

2nd IMA Conference on Theoretical and Computational Discrete Mathematics

Friday 14 September - Saturday 15 September 2018, The Enterprise Centre, University of Derby

Friday 14 September

08:30 – 09:00	Registration
09:00 – 09:20	Opening Address
09:20 – 10:00 Keynote talk	Dr Sergey Kitaev (University of Strathclyde, UK) <i>Encoding Graphs by Words and Patterns</i>
Session 1	Words and Graphs (Chair: Dr Sergey Kitaev)
10:00– 10:20	Jessica Enright (University of Edinburgh, UK) <i>Polygon-Circle Graphs and Word-Representable Graphs</i>
10:20 – 10:40	Richard Pinch <i>Enumerating Words With Forbidden Factors</i>
10:40 – 11:00	Tea/Coffee Break
11:00 – 11:20	Xavier Ouvrard (Unige / CERN, Switzerland), Jean-Marie Le Goff (CERN) and Stéphane Marchand-Maillet (Unige) <i>On Adjacency and e-Adjacency in General Hypergraphs: Towards a New e-Adjacency Tensor</i>
11:20 – 11:40	Dimitris Simos and Bernhard Garn (SBA Research, Austria) <i>Algebraic Techniques for Covering Arrays and Related Structures</i>
11:40 – 12:00	Nicholas Korpelainen and M. Stubbley (University of Derby, UK) <i>A Few Variations on Pebbling Chessboards and Graphs</i>
12:00 – 13:00	Lunch
13:00 – 13:40 Keynote talk	Professor Preda Mihăilescu (Georg-August-University, Goettingen, Germany) <i>The Charm of Stickelberger</i>
Session 2	Computational Discrete Mathematics (Chair: Professor Preda Mihăilescu)
13:40 – 14:00	Eda Yildiz (Yildiz Technical University, Turkey) <i>On Bounds for Quantum Error Correcting Codes over EJ-Integers</i>
14:00 – 14:20	Cristina Fernandez-Cordoba , Carlos Vela and Merce Villanueva (Universitat Autònoma de Barcelona) <i>On the Rank of Z₈-Linear Hadamard Codes</i>
14:20 – 14:40	Ioan Lucian Popa , Larisa Elena Biris , Traian Ceausu and Claudia Luminita Mihitz (1 st December 1918 University of Alba Iulia, Romania) <i>On Uniform Exponential Trisplitting of Discrete Skew-Product Semiflows</i>
14:40 – 15:00	Tea/Coffee Break
15:00 – 15:20	Nevena Maric (University of Missouri, USA) <i>CUT Vertices On a Line</i>
15:20 – 15:40	Dorin Andrica (Babes-Bolyai University of Cluj-Napoca, Romania) and Ovidiu Bagdasar (University of Derby, UK) <i>Some Remarks On 3-Partitions of Multisets</i>
15:40 – 16:00	Ovidiu Bagdasar (University of Derby, UK) and A. Bagdasaryan (American University of the Middle East, Kuwait) <i>On New Arithmetic Triangles Arising From Inverses of Analytic Functions</i>
16:00 – 17:00	Drinks reception with poster session

Saturday 15 September

09:00 – 09:40 Keynote talk	Professor Tom Ward (University of Leeds, UK) <i>Integer Sequences and Dynamics</i>
Session 3	Sequences and Lattices (Chair: Professor Tom Ward)
09:40 – 10:00	S.D. Dafnis (Hellenic Open University, Greece), A.N. Philipou (University of Patras, Greece) and I.E. Livieris (Technological Educational Institute of Western Greece, Greece) <i>An Identity Relating Fibonacci and Lucas Numbers of Order k</i>
10:00 – 10:20	Bernhard Garn and Dimitris Simos (SBA Research, Austria) <i>Weighted t-Way Sequences</i>
10:20 – 10:40	Tea/Coffee Break
10:40 – 11:00	Ralph-Joseph Tatt and Ovidiu Bagdasar (University of Derby, UK) <i>On New Arithmetic Functions Involving Perfect Powers</i>
11:00 – 11:20	Rachid Boumahdi (Laboratory USTHB /Ecole nationale, Algeria) <i>Polynomials With Values Which Are Powers of Integers</i>
11:20 – 11:40	Seunghwan Chang, Seongan Lim, Hyang-Sook Lee (Ewha Womans University, South Korea), Juhee Lee (ARIST, South Korea), Taewan Kim (Electronics and Telecommunications Research Institute, Republic of Korea) <i>Minimal Condition for Shortest Vectors in Lattices of Low Dimension</i>
11:40 – 12:00	Vsevolod Chernyshev (National Research University Higher School of Economics, Russia) <i>Polynomial Approximation for the Number of All Possible Endpoints of a Random Walk On a Metric Graph</i>
12:00 – 13:00	Lunch and poster session
13:00 – 13:40 Keynote talk	Professor Martin Bohner (Missouri University of Science and Technology, USA) <i>Time Scales</i>
Session 4	Applied Discrete Mathematics (Chair: Professor Martin Bohner)
13:40 – 14:00	Mohsen Farid , I. Nasser (University of Derby, UK) and A. Abdel-Hady (Egyptian Chinese University, Egypt) <i>Information Entropies for Modified Yukawa Potential Using the J-Matrix Method</i>
14:00 – 14:20	Konstantinos Papalamprou and L. Pitsoulis (Aristotle University of Thessaloniki, Greece) <i>On the Recognition of Cographic Signed-Graphic Matroids</i>
14:20 – 14:30	Summary and Close – refreshments available

Posters

Xavier Ouvrard (CERN, Switzerland)

Hypergraph Modeling and Visualisation of Complex Co-occurrence Networks

Taras Goy (Vasyl Stefanyk Precarpathian National University, Ukraine)

Combinatorial Identities for Fibonacci Polynomials