

Detailed program of SSVM 2017.

Monday June 5th 2017

Plenary session 1: (9h00:10h00)

Maurizio Falcone - Recent Developments in the Shape-from-Shading Problem.

Oral session 1: Scale-Space and PDEs 1 (10h30 - 11h20)

- Spatio-Temporal Scale Selection in Video Data - *Tony Lindeberg* (2)
- An Efficient and Stable Two-Pixel Scheme for 2D Forward-and-Backward Diffusion - *Martin Welk, Joachim Weickert* (68)

Oral session 2: Restoration and reconstruction 1 (11h30 - 12h20)

- Denoising by Inpainting - *Robin Adam, Pascal Peter, Joachim Weickert* (28)
- Stochastic Image Reconstruction from Local Histograms of Gradient Orientation - *Agnès Desolneux, Arthur Leclaire* (32)

Oral session 3: Segmentation (14h15 - 15h30)

- A Fast MBO Scheme for Multiclass Data Classification - *Matt Jacobs* (24)
- Convex Non-Convex Segmentation over Surfaces - *Serena Morigi, Fiorella Sgallari, Alessandro Lanza, Martin Huska* (30)
- Numerical Integration of Riemannian Gradient Flows for Image Labeling - *Fabrizio Savarino, Ruben Garske, Freddie Åström, Judit Recknagel, Christoph Schnörr* (37)

Poster session 1: Scale-Space and Reconstruction (16h00-17h00)

- A Novel Convex Relaxation for Non-binary Discrete Tomography - *Jan Kuske, Paul Swoboda, Stefania Petra* (1)
- Image Reconstruction by Multilabel Propagation - *Matthias Zisler, Freddie Åström, Stefania Petra, Christoph Schnörr* (12)
- User-Friendly Simultaneous Tomographic Reconstruction and Segmentation with Class Priors - *Hans Kjer, Yiqiu Dong, Per Christian Hansen* (17)
- An Optimal Transport-Based Restoration Method for Q-Ball Imaging - *Thomas Vogt, Jan Lellmann* (22)
- Performance Bounds for Cosparsity Multichannel Signal Recovery via Collaborative-TV - *Lukas Kiefer, Stefania Petra* (63)
- Blind Space-Variant Single-Image Restoration of Defocus Blur - *Leah Bar, Nir Sochen, Nahum Kiryati* (5)
- Robust Blind Deconvolution with Convolution-Spectrum-Based Kernel Regulariser and Poisson-Noise Data Terms - *Martin Welk* (45)
- A Correlation-based Dissimilarity Measure for Noisy Patches - *Paul Riot, Yann Gousseau, Florence Tupin, Andres Almansa* (57)
- Analysis of a Physically Realistic Film Grain Model, and a Gaussian Film Grain Synthesis Algorithm - *Alasdair Newson, Noura Faraj, Julie Delon, Bruno Galerne* (62)
- Corner detection using the affine morphological scale space - *Luis Alvarez* (25)
- Tubular Structure Segmentation based on Heat Diffusion - *Fang Yang, Laurent Cohen* (41)

Oral session 4: Tomography (17h00 - 17h50)

- Nonlinear Flows for Displacement Correction and Applications in Tomography - *Guozhi Dong, Otmar Scherzer* (26)
- Simultaneous Reconstruction and Segmentation of CT Scans with Shadowed Data - *François Lauze, Yvain Quéau, Esben Plenge* (66)

Tuesday June 6th 2017

Plenary session 2: (9h00:10h00)

Christine De Mol - Non-Negative Matrix Factorization and Blind Imaging with Positivity.

Oral session 5: Scale-Space and PDEs 2 (10h30 - 11h20)

- Nonlinear Spectral Image Fusion - *Michael Möller, Raz Nossek, Martin Benning, Guy Gilboa, Daniel Cremers, Carola Schönlieb, Martin Burger (27)*
- Contrast Invariant L1 Data Fidelities for Nonlinear Spectral Image Decomposition - *Leonie Zeune, Stephan van Gils, Leon Terstappen, Christoph Brune (59)*

Oral session 6: Restoration and reconstruction 2 (11h30 - 12h20)

- Optimal Patch Assignment for Statistically Constrained Texture Synthesis - *Jorge Alberto Gutierrez Ortega, Julien Rabin, Bruno Galerne, Thomas Hurtut (46)*
- Below the Surface of the Non-Local Bayesian Image Denoising Method - *Pablo Arias, Mila Nikolova (72)*

Oral session 7: Manifolds in Imaging (14h15 - 15h30)

- Infimal Convolution Type Coupling of First and Second Order Differences on Manifold-Valued Images - *Ronny Bergmann, Jan Henrik Fitschen, Johannes Persch, Gabriele Steidl (15)*
- Time Discrete Extrapolation in a Riemannian Space of Images - *Alexander Effland, Martin Rumpf, Florian Schäfer (33)*
- Generalized Optimal Transport for Manifold-Valued Images - *Jan Henrik Fitschen, Friederike Johanna Laus, Bernhard Schmitzer (19)*

