

Preliminary Program DGCI 2017

Tuesday, September 19, 2017

08:15 Registration

08:45 Welcome

09:00 Keynote: Helmut Pottmann

Session 1: Geometric Transforms

10:00 "Honeycomb geometry: Rigid motions on the hexagonal grid"
Kacper Pluta, Pascal Romon, Yukiko Kenmochi, Nicolas Passat

10:30 "Large families of "grey" arrays with perfect auto-correlation and optimal cross-correlation"
Imants Svalbe, Matthew Ceko, Andrew Tirkel

11:00 Coffee Break

Session 2: Discrete Tomography

11:30 "High-level algorithm prototyping: an example extending the TVR-DART algorithm"
Axel Ringh, Xiaodong Zhuge, Willem Jan Palenstijn, Joost Batenburg, Ozan Öktem

12:00 "A parametric level-set method for partially discrete tomography"
Ajinkya Kadu, Tristan van Leeuwen, K. Joost Batenburg

12:30 Lunch

Session 3: Discrete Modeling and Visualization

14:00 "An Introduction to Gamma-Convergence for Spectral Clustering"
Aditya Challa, Sravan Danda, B. S. Daya Sagar, Laurent Najman

14:30 "Digital surface regularization by normal vector field alignment"
David Coeurjolly, Jacques-Olivier Lachaud, pierre gueth

15:00 Poster Teasers

Session 4: Posters & Coffee

from 15:15

"Reconstructions of Noisy Digital Contours with Maximal Primitives Based on Multi-Scale/Irregular Geometric Representation and Generalized Linear Programming"
Antoine Vacavant, Bertrand Kerautret, Tristan Roussillon, Fabien Feschet

"Recognition of digital polyhedra with a fixed number of faces is decidable in dimension 3"
Yan Gerard

“A new shape descriptor based on a Q-convexity measure”

Peter Balazs, Sara Brunetti

“Fuzzy Directional Enlacement Landscapes”

Michaël Clément, Camille Kurtz, Laurent Wendling

“Mojette Transform on the Densest Lattices in 2D and 3D”

Vincent Ricordel, Nicolas Normand, Jeanpierre Guedon

“The Minimum Barrier Distance -- A Summary of Recent Advances”

Robin Strand, Krzysztof Chris Ciesielski, Filip Malmberg, Punam Saha

“Convexity-preserving rigid motions of 2D digital objects”

Ngo Phuc, Yukiko Kenmochi, Isabelle Debled-Rennesson, Nicolas Passat

“Weighted Distances on the Trihexagonal Grid”

Gergely Kovács, Benedek Nagy, Bela Vizvari

“An Integer Programming Approach to Characterize Digital Disks on the Triangular Grid”

Gergely Kovács, Benedek Nagy, Bela Vizvari

“Digital primitives defined by weighted focal set”

Eric Andres, Ranita Biswas, Partha Bhowmick

18:00 Ice Breaker Party

Wednesday, September 20, 2017

08:45 Registration

09:00 Keynote: Michael Wilkinson

Session 5: Morphological Analysis

10:00 “Opening Holes in Discrete Objects with Digital Homotopy”

Aldo Gonzalez-Lorenzo, Alexandra Bac, Jean-Luc Mari

10:30 “Well-Composedness in Alexandrov spaces implies Digital Well-Composedness in Z^n ”

Nicolas Boutry, Laurent Najman, Thierry Géraud

11:00 Coffee Break

Session 6: Discrete Tomography

11:30 “Maximal N-ghosts and minimal information recovery from N projected views of an array”

Imants Svalbe, Matthew Ceko

12:00 “Ambiguity results in the characterization of hv-convex polyominoes from projections”

Andrea Frosini, Paolo Dulio, Elena Barucci, Simone Rinaldi

12:30 Lunch

Session 7: Discrete Shape Representation, Recognition and Analysis

- 14:00 "Heat kernel Laplace-Beltrami operator on digital surfaces"
Thomas Caissard, David Coeurjolly, Jacques-Olivier Lachaud, Tristan Roussillon
- 14:30 "Efficiently Updating Feasible Regions for Fitting Discrete Polynomial Curve"
Fumiki Sekiya, Akihiro Sugimoto

15:00 IAPR TC 18 session, "brainstorming session on Open Problems"

15:30 Coffee Break

16:00 Meeting of the DGCI Steering Committee (decision about the Award)

17:30 Guided Tour Through Vienna

19:00 Gala Dinner

Group Photo, Dinner, Announcement of the next DGCI edition, Best Student Paper Award

Thursday, September 21, 2017

09:00 Keynote: Eric Andres

Session 8: Discrete and Combinatorial Topology

- 10:00 "Euclidean and Geodesic Distance Profiles"
Ines Janusch, Nicole M. Artner, Walter Kropatsch
- 10:30 "Greyscale Image Vectorization from Digital Contour Representations"
Bertrand Kerautret, Ngo Phuc, Yukiko Kenmochi, Antoine Vacavant

11:00 Coffee Break

Session 9: Discrete and Combinatorial Tools for Image Segmentation and Analysis

- 11:30 "The Boolean Map Distance: Theory and Efficient Computation"
Filip Malmberg, Robin Strand, Jianming Zhang, Stan Sclaroff
- 12:00 "Fast and Efficient Incremental Algorithms for Circular and Spherical Propagation in Integer Space"
Shivam Dwivedi, Aniket Gupta, Siddhant Roy, Ranita Biswas, Partha Bhowmick

12:30 Lunch

Session 10: Models for Discrete Geometry

- 14:00 "Study on the digitization dual combinatorics and convex case"
Loic mazo, Etienne Baudrier
- 14:30 "Algorithmic Construction of Acyclic Partial Matchings for Multidimensional Persistence"
Madjid Allili, Tomasz Kaczynski, Claudia Landi, Filippo Masoni
- 15:00 Farewell