

Program 8TH PODLASIE CONFERENCE ON MATHEMATICS, 5-8.12.2019

CNK, Zwierzyniecka 16, Library/Biblioteka

Thursday, December 5, 2019

15:30-19:00	<p style="text-align: center;"><i>Registration</i></p> <p style="text-align: center;"><i>Coffee and sweets</i></p>	CNK, GROUND FLOOR, AT THE DESK
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Friday, December 6, 2019

Plenary lectures	9:00-9:45	Chairman: Ryszard Mazurek	Plenary lecture:					Room Aula CNK	
			Jenő Szigeti <i>A symmetric version of classical determinant theory for matrices over noncommutative rings</i>						
Plenary lectures	9:45-10:30	Chairman: Tatiana Odziejewicz	Plenary lecture:					Room Aula CNK	
			Tadeusz Kaczorek <i>Angles between matrices and polynomials in analysis of linear systems</i>						
10:30-11:00 <i>Coffee break</i>									
Sessions	11:00-11:30	Małgorzata Klimek REGULAR PRABHAKAR-STURM-LIOUVILLE PROBLEM WITH HOMOGENEOUS ROBIN BOUNDARY CONDITIONS	Fractional Differential Equations and its Applications Chairman: Agnieszka B. Malinowska	11:00-11:20	Jan Krempa ON NILPOTENT FREE ALGEBRAS	Algebra Chairman: Jenő Szigeti	11:00-11:20	Aldo Andrés Alvarez López LINGUISTIC HACKATHON: ACCELERATING BILINGUAL DATA GENERATION THROUGH COLLABORATION FOR GUARANI-SPANISH LANGUAGE PAIR	Mathematics in Data Science Chairman: Marek Drużdżel
	11:30-11:45	Piotr Ostalczyk ON A CORRELATION OF THE FRACTIONAL SYSTEM FREQUENCY CHARACTERISTIC WITH THE TRANSIENT RESPONSE		11:20-11:40	Joachim Jelisiejew PATHOLOGIES IN CLASSIFICATION OF FINITE ALGEBRAS		11:20-11:40	Piotr Tynecki EFFICIENT DNA WORD EMBEDDING WITH PYTHON	
	11:45-12:00	Mariusz Matusiak FAST EVALUATION OF GRUNWALD-LETNIKOV DIFFERENTIATION ALGORITHM BASED ON FFT CONVOLUTION OPERATIONS	Room 32, 2nd floor	11:45-12:05	Piotr Grzeszczuk ON SKEW EXTENSIONS OF RINGS	Room Aula CNK	11:40-12:00	Mateusz Rogowski HANDLING IMBALANCED DATA WITH BAYESIAN NETWORKS	Room 27, 2nd floor
	12:00-12:15	Amel Berhail EXISTENCE AND UNIQUENESS OF NONLINEAR HADAMARD LANGEVIN EQUATION WITH INTEGRAL BOUNDARY CONDITIONS		12:05-12:25	Michał Ziembowski ON SOME PROBLEMS RELATED TO ANNIHILATORS OF RINGS		12:10-12:30	Lighting talks (posters)	
	12:15-12:30	Piotr Oziabło IMPLEMENTATION AND TUNING ALGORITHM OF FRACTIONAL-, VARIABLE-ORDER PID CONTROLLER							
12:30-13:15 <i>Lunch break</i>									
Plenary lectures	13:15-13:50	Chairman: Małgorzata Hryniewicka	Plenary lecture:					Room Aula CNK	
			Janez Šter <i>Nilpotent elements and nilpotent polynomials in noncommutative ring theory</i>						
	13:50-14:20	Chairman: Agnieszka Oniśko-Drużdżel	Plenary lecture:					Room Aula CNK	
		Adam Zagórecki <i>Selected theoretical challenges in data science</i>							
14:20-14:50	Chairman: Agnieszka Oniśko-Drużdżel	Plenary lecture:					Room Aula CNK		
		Mariusz Ferenc <i>The Prince or the Pauper: does still mathematics have royal privileges in data science?</i>							

