods</i>	Room 6 B
	15:25-15:45	Michał Macias , Dominik Sierociuk, Wiktor Malesza <i>Realization of the fractional variable-order model with symmetric property</i>		15:25-15:45	Michał Macias <i>The particular types of fractional variable-order symmetric operators</i>	
	15:45-16:05	Stavroula Kapoulea , Costas Psychalinos, and Ahmed Elwakil <i>Reduced Spread Fractional-Order Differentiator and Integrator Designs</i>		15:45-16:05	Marcin Sowa <i>Subval solver in Octave and Matlab for fractional, nonlinear problems</i>	
	16:05-16:25	Wojciech Mitkowski, Krzysztof Oprzędkiewicz <i>Exponential stability for a class of fractional order dynamic systems</i>		16:05-16:25	Wojciech Sumelka , Krzysztof Szajek <i>On equivalence of discrete and fractional mechanical models</i>	
	16:25-16:50	<i>Coffee break and Poster Session</i>				
Sessions	16:50-17:10	Celeleddin Yeroglu , Aleksei Tepljakov, Eduard Petlenkov, Baris Baykant Alagoz <i>Model reference adaptive control of fractional-order PID control systems</i>	Chairman: Krzysztof Oprzędkiewicz	16:50-17:10	Harold Esmonde <i>Phase change of curing adhesive</i>	Chairman: Dumitru Baleanu
	17:10-17:30	Costas Psychalinos , Ahmed Elwakil, and Georgia Tsirimokou <i>Techniques for the Cole-Cole Bio-Impedance Parameters Extraction</i>	Room 12 B	17:10-17:30	Michał Ostaszewski , Andrzej Koszewnik, Ewa Pawłuszewicz <i>Design and hardware implementation of the control systems based on the stability boundary locus of fractional order derivative/integrator operators</i>	Room 6 B
	17:30-17:50	Aslihan Kartci, Agamyrat Agambayev, Norbert Herencsar , and Khaled N. Salama <i>Analysis and verification of identical- and arbitrary-order mixed-matrix PoC network</i>		17:30-17:50	Krzysztof Rogowski <i>On the solutions to dynamic systems with Caputo-Fabrizio derivative</i>	
	17:50-18:10	Defterli Ozlem <i>About some new developments in fractional variational principals</i>		17:50-18:10	Nuno Bastos <i>Variational problems involving the Caputo-Fabrizio derivative</i>	
	18:10-18:30	Adam Czornik , Michał Niezabitowski <i>Separation results for discrete-time linear fractional systems</i>		18:10-18:30	Aleksandra Kawala-Janik <i>Advantages and disadvantages of fractional filtering in analysis of biomedical data</i>	
	18:30-18:50	Klaudia Dziedzic , Krzysztof Oprzędkiewicz <i>A hybrid PSO-simplex identification of the discrete fractional order transfer function</i>		18:30-18:50	Łukasz Majka <i>Fractional calculus in modelling Power System elements</i>	
	19:00	<i>Conference Dinner</i>				

