

Applied Topology in Bedlewo, 2013

Schedule of talks

21.07, Sunday

	Lecture Room C
14:15	RAFAŁ KOMENDARCZYK, <i>Knots and links in flows and fluids.</i>
16:15	PAVLE BLAGOJEVIC, <i>Using equivariant topology methods in combinatorial geometry.</i>
18:00	Dinner
20:00	LISBETH FAJSTRUP, <i>Concurrency and directed topology. Problems and methods.</i>

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Warsaw Center
of Mathematics
and Computer Science



22.07, Monday

Lecture Room C (chairmans – Michael Farber and Tadeusz Januszkiewicz)			
08:45	Official opening.		
09:00	SHMUEL WEINBERGER, <i>Quantitative problems in pure and applied topology.</i>		
10:00	DANIEL C. COHEN, <i>On the topology of matrix configuration spaces.</i>		
11:00	coffee break		
11:15	JAREK KEDRA, <i>On the L^2-geometry of volume preserving diffeomorphisms.</i>		
12:15	EVGENY SHCHEPIN, <i>A Persistent Morse Theory in the Plane.</i>		
13:15	lunch break		
	Lecture Room A (chairman – Ran Levi)		Lecture Room C (chairman – Pavle Blagojevic)
15:00	OMER BOBROWSKI, <i>The Topology of Noise.</i>		JESUS GONZALEZ, <i>Sequential motion planning of non-colliding particles in Euclidean spaces.</i>
15:45	VITALIY KURLIN, <i>Reconstructing persistent structures from noisy images.</i>		LUCILE VANDEMBROUCQ, <i>On Topological Complexity and related invariants.</i>
16:30	coffee break		
	Lecture Room A (chairman – Grzegorz Graff)	Lecture Room B (chairman – Mark Grant)	Lecture Room C (chairman – Jesus Gonzalez and Michael Robinson)
17:00	STEFANO MARO, <i>Periodic solutions with winding number N of a forced relativistic pendulum.</i>	DIRK SCHÜTZ, <i>Intersection Homology of Linkage spaces.</i>	KALLEL SADOK, <i>On the Topology of Diagonal Arrangements and their Complements.</i>
17:30	PIOTR BARTLOMIEJCZYK, <i>The exponential law for partial, local and proper maps and its application to homotopy theory.</i>	VIKTOR FROMM, <i>Morse Homotopy and Homological Conormal Field Theory.</i>	GRZEGORZ JABLONSKI, <i>Persistent homology of maps.</i>
18:30	Reception and welcome party.		

23.07, Tuesday

Lecture Room C (chairman – Rafael Ortega and Aleksy Tralle)			
09:00	MONICA NICOLAU, <i>Tackling the topology and geometry underlying big data.</i>		
10:00	DAI TAMAKI, <i>Some applications of cellular stratified spaces.</i>		
11:00	coffee break		
11:15	PARAMESWARAN SANKARAN, <i>Formality of Schubert varieties in classical complex flag manifolds.</i>		
12:15	J. J. SÁNCHEZ GABITES, <i>Cech cohomology of attractors of discrete dynamical systems.</i>		
13:15	lunch break		
	Lecture Room A (chairman – Peter Bubenik)		Lecture Room C (chairman – Shmuel Weinberger)
15:00	KRZYSZTOF ZIEMIANSKI, <i>Path spaces on skeleta of tori.</i>		SANG-EON HAN, <i>A new approach to the study of digital spaces derived from a Khalimsky topological structure.</i>
15:45	RADE T. ZIVALJEVIC, <i>Computational topology and effective obstruction theory.</i>		WASHINGTON MIO, <i>Multiscale Analysis of Data Through Tensor Fields Underlying Their Distribution.</i>
16:30	coffee break		
	Lecture Room A (chairman – Jesus Gonzalez)	Lecture Room B (chairman – Michael Robinson)	Lecture Room C (chairman – Rafal Komendarczyk)
17:00	HELLEN COLMAN, <i>Equivariant topological complexity.</i>	JOSE PEREA, <i>Persistent Homology of Time-Delay Embeddings.</i>	KARIM ALEXANDER ADIPRASITO, <i>Minimal CW models for complements of 2-arrangements.</i>
17:30	WOJCIECH LUBAWSKI, <i>A new approach to the equivariant topological complexity.</i>	JOSE ANTONIO VILCHES, <i>Optimality criteria for discrete Morse functions on 2-complexes and triangulated 3-manifolds.</i>	ISMAR VOLIC, <i>Conguration space integrals and the cohomology of knot and link spaces.</i>
18:00	ALEKSANDRA FRANC, <i>Some lower bounds for topological complexity.</i>	HAN WANG, <i>On the Space of Coverings.</i>	DUSKO JOJIC, <i>Shellability of complexes of directed trees.</i>

