Discrete Math Days 2022 (DMD 20/22)
Santander, 4–6 July 2022

List of accepted contributions

Contributed Talks

Contributions have been accepted for oral presentation as a 20-minute talk.

- Aida Abiad, Boris Brimkov, Sakander Hayat, **Antonina P. Khramova** and Jack H. Koolen.
  Extending a conjecture of Graham and Lovász on the distance characteristic polynomial

- Deniz Ağaoğlu Çağırıcı and **Onur Çağırıcı**.
  Unit disk visibility graphs

- José Aliste-Prieto, **Anna De Mier**, Rosa Orellana and José Zamora.
  Polynomials for marked graphs and the chromatic symmetric function

- **Alexander Allin** and Alberto Espuny Díaz.
  An analogue of Chvátal's Hamiltonicity theorem for randomly perturbed graphs

- Béla Bajnok and **Péter Pál Pach**.
  On sumsets of nonbases of maximum size

- Bojan Bašić and **Anna Slivková**.
  On the Heesch number in $\mathbb{E}^d$

- Bruno Benedetti and **Marta Pavelka**.
  2-LC triangulated manifolds are exponentially many

- Davide Bolognini, **Antonio Macchia**, Giancarlo Rinaldo and Francesco Strazzanti.
  Accessible set systems and a conjecture on Cohen-Macaulay binomial edge ideals

- Márton Borbényi, Panna Fekete, Aranka Hrušková and **Ander Lamaison**.
  Logarithmic convergence of projective planes

- Fábio Botler, Phablo F.S. Moura and **Tássio Naia**.
  Seymour's second neighborhood conjecture in arbitrary orientations of a random graph

- **Marie-Charlotte Brandenburg**, Christian Haase and Ngoc Mai Tran.
  Competitive equilibrium always exists for combinatorial auctions with graphical pricing schemes

- **Antonio Cañete**, Isabel Fernández and Alberto Márquez.
  Conway's fried potato problem: a (quadratic) algorithm leading to an optimal division for convex polygons

- Jordi Castellví, Marc Noy and **Clément Requilé**.
  Enumeration of chordal planar graphs and maps

- Gilad Chase, Neta Dafni, Yuval Filmus and **Nathan Lindzey**.
  Characterizing the Extremal Families in Erdős–Ko–Rado Theorems

- Giulia Codenotti, **Stephan Gardoll** and Thorsten Theobald.
  Combinatorics and preservation of conically stable polynomials

- **Giulia Codenotti**, Thomas Hall and Johannes Hofscheier.
  Generalised flatness constants: a framework applied in dimension 2

- **Luis Crespo Ruiz** and Francisco Santos.
  Multitriangulations and tropical Pfaffians

- Anuj Dawar and **Danny Vagnozzi**.
  A parallel between the descriptive complexities of finite groups and Latin square graphs

- Josep Díaz, **Öznur Yasar Diner**, Maria Serna and Oriol Serra.
  On Vertex Bisection Width of Random d-Regular Graphs

- **Manuel A. Espinosa-García**, Amanda Montejano, Edgardo Roldán-Pensado and J. David Suárez.
  Sidon-Ramsey and B_h-Ramsey numbers

- **Alberto Espuny Díaz** and Joseph Hyde.
  Powers of Hamilton cycles in graphs perturbed by a random geometric graph

- David Fabian, **Patrick Morris** and Tibor Szabó.
  Maximum running times for graph bootstrap percolation processes

- Delia Garijo, Andrew Goodall and **Lluís Vena**.
  Homomorphisms between graphs embedded in surfaces

- **Irene Gil Fernández** and Hong Liu.
  How to build a pillar: a proof of Thomassen's conjecture

- Domingo Gómez-Pérez, Ana I. Gómez and **Francisco-Javier Soto**.
  A Faster Algorithm for the Two Cluster Partitioning Problem

- **Mario Huicochea**.
  Rainbow solutions of a linear equation with coefficients in $\mathbb{Z}/p\mathbb{Z}$

- **José Manuel Jiménez Cobano**, Haydee Jiménez Tafur and José María Ucha-Enríquez.
  The weighted sum method for multi-objective optimization using Test Sets via Gröbner Bases

- Michael Joswig, **Dante Luber**, Georg Loho and Jorge Olarte.
  Generalized Permutahedra and Positive Flag Dressians

- Daniel Král', **Ander Lamaison** and Péter Pál Pach.
  Common systems of two equations over the binary field

- Jacob Lahne, **David Orden**, Katherine Phetxumphou and Marino Tejedor-Romero.
  Linking+SensoGraph: A new graph-based method for sensory analysis

- **Leo Liberti**, Benedetto Manca and Pierre-Louis Poirion.
  Random projections for the distance geometry problem

- **Eduardo Lucas Marín**.
  On discrete Borell-Brascamp-Lieb type inequalities for big negative parameters

- Carlos Marijuán and **Miriam Pisonero**.
  New Results for the Spectra of Weighted Graphs of Order 5

- **Philippe Nadeau**.
  Local parking procedures on the integers

- **Miquel Ortega** and Sean Prendiville.
  Extremal Sidon sets are Fourier uniform, with applications to partition regularity

- Arnau Padrol, **Eva Philippe** and Francisco Santos.
  Many regular triangulations and many polytopes

- Arnau Padrol, Vincent Pilaud and **Germain Poullot**.
  Deformation cones of graphical zonotopes

- Olaf Parczyk, Sebastian Pokutta, **Christoph Spiegel** and Tibor Szabó.
  New Ramsey Multiplicity Bounds and Search Heuristics

- **Julian Pfeifle**.
  Fast positive Plücker trees

- **Manuel Radons** and Josué Tonelli-Cueto.
  Generalized Perron roots and solvability of the absolute value equation

- Juanjo Rué and **Maximilian Wötzel**.
  Normal limiting distributions for systems of linear equations in random sets

- Oriol Serra and **Maximilian Wötzel**.
  On a nonabelian Kneser theorem

Posters

Contributions have been accepted for presentation in the poster session

- Aida Abiad, Jozefien D'haeseleer and **Robin Simoens**.
  Cospectral generalized Johnson and Grassmann graphs

- Tanbir Ahmed, **Luis Boza**, María Pastora Revuelta and María Isabel Sanz.
  Advances on the 3-color off-diagonal generalized Schur numbers $S(3; k_1, k_2, k_3)$

- Gabriela Araujo-Pardo, Cristina Dalfó, Miguel Àngel Fiol and **Nacho López**.
  On bipartite biregular Moore graphs

- **Lidija Čomić** and Paola Magillo.
  Computation of 2D Discrete Geometric Moments through Inclusion-Exclusion

- Adriana Dapena, Magdalena Lemańska, **María José Souto-Salorio** and Francisco Vazquez-Araujo.
  Trees having domination number equal to isolation number

- Magda Dettlaff, Abel Cabrera Martínez, **Magdalena Lemańska** and Juan Alberto Rodríguez-Velázquez.
  Restrained differential of a graph

- Antonio González, **Carmen Hernando** and Mercè Mora.
  Distance-equalizer sets of graphs

- Simon B. Hengeveld and **Antonio Mucherino**.
  The discrete side of Distance Geometry: a focus on the 1-dimensional case

- **Nacho López**, Josep Conde and Gabriela Araujo-Pardo.
  On local bipartite Moore graphs

- **László Németh** and László Szalay.
  Sequences related to square and cube zig-zag shapes