Friday, September 21, 2018

Plenary Lecture	9:00-10:00	Chairman: Piotr Ostalczyk	Plenary Lecture: Tadeusz Kaczorek <i>Positivity and stability of standard and descriptor fractional linear systems with interval state matrices</i>			Room 12 B
	10:00-10:20	Coffee break and Poster Session				
Sessions	10:20-10:40	Stefan Domek <i>Switched fractional state-space predictive control methods for non-linear fractional systems</i>	Chairman: Jerzy Baranowski Room 12 B	10:20-10:40	M. Lusa Morgado, Luis F. Morgado <i>Modelling transient currents in disordered materials with time-fractional advection-diffusion equations</i>	Chairman: Małgorzata Klimek Room 6 B
	10:40-11:00	Andrzej Ruszewski <i>Stability analysis for a class of fractional discrete-time linear scalar systems with multiple delays in state</i>		10:40-11:00	Adam Kubica , Katarzyna Ryszewska <i>Fractional diffusion equations</i>	
	11:00-11:20	Andrej Novak , Antun Lovro Brkic <i>A fast matrix decomposition algorithm for fractional image inpainting problem</i>		11:00-11:20	Adam Kubica, Katarzyna Ryszewska <i>Decay of weak solutions to fractional diffusion equations</i>	
	11:20-11:40	Panagiots Bertias , Costas Psychalinos, and Ahmed Elwakil <i>Simple Realizations of Tunable Fractional-Order Differentiators and Integrators</i>		11:20-11:40	Ricardo Almeida, Ewa Girejko , Agnieszka B. Malinowska, Snezhana Hristova <i>Leader-following consensus for Caputo fractional multi-agent systems</i>	
	11:40-12:00	Nenad Grahovac , Miodrag Zigic <i>Dynamics of adjacent structures for different earthquake excitation models</i>		11:40-12:00	Agnieszka B. Malinowska <i>On systems of fractional differential equations with a general derivative</i>	
	12:00-12:20	Galyna Romashchenko <i>On similarity to the operator of fractional integration in the Sobolev spaces</i>		12:00-12:20	Magda Rebelo , Luisa Morgado <i>Approximation of pricing double barrier options based on Black-Scholes equation with distributed order in time</i>	
	12:20-14:00	Lunch break				
Sessions	14:00-14:20	Rafał Stanisławski, Kamil Koziol <i>Selected implementation issues in computation of the Grunwald-Letnikov fractional-order difference by means of embedded system</i>	Chairman: Nuno Bastos Room 12 B	14:00-14:20	Michał Wiraszka , Piotr Sakrajda <i>Switching Energy Loss in Fractional-Order Time-Varying Heat Diffusion Model</i>	Chairman: Bohdan Datsko Room 6 B
	14:20-14:40	Yuriy Povstenko , Tamara Kyrylych <i>Time-Fractional Heat Conduction with Heat Absorption in a Half-Line Domain due to Boundary Value of the Heat Flux Varying Harmonically in Time</i>		14:20-14:40	Ivan Matychyn, Viktoriiia Onyshchenko <i>Computation of Matrix Mittag-Leffler Function</i>	
	14:40-15:00	Celaleddin Yeroglu , Aleksei Tepljakov, Eduard Petlenkov and Baris Baykant Alagoz <i>Model reference adaptive control of fractional-order PID control systems</i>		14:40-15:00	Zbigniew Zaczekiewicz <i>State Observer for Fractional Differential-Algebraic Systems with Delay</i>	
	15:00-15:20	Ewa Pawłuszewicz <i>Different approaches to the observability of fractional order polynomial systems</i>		15:00-15:20	Jan Mucha , Marcos Faundez-Zanuy, Jiri Mekyska <i>Fractional methods for feature extraction in online handwritten signals</i>	
	15:20	Coffee Break and Closing Ceremony				

Posters

Authors	Title
Artur Babiarsz	<i>Comparative analysis of fractional and integer model of robot</i>
Ewa Girejko, Dorota Mozyrska, Małgorzata Wyrwas	<i>Fractional Cucker-Smale type models with Caputo variable-order operator</i>
Agnieszka Jakubowska-Ciszek, Janusz Walczak	<i>Frequency method for determining the equivalent parameters of fractional-order elements $L\beta C\alpha$</i>
Wiktor Jakowluk	<i>Design of an optimal input signal for parameter estimation of linear fractional-order systems</i>
Piotr Jurgaś, Michał Niezabitowski	<i>Separation results for continuous-time fractional linear systems</i>
Rafał Kociszewski	<i>Analysis of controllability problem of composite fractional discrete-time systems with delays</i>
Konrad Markowski	<i>to be announced later</i>
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Dorota Mozyrska, Małgorzata Wyrwas	<i>Stability of linear discrete-time systems with the Caputo fractional-, variable-order h-difference operator of convolution type</i>
Adam Trojnar	<i>Simulation of the fuel gas valve fractional-order PID controller in closed loop system</i>