

Session 1A - 3D Geometry, Chair: Johan Edstedt

Maria Axelsson, Max Holmberg, Michael Tulldahl

Semantic segmentation of scanning lidar data for scene understanding

Tiago Cortinhal, Eren Erdal Aksoy

Depth- and semantics-aware multi-modal domain translation:

Generating 3D panoramic color images from lidar point clouds

Anna Gummesson, Magnus Oskarsson

Cylinder triangulation - Robust and accurate methods

José Pedro Iglesias, Amanda Nilsson, Carl Olsson

expOSE: Accurate initialization-free projective factorization using exponential regularization

Session 1B - Medical image segmentation, Chair: Iulian Emil Tampu

Milda Poceviciute, Gabriel Eilertsen, Claes Lundström

Integrating spatial uncertainty with deep learning segmentation model for false negatives detection in digital pathology

Måns Larsson, Muhammad Usman Akbar, Anders Eklund

Does an ensemble of GANs lead to better performance when training segmentation networks with synthetic images?

Subhash Chandra Pal, Subhashis Banerjee, Dimitrios Toumpanakis, Johan Wikström, Robin Strand and Ashis Kumar Dhara

Segmentation of major cerebral vessels from MRA images

Swagata Kundu, Subhashis Banerjee, Dimitrios Toumpanakis, Johan Wikström, Robin Strand, Ashis Kumar Dhara

3D Segmentation of post-operative glioblastoma with interactive correction of oversegmentation

Session 2A - Compression and reproduction, Chair: Behnaz Kavoosighafi

Fereshteh Abedini, Sasan Gooran, Daniel Nyström

Structure-aware color halftoning with adaptive sharpness control

Wen Cao, Ehsan Mianji, Jonas Unger

Compressive spectral light field compact image

Danhua Lei, Ehsan Miandji, Jonas Unger, Ingrid Hotz

Sparse representation of HARDI data towards visual exploration

Alina Pranovich, Sasan Gooran, Jeppe Revall Frisvad, Daniel Nyström

Surface discretisation effects on 3D printed surface appearance

Session 2B - Multimodal medical imaging, Chair: Can Deniz Bezek

Nicolas Pielawski, Johan Öfverstedt, Elisabeth Wetzer

Global multimodal image registration using Gaussian processes

Johan Öfverstedt, Joakim Lindblad, Natasa Sladoje

Towards improved oral cancer detection via multimodal image fusion of brightfield and fluorescence micrographs

Love Nordling, Johan Öfverstedt, Joakim Lindblad, Natasa Sladoje

Multimodal deformable image registration using contrastive learning of equivariant image representations

Jörg Schilcher, Alva Nilsson, Oliver Andlid, Anders Eklund

Combining x-ray images and tabular data from electronic health records through data fusion for classification of femoral fractures

Session 3A - Novel techniques and hardware, Chair: José Pedro Lopes Iglesias

Anders Åström, Robert Forchheimer

Fast, low-complex, non-contact motion encoder based on a novel statistical approach

Marcus Valtonen Örnå, Püren Güler, Dmitry Knyagin, Mattias Borg

Accelerating AI using analog IMC: Imaging applications on future hardware

Hanna Hamrell, Johan Berneland, Jens Grundmark

Oskar Karlsson, Hannes Ovrén, David Gustafsson

Neuromorphic cameras - An introduction with initial results

Victor Wählstrand Skärström, Niklas Lorén, Magnus Röding,

Inverse design of 3D materials with prescribed diffusivity

Session 3B - Deep learning for medical imaging, Chair: Martin Trimmel

Jennie Karlsson, Ida Arvidsson, Freja Sahlin, Kalle Åström, Niels Christian Overgaard

Breast cancer detection using point-of-care ultrasound and deep learning

Johan Jönemo, Muhammad Usman Akbar, Robin Kämpe, J. Paul Hamilton, Anders Eklund

Efficient brain age prediction from 3D MRI volumes using 2D projections

Can Deniz Bezek, Lingkai Zhu, Orcun Goksel

Model-based deep learning of ultrasound beamforming

Session 4A - 3D geometry, Chair: Tiago Cortinhal

Josef Bengtson, David Nilsson, Marcel Büsching, Fredrik Kahl
Generalizable novel view synthesis with adjustable visual appearance

Kunal Chelani, Fredrik Kahl, Zuzana Kukelova, Torsten Sattler
Recovering scene information via camera poses

*Jing Chong Beh, Kam Woh Ng, Jie Long Kew, Che-Tsung Lin,
Chee Seng Chan, Shang-Hong Lai, Christopher Zach*
CyEDA: cycle-object edge consistency domain adaptation

Ludvig Ericson, Patric Jensfelt
FloorGenT: Generative vector graphic model of floor plans for robotics

Session 4B - Image segmentation and registration, Chair: Milda Poceviciute

*Filip Winzell, Ida Arvidsson, Niels Christian Overgaard, Karl Åström, Felicia-Elena
Marginean, Anders Bjartell, Agnieszka Krzyzanowska, Athanasios Simoulis, Anders Heyden*
Systematic augmentation in HSV space for semantic segmentation of prostate biopsies

Sebastian Gerard, Josephine Sullivan
Contrastive pretraining for semantic segmentation is robust to noisy positive pairs

Paula Camargo Romera, Andrea Behanova, Carolina Wählby
Size-based thresholding for cell classification in multiplex
immunohistochemical staining microscopy

Elisabeth Wetzer, Joakim Lindblad, Natasa Sladoje
Partial dimensional collapse in contrastive learning when using intermediate layers