

CALDAM 2021 Program
Indian Institute of Technology Ropar
February 11-13, 2021

Day 1: February 11, 2021

8:30-9:00 am	Inaugural Session
9:00-10:15 am	Google Invited Talk I Width Parameters for Hard and Easy Problems Martin Fürer
10:15-10:30 am	Break
10:30-12:10 pm	Graph Theory I On cd-coloring of trees and co-bipartite graphs Shalu M. A., Kirubakaran V. K. 10:30-10:55 am Cut Vertex Transit Functions of Hypergraphs Manoj Changat, Ferdoos Hossein Nezhad, Peter F. Stadler 10:55-11:20 am Lexicographic Product of Digraphs and Related Boundary-Type Sets Manoj Changat, Prasanth G. Narasimha-Shenoi, Mary Shalet Thottungal Joseph 11:20-11:45 am The Connected Domination Number of Grids Adarsh Srinivasan, N S Narayanaswamy 11:45-12:10 pm
12:10-1:15 pm	Lunch Break
1:15-2:30 pm	Parameterized Algorithms I On Parameterized Complexity of Liquid Democracy Palash Dey, Arnab Maiti, Amartya Sharma 1:15-1:40 pm Acyclic coloring parameterized by directed clique-width Frank Gurski, Dominique Komander, Carolin Rehs 1:40-2:05 pm On Structural Parameterizations of Load Coloring I. Vinod Reddy 2:05-2:30 pm
2:30-2:45 pm	Break
2:45-4:25 pm	Computational Geometry

	<p>New variants of Perfect Non-crossing Matchings Ioannis Mantas, Marko Savić, Hendrik Schrezenmaier 2:45-3:10 pm</p> <p>Cause I'm a Genial Imprecise Point: Outlier Detection for Uncertain Data Vahideh Keikha, Hamidreza Keikha, Ali Mohades 3:10-3:35 pm</p> <p>A Worst-case Optimal Algorithm to Compute the Minkowski Sum of Convex Polytopes Sandip Das, Subhadeep Ranjan Dev, Swami Sarvottamananda 3:35-4:00 pm</p> <p>On the Intersections of Non-homotopic Loops Václav Blažej, Michal Opler, Matas Šileikis, Pavel Valtr 4:00-4:25 pm</p>
4:25-5:00 pm	Break
5:00-6:15 pm	<p>Google Invited Talk II</p> <p>Matching and Spanning Trees in Geometric Graphs Anil Maheshwari</p>
6:15-7:00 pm	<p>CALDAM Business Meeting ACSDM Business Meeting</p>

Day 2: February 12, 2021

9:00-10:15 am	Combinatorics and Algorithms I On algorithms to find p-ordering Aditya Gulati, Sayak Chakrabarti, Rajat Mittal 9:00-9:25 am Experimental Evaluation of a Local Search Approximation Algorithm for the Multiway Cut Problem Andrew Bloch-Hansen, Nasim Samei, Roberto Solis-Oba 9:25-9:50 am Algorithmic analysis of priority-based bin packing Piotr Wojciechowski, K. Subramani, Alvaro Velasquez, Bugra Caskurlu 9:50-10:15 am
10:15-10:30 am	Break
10:30-12:10 pm	Graph Theory II On degree sequences and eccentricities in pseudoline arrangement graphs Sandip Das, Siddani Bhaskara Rao, Uma kant Sahoo 10:30-10:55 am Cops and Robber on Butterflies and Solid Grids Sheikh Shakil Akhtar, Sandip Das, Harmender Gahlawat 10:55-11:20 am b-Coloring of Some Powers of Hypercubes P. Francis, S. Francis Raj, M. Gokulnath 11:20-11:45 am Chromatic Bounds for the Subclasses of k_2 -Free Graphs Athmakoori Prashant, M. Gokulnath 11:45-12:10 pm
12:10-1:15 pm	Lunch Break
1:15-2:30 pm	Graph Algorithms I Failure and communication in a synchronized multi-drone system Sergey Bereg, José Miguel Díaz-Báñez, Paul Horn, Mario A. Lopez, Jorge Urrutia 1:15-1:40 pm Memory Optimal Dispersion by Anonymous Mobile Robots Archak Das, Kaustav Bose, Buddhadeb Sau 1:40-2:05 pm Quantum and approximation algorithms for maximum witnesses of Boolean matrix products Mirosław Kowaluk, Andrzej Lingas