	14:50-15:20	<i>Coffee break and poster session</i>							
Sessions	15:20-15:40	Alina Dobrogowska CLASSES OF SECOND ORDER DIFFERENCE EQUATIONS SOLVABLE BY FACTORIZATION METHOD	Dynamical and Control Systems Chairman: Ashutosh Simha Room 32, 2nd floor	15:20-15:40	Piotr Jędrzejewicz HOW SQUARE-FREE FACTORIALITY EXTENDS ATOMICITY?	Algebra Chairman: Janez Šter Room Aula CNK	15:20-15:40	Agnieszka Dardzińska SELECTED DATA MINING METHODS SUPPORTING DIAGNOSIS OF STROKE	Mathematics in Data Science Chairman: Mariusz Ferenc Room 27, 2nd floor
	15:40-16:00	Małgorzata Wyrwas IRREDUCIBILITY OF INPUT-OUTPUT EQUATIONS FOR TIME-DELAY SYSTEMS		15:40-15:55	Karol Pryszczepko THE CLASSIFICATION OF FULLY FILIAL TORSION-FREE RINGS		15:40-16:00	Kamil Kozłowski PREDICTING READMISSION RISK FOR PATIENT SELECTED DIAGNOSIS RELATED GROUPS	
	16:00-16:20	Łukasz Rzepnicki POLYNOMIAL STABILITY AND IRRATIONALITY MEASURE		15:55-16:10	Ryszard R. Andruszkiewicz A CLASSIFICATION OF SEMI-PRIME FULLY FILIAL RINGS		16:00-16:20	Wojciech Łaguna CARDIOVASCULAR RISK SCORES: STUDY OF MEDICAL DATA FROM SCREENING PROGRAMS EuroAspire V" AND "BIAŁYSTOK PLUS"	
	16:20-16:40	Hadjila Tabti STOCHASTIC APPROXIMATION AND SIMULATION THROUGH A SINGLE-FUNCTIONAL INDEX		16:10-16:30	Dzmitry Marchanka GRAPHS AND ALGEBRAIC STRUCTURES		16:20-16:40	Anna Gomolińska MATHEMATICAL FOUNDATIONS OF ROUGH SET DATA ANALYSIS	
				16:30-16:45	Marek Kępczyk ON THE FIELDS WHICH ARE FINITE SUMS OF PROPER SUBFIELDS				
	17:00-...	<i>Walking night tour in Białystok city centre</i>							

Saturday, December 7, 2019

Plenary lectures	8:30-9:15	Chairman: Tatiana Odziejewicz	Plenary lecture: Ricardo Almeida <i>Fractional differential equations: existence results and some applications</i>					Room Aula CNK
	9:15-10:00	Chairman: Rajmund Stasiewicz	Plenary lecture: Kamila Łyczek <i>Mathematical circus</i>					Room Aula CNK
	10:00-10:30	100-years Anniversary of Polish Mathematical Society						
	10:30-11:00	<i>Coffee Break</i>						
Sessions	11:00-11:30	Bohdan Datsko DIFFERENT SCENARIOS FOR PATTERN FORMATION IN INCOMMENSURATE FRACTIONAL REACTION-DIFFUSION SYSTEMS CLOSE TO BIFURCATION POINT FRACTIONAL DERIVATIVE	Fractional Differential Equations and its Applications Chairman: Małgorzata Klimek Room 27, 2nd floor	11:00-11:20	Czesław Bagiński COMBINATORIAL PROPERTIES OF GENERIC CAYLEY GRAPHS VERSUS ALGEBRAIC PROPERTIES OF GROUPS	Algebra Chairman: Piotr Jędrzejewicz Room 32, 2nd floor	11:00-12:30	Mathematics of Borderlands- the session of popularization of mathematics/ Matematyka Pogranicza, Aula CNK
	11:30-11:45	Nuno R.O. Bastos NUMERICAL STUDY FOR A FRACTIONAL POPULATIONS GROWTH MODEL OF A VARIABLE-ORDER FRACTIONAL DERIVATIVE		11:20-11:40	Izabela A. Malinowska FINITE GROUPS WITH FEW NORMALIZERS			
	11:45-12:00	Nora Tabouche STUDY OF HADAMARD FRACTIONAL DIFFERENTIAL EQUATIONSON AN INFINITE INTERVAL WITH INTEGRAL BOUNDARY VALUE CONDITIONS		11:45-12:05	Agnieszka Stocka SETS OF PRIME POWER ORDER GENERATORS OF FINITE GROUPS			
	12:00- 12:15	Klaudia Dziedzic THE EASY ADJUSTABLE DIGITAL FOPID CONTROLLER		12:05-12:25	Mateusz Woronowicz ON FEIGELSTOCK'S CONJECTURE ON THE EQUIVALENCE OF THE NOTIONS OF NIL AND ASSOCIATIVE NIL GROUPS IN THE CONTEXT OF ADDITIVE GROUPS OF RINGS OF FINITE RANK			
	12:15-12:30	Barbara Łupińska THE LYAPUNOV-TYPE INEQUALITY WITH THE KATUGAMPOLA FRACTIONAL DERIVATIVE						
	12:30-13:15	<i>Lunch break</i>						

