

COLLOQUIUM ON COMBINATORICS — 23/24 NOVEMBER 2018
DISCRETE MATHEMATICS — PADERBORN UNIVERSITY

Thursday, 22 November 2018

18:00 *Get together and registration at Bobberts* (Neuer Platz 3, Downtown Paderborn)

Friday, 23 November 2018

08:30 *Registration*

09:00 - 09:05 *Opening*

09:05 - 10:00 **Bill Jackson (London)**

“Rigidity of graphs and frameworks”

10:00 - 10:30 *Coffee break*

10:30 - 12:05 **Parallel sessions**

12:05 - 13:15 *Lunch*

13:15 - 14:50 **Parallel sessions**

14:50 - 15:20 *Coffee break*

15:20 - 16:15 **Karen Meagher (Regina)**

“Erdős-Ko-Rado theorems for permutations”

16:15 - 16:25 *Short break*

16:25 - 17:20 **Dion Gijswijt (Delft)**

“Cap sets and new applications of the polynomial method”

19:00 *Dinner at Bobberts* (Neuer Platz 3, Downtown Paderborn)

Saturday, 24 November 2018

08:50 - 10:00 **Parallel sessions**

10:00 - 10:30 *Coffee break*

10:30 - 12:05 **Parallel sessions**

12:05 - 13:15 *Lunch*

13:15 - 14:10 **Bernd Sturmfels (Leipzig)**

“The geometry of SDP-exactness in quadratic optimization”

14:10 - 14:40 *Coffee break*

14:40 - 15:35 **Paul Seymour (Princeton)**

“Gyárfás-Sumner meets Erdős-Hajnal”

15:35 - 15:40 *Farewell*

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Detailed program on Friday morning

23 November 2018

Time	Section I	Section II	Section III	Section IV
	Room: A	Room: B	Room: C	Room: D
09:00 - 09:05	<i>Opening</i>			Room: E
09:05 - 10:00	Bill Jackson Rigidity of graphs and frameworks			Room: E
10:00 - 10:30	<i>Coffee break</i>			
10:30 - 10:50	H. Harborth 1 Numbers of crossings in drawings of the cycle graph	I. Beckenbach 2 The tight cut decomposition of matching covered hypergraphs	S. Li 3 Constructions of primitive formally dual pairs having subsets with unequal sizes	M.V. Sangaranar. 4 Partition functions for two-dimensional nearest neighbor Ising models and applications in chemistry
10:55 - 11:15	K. S. Lyngsie 5 A 3-decomposition theorem	M. Sonntag 6 Edge intersection hypergraphs	H. Zerdoum 7 Zero-sum problems in finite abelian groups	W. Hochstättler 8 The Varchenko determinant of an oriented matroid
11:20 - 11:40	C. T. Zamfirescu 9 Grinberg's criterion	S. Wiederrecht 10 On perfect matchings in uniform balanced hypergraphs	K. Tabak 11 Viergruppen as Hamiltonian graphs	S. Gharibian 12 On efficiently solvable cases of Quantum k-SAT
11:45 - 12:05	I. Schiermeyer 13 Gallai Ramsey numbers of complete graphs and odd cycles	M. Hiller 14 Gallai-Edmonds-decompositions for balanced hypergraphs	Y. Stanchescu 15 Additive combinatorics in ordered nilpotent groups	M. Hatzel 16 Perfect matching width, grids and directed cycles
12:05 - 13:15	<i>Lunch</i>			

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Detailed program on Friday afternoon

