

Workshop I: Geometric Processing

Monday April 1, 2019

- 8:00–8:55 *Check-In/Light Breakfast (Hosted by IPAM)*
- 8:55–9:00 *Welcome & Opening Remarks: Dean Miguel García-Garibay (Dean of Physical Sciences, UCLA) and Dima Shlyakhtenko (Director, IPAM)*
- 9:00–9:50 **Xue-Cheng Tai** (University of Bergen)
A New Operator Splitting Method for Euler's Elastica Model
- 10:00–10:15 *Break*
- 10:15–11:05 **Jan Lellmann** (Universität zu Lübeck)
Measure-Valued Variational Image Processing
- 11:15–11:30 *Break*
- 11:30–12:20 **Thomas Pock** (Technische Universität Graz)
Total Roto-Translational Variation
- 12:30–2:15 *Lunch (on your own)*
- 2:15–3:05 **Martin Ehler** (Universität Wien)
Fourier Expansion of discrepancy kernels
- 3:15–3:30 *Break*
- 3:30–4:20 **François Lauze** (University of Copenhagen)
Tree-like shape spaces
- 4:30–4:45 *Break*
- 4:45–5:35 **Misha Kazhdan** (Johns Hopkins University)
Registering Genus-zero Surfaces
- 5:45–7:30 *Poster Session & Reception (Hosted by IPAM)*

Tuesday April 2, 2019

- 8:00–9:00 *Check-In/Breakfast (Hosted by IPAM)*
- 9:00–9:50 **Yannick Berthoumieu** (University of Bordeaux)
Beyond Euclidean Gaussian law: application to the classification task based on Riemannian feature coding.
- 10:00–10:15 *Break*

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- 10:15–11:05 **Stephan Huckemann** (Georg-August-Universität zu Göttingen)
Limit Theorems for PCA Like Analysis on Non-Euclidean Spaces
- 11:15–11:30 *Break*
- 11:30–12:20 **Xavier Pennec** (Institut National de Recherche en Informatique Automatique (INRIA))
Geometric Statistics for Computational Anatomy - Overview & recent advances
- 12:30–2:15 *Lunch (on your own)*
- 2:15–3:05 **Sophie Achard** (Centre National de la Recherche Scientifique (CNRS))
Graph inference via multiple testing in collaboration with Pierre Borgnat, Irène Gannaz, and Marine Roux
- 3:15–3:30 *Break*
- 3:30–4:20 **Max Wardetzky** (Georg-August-Universität zu Göttingen)
Discrete Curvature Functionals — Applications and Challenges
- 4:30–4:45 *Break*
- 4:45–5:35 **Jean-Marie Mirebeau** (Université d'Orsay)
Fast marching methods for anisotropic metrics

Wednesday April 3, 2019

- 8:00–9:00 *Check-In/Breakfast (Hosted by IPAM)*
- 9:00–9:50 **Sebastian Neumayer** (Universität Kaiserslautern)
Morphing of Manifold-Valued Images inspired by Discrete Geodesics in Image Spaces
- 10:00–10:15 *Break*
- 10:15–11:05 **Laurent Younes** (Johns Hopkins University)
A Model for Elastic Evolution on Foliated Shapes
- 11:15–11:30 *Break*
- 11:30–12:20 **Benedikt Wirth** (Westfälische Wilhelms Universität Münster)
Optimal transport based regularization
- 12:30–2:15 *Lunch (on your own)*
- 2:15–3:05 **Ron Kimmel** (Technion - Israel Institute of Technology)
Interaction between invariant structures for shape analysis
- 3:15–3:30 *Break*
- 3:30–5:30 *Discussion*

Thursday April 4, 2019

- 8:00–9:00 *Check-In/Breakfast (Hosted by IPAM)*
- 9:00–9:50 **Ronald Lok Ming Lui** (The Chinese University of Hong Kong)
Computing quasiconformal folds
- 10:00–10:15 *Break*
- 10:15–11:05 **Keenan Crane** (Carnegie Mellon University)
Heat Methods in Geometry Processing
- 11:15–11:30 *Break*
- 11:30–12:20 **Joan Bruna** (New York University)
Deep Geometric Prior for Surface Reconstruction
- 12:30–2:15 *Lunch (on your own)*
- 2:15–3:05 **David Coeurjolly** (CNRS, Université de Lyon)
Geometry processing on Voxel Objects
- 3:15–3:30 *Break*
- 3:30–4:20 **Ronny Bergmann** (Technische Universität Chemnitz)
Nonsmooth Optimization on Riemannian Manifolds and Manifold-Valued Data Processing
- 4:30–4:45 *Break*
- 4:45–5:35 **Lek-Heng Lim** (University of Chicago)
Geometric distances between objects of different dimensions

Friday April 5, 2019

- 8:00–9:00 *Check-In/Breakfast (Hosted by IPAM)*
- 9:00–9:50 **Christoph Schnörr** (University of Heidelberg)
The Assignment Flow
- 10:00–10:15 *Break*
- 10:15–11:05 **Bernhard Egger** (Massachusetts Institute of Technology)
3D Morphable Models
- 11:15–11:30 *Break*

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11:30–12:20 **Marcelo Bertalmío** (Universitat Pompeu Fabra)
From vision models to cinema applications, and back

12:30–2:15 *Lunch (on your own)*

2:15–3:05 **Blanche Buet** (Université de Paris XI)
A varifold approach to surface approximation and curvature estimation on point clouds