Sessions	13:15-13:35	Małgorzata Jastrzębska SOME LATTICES RELATED TO RINGS	Algebra	Chairman: Czesław Bagiński	Room 32, 2nd floor	13:15-15:05	Mathematics of Borderlands- the session of popularization of mathematics/ Matematyka Pogranicza
	13:35-13:55	Bernard Rybołowicz ON ALGEBRAIC STRUCTURE OF A CONGRUENCE EQUIVALENCE CLASS IN A RING					
	13:55-14:15	Maciej Zakarczemny ON THE ZERO-SUM CONSTANT, THE DAVENPORT CONSTANT AND THEIR ANALOGUES					
	14:15-14:35	Larysa Marchanka SOME IDEAS ABOUT CONNECTED GRAPHS ISOMORPHISM					
	14:35-14:50	Małgorzata E. Hryniewicka ON SOME GENERALIZATIONS OF THE REVERSIBILITY IN NONUNITAL RINGS					
	14:50-15:05	Ryszard Mazurek NIL-SEMICOMMUTATIVE RINGS					
	15:05 -15:25	<i>Coffee break and poster session</i>					
Session	15:25-16:45	Mathematics of Borderlands- the session of popularization of mathematics/ Matematyka Pogranicza					
	16:45-17:00	<i>Coffee break</i>					
Session	17:00-17:45	Mathematics of Borderlands- the session of popularization of mathematics/ Matematyka Pogranicza					
	18:30-20:30	<i>The concert and dinner</i>					

Sunday, December 8, 2019

Plenary Lecture	9:15-10:00	Chairman: Zbigniew Bartosiewicz	Plenary lecture: Ashutosh Simha <i>Riemannian geometric methods for agile control of mechanical systems</i>	Room Aula CNK	
	10:00-10:20	<i>Coffee break</i>			
Session	10:20-10:40	Antoni Pierzchalski THE SYMMETRIC DERIVATIVE AND ITS APPLICATIONS		Dynamical and Control Systems	
	10:40-11:00	Natália Martins A NON-STANDARD CLASS OF VARIATIONAL PROBLEMS OF HERGLOTZ TYPE			Chairman: Anna Poskrobko
	11:00-11:20	Ashutosh Simha A RIEMANNIAN GEOMETRIC FRAMEWORK FOR GLOBAL OUTPUT TRACKING OF NONHOLONOMIC SYSTEMS			Room Aula CNK
	11:20-11:40	Zbigniew Bartosiewicz INVARIANCE UNDER DISCRETIZATION FOR POSITIVE SYSTEMS			
	11:40-12:00	Robert Jankowski EXISTENCE OF THE ASYMPTOTICALLY PERIODIC SOLUTION OF SYSTEM OF NONLINEAR NEUTRAL DIFFERENCE EQUATIONS			
	12:00-....	<i>Lunch break</i>			

Posters Ground floor, main hall

Authors	Title
Bahia BARACHE*, Abdelnasser DAHMANI	<i>EXPONENTIAL INEQUALITIES FOR MANN'S STOCHASTIC ALGORITHM WITH QUASI- ASSOCIATED ERRORS</i>
Radosław Borodziuk and Magdalena Topczewska	<i>MACHINE LEARNING APPROACH IN PREDICTING INSULIN DOSAGE</i>
Antoni Leon Dawidowicz* and Anna Poskrobko	<i>ON CERTAIN MODIFICATION OF AGE-DEPENDENT PREDATOR-PREY MODEL</i>
Ewa Girejko* and Agnieszka B. Malinowska	<i>MULTI-AGENT SYSTEMS WITH CONSENSUS UNDER DOS ATTACK</i>
Davydkou Ihar	<i>STATISTICAL STUDY OF THE DEVELOPMENT OF SMALL AND MEDIUM-SIZED BUSINESSES IN THE COUNTRIES OF EUROPEAN UNION</i>
Volha Kuzmich	<i>COMPARATIVE ANALYSIS OF BROAD MONEY SUPPLY AND MACROECONOMIC GROWTH RATES IN BELARUS AND POLAND</i>
Kirill Lapin*, Yuliya Sinyugina	<i>WEB APPLICATION FOR VISUALIZING SPATIAL DATA</i>
Ricardo Almeida, Ewa Girejko, Snezhana Hristova, Agnieszka B. Malinowska*	<i>ON LEADER-FOLLOWING CONSENSUS IN OPINION FORMATION MODELS</i>
Larisa Marchanka* and Aksana Yakubovich	<i>OPEN MARKOV QUEUEING NETWORKS WITH NEGATIVE CUSTOMERS AND CONTROL QUEUES IN THE NODES</i>
Uladzislau Markevich	<i>APPLICATION DEVELOPMENT «RECOGNITION OF OBJECTS IN THE PHOTO» ON PROGRAMMING LANGUAGE PYTHON</i>
Dorota Mozyrska*, Małgorzata Wyrwas	<i>FRACTIONAL DERIVATIVES AND DIFFERENCES AND THEIR EIGENVALUE FUNCTIONS</i>
Marharyta Papkova	<i>MULTIDIMENSIONAL COMPARATIVE ANALYSIS OF BELARUS BANKS SAFE FUNCTIONING STANDARDS</i>
Anna Poskrobko* and Antoni Leon Dawidowicz	<i>ON CHAOS BEHAVIOUR OF NONLINEAR LASOTA EQUATION IN LEBESGUE SPACE</i>
Baya Takhedmit	<i>ANALYSIS OF THE M / G / 1 QUEUEING SYSTEM WITH BREAKDOWNS AND REPAIRS</i>
Anastasiya Volkava	<i>THE VARIABILITY OF EXCHANGE RATES CHANGE</i>