Poster session 2: Optimization and Segmentation (16h00-17h00)

- *Denoising of Image Gradients and Constrained Total Generalized Variation* - *Birgit Komander, Dirk Lorenz (14)*
- *On a Projected Weiszfeld Algorithm* - *Max Nimmer, Gabriele Steidl, Henrike Stephani, Sebastian Neumayer (40)*
- *Learning Filter Functions in Regularisers by Minimising Quotients* - *Martin Benning, Guy Gilboa, Joana Grah, Carola Schönlieb (65)*
- *Bregman-Proximal Augmented Lagrangian Method to Multiphase Image Segmentation* - *Jing Yuan, Ke Yin, Yiguang Bai, Xiangchu Feng, Xue-Cheng Tai (76)*
- *Graphical Model Parameter Learning by Inverse Linear Programming* - *Vera Trajkovska, Paul Swoboda, Freddie Åström, Stefania Petra (9)*
- *MAP Image Labeling Using Wasserstein Messages and Geometric Assignment* - *Freddie Astroem, Ruben Garske, Fabrizio Savarino, Judit Recknagel, Christoph Schnörr (44)*
- *Multinomial Level-Set Framework for Multi-Region Image Segmentation* - *Tammy Riklin Raviv (60)*
- *Local mean multiphase segmentation with HMMF models* - *Jacob Kirstejn Hansen, François Lauze (67)*
- *An Efficient Lagrangian Algorithm for a Anisotropic Geodesic Active Contour Model* - *Gunay Dogan (70)*
- *A Probabilistic Framework for Curve Evolution* - *Vedrana Dahl, Anders Bjorholm Dahl (74)*

Oral session 8: Registration and Motion (17h00 - 17h50)

- Transport Based Image Morphing with Intensity Modulation - *Stefan Simon, Martin Rumpf, Jan Maas (35)*
- Compressed Motion Sensing - *Robert Dalitz, Stefania Petra, Christoph Schnörr (61)*

Wednesday June 7th 2017

Plenary session 3 (8h00:9h00):

Marco Loog - Scale, Saliency, and Supervised Learning.

Poster session 3: Motion, registration, 3D vision (9h00-10h00)

- A Comparison of Isotropic and Anisotropic Second Order Regularisers for Optical Flow - *Daniel Maurer, Michael Stoll, Sebastian Volz, Patrick Gairing, Andres Bruhn (4)*
- Order-Adaptive Regularisation for Variational Optical Flow: Global, Local and in Between - *Daniel Maurer, Michael Stoll, Andres Bruhn (20)*
- Vehicle X-Ray Scans Registration: A One-Dimensional Optimization Problem - *Abraham Marciano, Laurent Cohen, Najib Gadi (38)*
- Evaluating Data Terms for Variational Multi-frame Super-resolution - *Kireeti Bodduna, Joachim Weickert (50)*
- A Unified Hyperelastic Joint Segmentation/Registration Model Based on Weighted Total Variation and Nonlocal Shape Descriptors - *Noémie Debroux, Carole Le Guyader (71)*
- Adaptive Discretizations for Non-Smooth Variational Vision - *Virginia Estellers, Stefano Soatto (6)*
- The Hessian of Axially Symmetric Functions on $SE(3)$ and Application in 3D Image Analysis - *Michiel Janssen, Tom Dela Haije, Frank Martin, Erik Bekkers, Remco Duits (21)*
- Semi-Calibrated Near-Light Photometric Stereo - *Yvain Queau, Tao Wu, Daniel Cremers (36)*
- Shape Matching by Time Integration of Partial Differential Equations - *Robert Dachsel, Michael Breuß, Laurent Hoeltgen (52)*
- Subspace Least Squares Multidimensional Scaling - *Amit Boyarski, Alex Bronstein, Michael Bronstein (56)*

Oral session 9: Scale-Space and PDEs 3 (10h30 - 11h20)

- Analytic Existence and Uniqueness Results for PDE-Based Image Reconstruction with the Laplacian - *Laurent Hoeltgen, Isaac Harris, Michael Breuß, Andreas Kleefeld (48)*
- Dynamic Texture Recognition Using Time-Causal Spatio-Temporal Scale-Space Filters - *Ylva Jansson, Tony Lindeberg (8)*

Thursday June 8th 2017

Plenary session 4: (9h00:10h00)

Per Christian Hansen - ART Performance

Oral session 10: Variational Methods (10h30 - 11h20)

- A Unified Framework for the Restoration of Images Corrupted by Additive White Noise - *Serena Morigi, Alessandro Lanza, Fiorella Sgallari, Federica Sciacchitano (42)*
- Directional Total Generalized Variation Regularization for Impulse Noise Removal - *Rasmus Kongskov, Yiqiu Dong (73)*

Oral session 11: Video and Shape from X (11h30 - 12h20)

- Beyond Multi-view Stereo: Shading-Reflectance Decomposition - *Jean Mérou, Yvain Quéau, Jean-Denis Durou, Fabien Castan, Daniel Cremers (69)*
- A Dynamic Programming Solution to Bounded Dejittering Problems - *Lukas Lang (43)*