Felix Järemo Lawin

Curriculum Vitae

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Github | *Google Scholar*

I am a 5th year PhD Student at the Computer Vision Laboratory, Linköping University, Sweden, defending my thesis on August 27. My research is focused on machine learning for different computer vision applications including point set registration, segmentation, video object segmentation and tracking. I am also interested in deep learning and machine learning methods in general, and how they can be applied in different fields.

Education

2016–present **PhD Student**, *Linköping University*.

My research focuses on machine learning for computer vision. Here is a selection of topics that I have worked with:

- Time-of-flight ranging algorithms for RGB-D cameras
- 3D reconstruction
- Point set registration
- Learning representations for registration
- Object detection
- Semantic segmentation
- Video object segmentation and tracking

In addition I have 90 ECTS credits of graduate courses in mathematics, machine learning and pedagogy.

2009–2015 **Master of Science in Applied Physics and Electrical Engineering**, *Linköping University*.

- First three years focused on mathematics, physics and electrical enginering
- I had one year off traveling and working as a programmer
- In the final two years I specialized in computer vision

Experience

2016–Present **PhD Student**, *Linköping University*.

My main work tasks are research, teaching and master student supervision.

2015–2016 **Research assistant**, *Linköping University*.

Worked with a teaching, time-of-flight ranging project, robotics in the EU project H2020 CENTAURO.

2012–2013, june-aug 2014 **Programmer**, *Tetra Pak*, Lund.

My main tasks involved data base management and front-end development of administrative tools.

Programming Skills

Languages

Advanced Python, MATLAB

Experienced	C/C++
Intermediate	SQL, VBA, Java, R
	Machine Learning packages
Advanced	Pytorch
Intermediate	TensorFlow

Languages

Swedish	Mothertongue
English	Fluent

Teaching experience

During my PhD studies at Linköping University I have supervised master theses and worked as a teacher in the courses below.

TSDT18	**Signals and Systems**, *lessons, labs and exams*.
TSBB15	**Computer Vision**, *student project supervision*.
TSBB11	**CDIO Project Computer Vision**, *student project supervision*.
TFYY51	**Ingenjörsprojekt Y**, *student project supervision*.
TSKS21	**Signals, Information and Images**, *lessons, labs and exams*.
TSBB17	**Visual Object Recognition and Detection**, *student project supervision*.

Publications

3DV 2020	**Registration Loss Learning for Deep Probabilistic Point Set Registration**, *Felix Järemo Lawin, Per-Erik Forssén*, International Conference on 3D Vision, 2020. Project page
ECCV 2020	**Learning what to learn for video object segmentation**, *Goutam Bhat, Felix Järemo Lawin, Martin Danelljan, Andreas Robinson, Michael Felsberg, Luc Van Gool, Radu Timofte*, European Conference on Computer Vision 2020, Project page.
CVPR 2020	**Learning Fast and Robust Target Models for Video Object Segmentation**, *Andreas Robinson, Felix Järemo Lawin, Martin Danelljan, Fahad Shahbaz Khan, Michael Felsberg*, Conference on Computer Vision and Pattern Recognition 2020, Project page.
RAL 2020	**Assessing Losses for Point Set Registration**, *Anderson C. M. Tavares, Felix Järemo Lawin, Per-Erik Forssén*, IEEE Robotics and Automation Letters 2020, Project page.
CVPR-WS 2019	**Discriminative learning and target attention for the 2019 davis challenge on video object segmentation**, *Andreas Robinson, Felix Järemo Lawin, Martin Danelljan, Michael Felsberg*, The 2019 DAVIS Challenge on Video Object Segmentation-CVPR Workshops 2019.
CVPR 2018	**Density Adaptive Point Set Registration**, *Felix Järemo Lawin, Martin Danelljan, Fahad Shahbaz Khan, Per-Erik Forssén, Michael Felsberg* , Conference on Computer Vision and Pattern Recognition 2018, Project page.

CAIP 2017 **Deep projective 3D semantic segmentation**, *Felix Järemo Lawin, Martin Danelljan, Patrik Tosteberg, Goutam Bhat, Fahad Shahbaz Khan, Michael Felsberg* , International Conference on Computer Analysis of Images and Patterns 2017.

ECCV 2016 **Efficient multi-frequency phase unwrapping using kernel density estimation**, *Felix Järemo Lawin, Per-Erik Forssén, Hannes Ovrén* , European Conference on Computer Vision 2016, Project page.