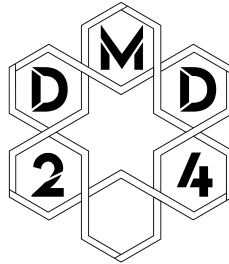# Discrete Mathematics Days 2024 (DMD 24)
Alcalá de Henares, July 3 - 5, 2024

List of accepted contributions

Contributed Talks

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

- Aida Abiad, Nils van de Berg and Robin Simoens.
  Switching methods for the construction of cospectral graphs

- José D. Alvarado, Yoshiharu Kohayakawa, Patrick Morris, Guilherme O. Mota and Miquel Ortega.
  A canonical van der Waerden theorem in random sets

- Grzegorz Adamski, Małgorzata Bednarska-Bzdęga, Sylwia Antoniuk, Dennis Clemens, Fabian Hamann and Yannick Mogge.
  Creating trees with high maximum degree

- Manuel Aprile, Samuel Fiorini, Gwenael Joret, Stefan Kober, Michał T. Seweryn, Stefan Weltge and Yelena Yuditsky.
  Integer programs with nearly totally unimodular matrices: the cographic case

- Gabriela Araujo-Pardo, Silvia Fernández-Merchant, Adriana Hansberg, Dolores Lara, Amanda Montejano and Déborah Oliveros.
  Bounding the balanced upper chromatic number

- Sara Asensio, Ignacio García-Marco and Kolja Knauer.
  Complexity measures of trilean functions

- Ali Deniz Bagdas, Dennis Clemens, Fabian Hamann and Yannick Mogge.
  Speed and size of dominating sets in domination games

- Simeon Ball, Michel Lavrauw and Tabriz Popatia.
  On additive codes over finite fields

- Simeon Ball and Tomàs Ortega.
  Geometric quasi-cyclic low density parity check codes

- Natalie Behague, Joseph Hyde, Natasha Morrison, Jonathan Noel and Ashna Wright.
  An Approximate Counting Version of the Multidimensional Szemerédi Theorem

- Fábio Botler and Tássio Naia.
  Separating Cycle Systems

- Sofiya Burova, Gabor Lugosi and Guillem Perarnau.
  Increasing paths in the temporal stochastic block model

- José Cáceres, Delia Garijo, Alberto Marquez and Rodrigo Silveira.
  The Borsuk number of a graph

- Pablo Candela, Diego Gonzalez-Sanchez and Balázs Szegedy.
  A short proof of an inverse theorem in bounded torsion groups

- Claude Carlet.
  The weight spectrum of the Reed-Muller codes $RM(m-5,m)$

- Jordi Castellví and Clément Requilé.
  Enumeration of unlabelled chordal graphs with bounded tree-width

- Luis Crespo Ruiz, Álvaro Pelayo and Francisco Santos.
  On Ewald's and Nill's Conjectures about smooth polytopes

- Francisco Criado Gallart and Francisco Santos Leal.
  The baker's potato problem in two dimensions

- Gabriel Currier, Kenneth Moore and Chi Hoi Yip.
  Three-term arithmetic progressions in two-colorings of the plane.

- Josep Diaz, Oznur Yasar Diner, Maria Serna and Oriol Serra.
  Rainbow connectivity of multilayered random geometric graphs

- Zsigmond György Fleiner, Márk Hunor Juhász, Blanka Kövér, Péter Pál Pach and Csaba Sándor.
  Product representation of perfect cubes

- Ignacio García Marco, Philippe Gimenez and Mario González-Sánchez.
  Betti numbers of monomial curves

- Irene Heinrich, Eda Kaja and Pascal Schweitzer.
  Computing edge-colored ultrahomogeneous graphs

- Irene Heinrich and Lena Volk.
  The flexibility among 3-decompositions

- Mario Huicochea, René Gonzélez-Martínez, Amanda Montejano and David Suárez.
  On the sum of several finite subsets in $\mathbb{R}^2$

- Thomas Karam.
  Ranges of polynomials control degree ranks of Green and Tao over finite prime fields

- Gyula Károlyi.
  A covering problem for zonotopes and Coxeter permutahedra

- Amarja Kathapurkar, Patrick Morris and Guillem Perarnau.
  Rainbow loose Hamilton cycles in Dirac hypergraphs

- Aldo Kiem, Sebastian Pokutta and Christoph Spiegel.
  The Four-Color Ramsey Multiplicity of Triangles

- Max Kölbl.
  On a conjecture concerning the roots of Ehrhart polynomials of symmetric edge polytopes from complete multipartite graphs

- Jae-Baek Lee and Jonathan Noel.
  Disconnected common graphs via supersaturation

- Hoi Ping Luk, Ho Man Cheung and Min Yan.
  Classification of Edge-to-edge Monohedral Tilings of the Sphere

- Jaume Martí-Farré and Anna de Mier.
  On homogeneous matroid ports

- Kerri Morgan and Lluis Vena.
  Expressing the coefficients of the chromatic polynomial in terms of induced subgraphs: a systematic approach

- Konrad Mundiger, Sebastian Pokutta, Christoph Spiegel and Max Zimmer.
  Extending the Continuum of Six-Colorings

- Marc Noy, Martijn Gösgens, Lukas Lüchtrath, Elena Magnanini and Élie de Panafieu.
  Limit theorems for the Erdős–Rényi random graph conditioned on being a cluster graph

- Arturo Ortiz San Miguel and Gabor Lippner.
  d-regular graph on n vertices with the most k-cycles

- Alvaro Otero Sanchez, Daniel Camazón Portela and Juan Antonio López Ramos.
  On the solutions of linear systems over additively idempotent semirings

- Guillem Perarnau and Giovanne Santos.
  Random lifts of very high girth and their applications to frozen colourings

- Iván Rasskin.
  Regular polytopes, sphere packings and Apollonian sections

- Jan Soukup.
  Bicolored point sets admitting non-crossing alternating Hamiltonian paths

- José María Ucha, María Isabel Hartillo and Haydee Jiménez.
  Multi-objective Linear Integer Programming based in Test Sets

- Juan L. Valerdi.
  Polytope Neural Networks

Posters

Contributions have been accepted for presentation in the poster session

- Aida Abiad and Sjanne Zeijlemaker.
  Computing equitable partitions of graphs with a unique tree representation

- Carlos Alegría, Justin Dallant, Jean-Paul Doignon, Pablo Pérez-Lantero and Carlos Seara.
  The rectilinear convex hull of disks

- Mario Huicochea.
  A Kneser-type theorem for restricted sumsets

- José Manuel Jiménez, José María Ucha and Haydee Jiménez.
  An algebraic approach to the Weighted Sum Method in Multi-objective Integer Programming

- Aldo Kiem, Christoph Spiegel and Sebastian Pokutta.
  Categorification of Flag Algebras

- Eduardo Lucas Marín and David Iglesias López.
  Characterization of the equality in some discrete isoperimetric and Brunn-Minkowski type inequalities

- Hebert Pérez-Rosés.
  Totally Greedy Sequences Generated by a Class of Second-Order Linear Recurrences With Constant Coefficients

- Lina Simbaqueba, Natalie Behague, Gabriel Crudele and Jon Noel.
  Sidorenko-type inequalities for Trees.

- Linpeng Zhang, Hajo Broersma and Ligong Wang.
  A note on generalized crowns in linear r-graphs