23 November 2018

Time	Section I Room: A	Section II Room: B	Section III Room: C	Section IV Room: D
13:15 - 13:35	J. P. Zerafa 17 An equivalent formulation of the Fan-Raspaud Conjecture and related problems	D. Frettlöh 18 Perfect colourings of regular graphs	F. Szöllősi 19 New constructions of few-distance sets	Schrezenmaier 20 Equiangular polygon contact representations
13:40 - 14:00	J. Goedgebeur 21 Generation of hypohamiltonian graphs	D. Offner 22 Polychromatic colorings on the hypercube	M. Ganzhinov 23 Largest sets of biangular lines in low-dimensional Euclidean spaces	M. Pankov 24 Zigzags in embedded graphs. Z -knotted triangulations of surfaces
14:05 - 14:25	M. Schubert 25 Flows on signed graphs without long barbells	R. Steiner 26 Metric colourings of graphs	A. A. Polujan 27 Homogeneous cubic bent functions: new from old	M. Scheucher 28 Arrangements of pseudocircles: On circularizability
14:30 - 14:50	D. Mattiolo 29 On the circular flow number of graphs	S. D. Andres 30 The orthogonal graph colouring game	L. Kölsch 31 Optimal implementations of matrix multiplication in finite fields	C. Kolb 32 Compact competitive polygonal routing: The case of pairwise intersecting convex hulls
14:50 - 15:20	<i>Coffee break</i>			
15:20 - 16:15	Karen Meagher Erdős-Ko-Rado theorems for permutations Room: E			
16:15 - 16:25	<i>Short break</i>			
16:25 - 17:20	Dion Gijswijt Cap sets and new applications of the polynomial method Room: E			

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Detailed program on Saturday

24 November 2018

Time	Section I Room: A	Section II Room: B	Section III Room: C	Section IV Room: D			
08:50 - 09:10	Van Cleemput 33 Shortness coefficient of cyclically 4-edge-connected cubic graphs	A. Klopp 34 Path-factors of edge-chromatic critical graphs	M. Kiermaier 35 On the lengths of divisible codes	Ch. Josten 36 Twin Partitions: trying to count every second real number			
09:15 - 09:35	I. Allie 37 Oddness to resistance ratios in cubic graphs	A. Lozano 38 Caterpillars are antimagic	C. Deppe 39 Coding and decoding algorithms for Q-ary error-correcting codes with feedback	M. Walter 40 Extended formulations for radial cones			
09:40 - 10:00	E. Dahlhaus 41 Even cycles of cubic planar graphs	T. Schweser 42 DP-colorings of hypergraphs	L. Nölke 43 Packing anchored rectangles with resource augmentation	H. Bergold 44 A combinatorial extension of the colorful carathéodory			
10:00 - 10:30	<i>Coffee break</i>						
10:30 - 10:50	O. Parczyk 45 Universality in randomly perturbed graphs	S. Mohr 46 Kempe chains and rooted minors	F. Ihringer 47 Regular intersecting families	J. Syrovátková 48 Finding automaton maximizing score in prisoner's dilemma tournament			
10:55 - 11:15	J. Alvarado 49 Constrained graphons of maximum entropy	A. Erey 50 Maximizing the number of colorings and independent sets	M. Kwiatkowski 51 The graphs of projective codes	Kantarci Oğuz 52 A connection between peak and descent polynomials			
11:20 - 11:40	T. Laihonen 53 About a conjecture on identification in Hamming graphs	J. Wiehe 54 Computing the NL-flow polynomial	Vlahović Kruc 55 Some new quasi-symmetric designs on 56 points	A. Haupt 56 Enumeration of S-omino towers			
11:45 - 12:05	J. Rollin 57 Induced arboricity	M. Alipour 58 Graph operations and neighborhood polynomials	L. A. Pham 59 Latin cubes with forbidden entries	R. Bachmann 60 Binomial transforms and zeta series			
12:05 - 13:15	<i>Lunch</i>						
13:15 - 14:10	Bernd Sturmfels	The geometry of SDP-exactness in quadratic optimization					
14:10 - 14:40	<i>Coffee break</i>						
14:40 - 15:35	Paul Seymour Gyárfás-Sumner meets Erdős-Hajnal Room: E						
15:35 - 15:40	<i>Farewell</i>						