	2:05-2:30 pm
2:30-2:45 pm	Break
2:45-4:00 pm	<p>Approximation Algorithms I</p> <p>Online bin packing with overload cost Kelin Luo, Frits C. R. Spieksma 2:45-3:10 pm</p> <p>Scheduling Trains with Small Stretch on a Unidirectional Line Apoorv Garg, Abhiram Ranade 3:10-3:35 pm</p> <p>Algorithmic Aspects of Total Roman and Total Double Roman Domination in Graphs Chakradhar Padamutham, Venkata Subba Reddy Palagiri 3:35-4:00 pm</p>
4:00-4:15 pm	Break
4:15-5:05 pm	<p>Computational Complexity</p> <p>Balanced Connected Graph Partition Satyabrata Jana, Supantha Pandit, Sasanka Roy 4:15-4:40 pm</p> <p>Hardness Results of Global Roman Domination in Graphs B. S. Panda, Pooja Goyal 4:40-5:05 pm</p>
5:05-5:20 pm	Break
5:20-6:10 pm	<p>Parameterized Algorithms II</p> <p>One-Sided Discrete Terrain Guarding and Chordal Graphs Pralhad Narasimhan Kasthurirangan 5:20-5:45 pm</p> <p>Parameterized Complexity of Locally Minimal Defensive Alliances Ajinkya Gaikwad, Soumen Maity, Shuvam Kant Tripathi 5:45-6:10 pm</p>

Day 3: February 13, 2021

9:00-10:15 am	Graph Theory III Axiomatic characterization of the median function of a block graph Manoj Changat, Nella Jeena Jacob, Prasanth G. Narasimha-Shenoi 9:00-9:25 am On Coupon Coloring of Cartesian Product of Some Graphs P. Francis, Deepak Rajendraprasad 9:25-9:50 am On the Connectivity and the Diameter of Betweenness-Uniform Graphs David Hartman, Aneta Pokorná, Pavel Valtr 9:50-10:15 am
10:15-10:30 am	Break
10:30-11:45 pm	Approximation Algorithms II Approximation Algorithms for Orthogonal Line Centers Arun Kumar Das, Sandip Das, Joydeep Mukherjee 10:30-10:55 am Semitotal Domination on AT-free Graphs and Circle Graphs Ton Kloks, Arti Pandey 10:55-11:20 am Burning Grids and Intervals Arya Tanmay Gupta, Swapnil A. Lokhande, Kaushik Mondal 11:20-11:45 am
11:45-12:00 pm	Break
12:00-12:50 pm	Graph Algorithms II Template-driven Rainbow Coloring of Proper Interval Graphs L. Sunil Chandran, Sajal K. Das, Pavol Hell, Sajith Padinhatteeri, Raji R.Pillai 12:00-12:25 pm Minimum Consistent Subset of Simple Graph Classes Sanjana Dey, Anil Maheshwari, Subhas C. Nandy 12:25-12:50 pm
12:50-2:00 pm	Lunch Break
2:00-3:15 pm	Combinatorics and Algorithms II Recursive methods for some problems in coding and random permutations Ghurumuruhan Ganesan 2:00-2:25 pm

	<p>Achieving positive rates with predetermined dictionaries Ghurumuruhan Ganesan 2:25-2:50 pm</p> <p>Characterization of Dense Patterns Having Distinct Squares Maithilee Patawar, Kalpesh Kapoor 2:50-3:15 pm</p>
3:15-3:30 pm	Concluding Session