

# TOMASZ KONOPCZYŃSKI

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## EDUCATION

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### Heidelberg University

November 2015 - Present

Doctor of Philosophy (PhD)

Faculty of Mathematics and Computer Science,

Experimental Radiation Oncology, Mannheim Medical Center,

Interdisciplinary Center for Scientific Computing (IWR),

Heidelberg Collaboratory for Image Processing (HCI)

### University of Padua

July 2017

Secondment

Department of Management and Engineering

### Catholic University of Leuven

June 2014

Exchange Programme

Department of Neurosciences

### Wrocław University of Science and Technology

July 2014

Master of Science

Faculty of Electronics, Control Engineering and Robotics

### Wrocław University of Science and Technology

January 2012

Bachelor of Science

Faculty of Electronics, Control Engineering and Robotics

## EXPERIENCE

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### Tooploox

July 2018 - Present

*Machine Learning Researcher*

Leading and managing commercial machine learning projects on detection and recognition for 2D and 3D data. Leading research project on incremental and multi-modal learning. Taking part in new leads evaluation and representing the AI team inside and outside the company.

### Volume Graphics

May 2017 - April 2018

*Early Stage Researcher*

Development of advanced machine and deep learning algorithms for CT 3D scans of industrial and medical data segmentation. Taking part in the Marie Curie ESR Project InteraqCT an International Network for the Training of Early stage Researchers on Advanced Quality control by Computed Tomography.

### Tieto

September 2014 - April 2015

*Software Engineer*

Core OS team for mobile devices.

**IMEC**

December 2013 - June 2014

*International Scholar*

Development of scale-space based segmentation and identification of cells in microscopic images.

**Neurosoft**

August 2013 - November 2013

*Software Engineer*

Image and signal processing for real-time analysis of traffic scenes.

**European Space Agency**

July 2012 - January 2013

*Trainee*

Work on the spectral processing pipeline of the Fourier-Transform Spectroscopy in the far-infrared spectral domain for the Herschel Space Observatory.

**IBM**

July 2011 - August 2011

*Trainee*

Training on internal IBM software solutions.

## WORKSHOPS & PRESENTATIONS

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Roth K, Hesser J, **Konopczyński T**. Mask Mining for Improved Liver Lesion Segmentation. Medical Imaging meets NeurIPS workshop (med-NeurIPS), Vancouver, Canada. 2019

Koperski M\*, **Konopczyński T\***, Sembercki P, Trzcinski T. Plugin Networks for Inference under Partial Evidence. ML in PL Conference 2019, Warsaw, Poland. 2019 \*Equal contribution

**Konopczyński T**, Kröger T, Zheng L, Hesser J. Instance segmentation of fibers from low resolution ct scans via 3d deep embedding learning. ML in PL Conference, Warsaw, Poland. 2018

**Konopczyński T**, Kröger T, Zheng L, Garbe CS, Hesser J. Automated multiscale 3D feature learning for segmentation of vessels in CT images of human lungs. Dimensional X-ray Computed Tomography Conference, Teddington, United Kingdom. 2016

## PUBLICATIONS

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Roth K, Hesser J, **Konopczyński T**. Mask Mining for Improved Liver Lesion Segmentation. International Symposium on Biomedical Imaging (ISBI). 2020

Fotiadou E, **Konopczyński T**, Hesser J, Vullings R. End-to-End Trained CNN Encoder-Decoder Network for Fetal ECG Signal Denoising. Physiological Measurement. 2020

Rathore JS, **Konopczyński T**, Hesser J, Lucchetta G, Carmignato S. Investigation on Tomographic Based NDT Characterization of Short Glass Fiber Reinforced Composites as Obtained from Micro Injection Molding. Journal of Nondestructive Evaluation, Diagnostics and Prognostics of Engineering Systems (JNDE). 2020

Koperski M\*, **Konopczyński T\***, Sembercki P, Trzcinski T; Plugin Networks for Inference under Partial Evidence; Winter Conference on Applications of Computer Vision (WACV). 2020 \*Equal contribution

Fotiadou E, **Konopczyński T**, Hesser J, Vullings R. Deep Convolutional Encoder-Decoder Framework for Fetal ECG Signal Denoising. Computing In Cardiology (CiC). 2019

Bilic P, Christ PF, Vorontsov E, Chlebus G, **Konopczyński T**, et al. The liver tumor segmentation benchmark (LiTS). arXiv preprint arXiv:1901.04056. 2019

- Konopczyński T**, Kröger T, Zheng L, Hesser J. Instance segmentation of fibers from low resolution ct scans via 3d deep embedding learning. The British Machine Vision Conference (BMVC). 2018
- Konopczyński T**, Rathore D, Rathore J, Kröger T, Zheng L, Garbe CS, Carmignato S, Hesser J. Fully Convolutional Deep Network Architectures for Automatic Short Glass Fiber Semantic Segmentation from CT scans. Conference on Industrial Computed Tomography (iCT). 2018
- Konopczyński T**, Rathore J, Kröger T, Zheng L, Garbe CS, Carmignato S, Hesser J. Reference Setup for Quantitative Comparison of Segmentation Techniques for Short Glass Fiber CT Data. Conference on Industrial Computed Tomography (iCT). 2017
- Konopczyński T**, Kröger T, Zheng L, Garbe CS, Hesser J. Automated multiscale 3D feature learning for vessels segmentation in Thorax CT images. In Nuclear Science Symposium, Medical Imaging Conference and Room-Temperature Semiconductor Detector Workshop (NSS/MIC/RTSD), 2016 Oct 29 (pp. 1-3). IEEE.
- Prodanov D, **Konopczyński T**, Trojnar M. Selected Applications of Scale Spaces in Microscopic Image Analysis. Cybernetics and Information Technologies. 2015 Dec 1;15(7):5-12.
- Valtchanov I, Hopwood R, Polehampton E, Benielli D, Fulton T, Imhof P, **Konopczyński T**, Lim T, Lu N, Marchili N, Naylor D. Relative pointing offset analysis of calibration targets with repeated observations with Herschel-SPIRE Fourier-transform spectrometer. Experimental Astronomy. 2014 Jul 1;37(2):207-23.