24.07, Wednesday

	Lecture Room C (chairman – Matthew Kahle)		
09:00	ROY MESHULAM, <i>Random Latin Squares and 2-Dimensional Expanders.</i>		
10:00	LISBETH FAJSTRUP, <i>Cut-off theorems in PV-models, a geometric approach.</i>		
11:00	coffee break		
	Lecture Room A (chairman – Roy Meshulam)	Lecture Room B (chairman – Aleksy Tralle)	Lecture Room C (chairman – Monica Nicolau)
11:20	MARK GRANT, <i>Topological complexity of braid groups.</i>	GIL CAVALCANTI, <i>Formality Beyond Kähler geometry.</i>	JAVIER ARSUAGA, <i>Using computational homology to analyze breast cancer genomic data.</i>
12:05	ARMINDO COSTA, <i>Geometry and topology of random 2-complexes.</i>		MATTHEW WRIGHT, <i>Hadwiger Integration and Applications.</i>
12:45	lunch and excursion		

25.07, Thursday

Lecture Room C (chairman – Francisco R. del Portal and Davide Ferrario)			
09:00	PAVLE BLAGOJEVIC, <i>On highly regular embeddings.</i>		
10:00	RAN LEVI, <i>The topology of neural systems.</i>		
11:00	coffee break		
11:15	ROMAN KARASEV, <i>An analogue of Gromov’s waist theorem for coloring the cube.</i>		
12:15	PETER BUBENIK, <i>Persistent homology of metric space valued functions.</i>		
13:15	lunch break		
	Lecture Room A (chairman – Dan Cohen)		Lecture Room C (chairman – Uli Wagner)
15:00	NICHOLAS SCOVILLE, <i>Discrete Lusternik–Schnirelmann category.</i>		VIN DE SILVA, <i>Persistent cohomology and the topological analysis of recurrent signals.</i>
15:45	PETAR PAVESIC, <i>Change-of-fibre for fibrewise-pointed spaces.</i>		MICHELE INTERMONT, <i>Some Results in Visualizing Data.</i>
16:30	coffee break		
	Lecture Room A (chairman – Parameswaran Sankaran)	Lecture Room B (chairman – Roman Karasev)	Lecture Room C (chairman – Lisbeth Fajstrup)
17:00	MARTIN PINSONNAULT, <i>Homotopy Type of Symplectomorphism Groups.</i>	SINISA VRECICA, <i>On equipartitions of measures.</i>	MICHAEL WERMAN, <i>Efficient Classification using the Euler Characteristic.</i>
17:30	LUIS UGARTE, <i>Strongly Gauduchon metrics and complex deformations.</i>	MIMI TSURUGA, <i>Constructing Complicated Spheres.</i>	SHIZUO KAJI, <i>An Application of Lie theory to Computer Graphics.</i>
18:00	STANISŁAW SPIEŻ, <i>Borsuk-Ulam type theorems and equilibria in a class of games.</i>	JOÃO PITA COSTA, <i>The Persistence Lattice.</i>	SANJEEVI KRISHNAN, <i>Higher dimensional flow-cut dualities.</i>

26.07, Friday

Lecture Room C (chairman – Waclaw Marzantowicz and Swiatoslaw Gal)			
09:00	MICHAEL ROBINSON, <i>Morphisms between logic circuits.</i>		
10:00	ULI WAGNER, <i>Algorithmic and Combinatorial Aspects of Embeddings.</i>		
11:00	coffee break		
11:15	FACUNDO MÉMOLI, <i>Curvature sets over Persistence Diagrams.</i>		
12:15	RAFAL KOMENDARCZYK, <i>Knot and link invariants for vector fields.</i>		
13:15	lunch break		
	Lecture Room A (chairman – Facundo Memoli)	Lecture Room C (chairman – Jarek Kedra)	
15:00	RAFAEL ORTEGA, <i>Some dynamical properties of analytic diffeomorphisms of the plane.</i>	ULRICH KOSCHORKE, <i>Nielsen coincidence numbers, Hopf invariants and spherical space forms.</i>	
15:45	HENRY ADAMS, <i>Evasion paths in mobile sensor networks.</i>	ANDRÁS SZÚCS, <i>Homologies are infinitely complex.</i>	
16:30	coffee break		
	Lecture Room A (chairman – Evgeny Shchepin)	Lecture Room B (chairman – Dai Tamaki)	Lecture Room C (chairman – Jaime Sanchez Gabites)
17:00	EDIVALDO L. DOS SANTOS, <i>Borsuk-Ulam theorems and their parametrized versions for spaces of type (a, b).</i>	YOUNGGI CHOI, <i>Module category weight of compact Lie groups.</i>	FRANK WEILANDT, <i>An algorithm for computing the Conley index of a Poincaré map.</i>
17:30	ALEXEY VOLOVIKOV, <i>On cohomological index of free G-spaces.</i>	DAISUKE KISHIMOTO, <i>Hom-complexes and hypergraph colorings.</i>	JACEK GULGOWSKI, <i>Path following algorithm based on the sign changes.</i>
18:00	MORITZ FIRSCHING, <i>Equivariant models for open manifolds with an action of a finite group.</i>	KOUYEMON IRIYE, <i>Wedge decomposition of polyhedral products.</i>	PETER FRANEK, <i>Robust satisfiability of systems of equations.</i>

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