Antonin Sulc PhD

Contact Information	+49 152 265 75 325 sulc.antonin@gmail.com http://sulcantonin.github.io	Hamburg Germany

Research Interests	Anomaly Detection, Compute Vision, NLP + LLM
Technologies	PyTorch, Streamlit, HuggingFace, High-Performance (Cloud) Computing, R
Languages	English (C1), German (B2), Czech (native), Russian/Ukrainian + Hebrew + Korean (reading)

Education

University of Konstanz, Konstanz, Germany

PhD., Artificial Intelligence - Computer Vision, 2015 - 2020

- Thesis Topic: *Lightfield Analysis for non-Lambertian Scenes*
- Grade: *Magna Cum Laude* (1.0)
- Advisors: Prof. Dr. Bastian Goldluecke
- 371 Citations (Google Scholar)
- Publications on top-tier conferences (CVPR, ICCV, BMVC)
- My duties also involve supervision of students and supporting other departments in their tasks (Dpt. of Collective Behaviour)

Czech Technical University, Prague, Czech Republic

Bc., MSc., Artificial Intelligence, 2008 - 2014

- Topic: *On parametric model creation with Neural Modeling Fields*, **nominated as a master thesis of year 2014** in Czech Republic
- Advisor: Dr. Michal Vavrecka

Work History

Co-Founder 2022 - ∞
mindling.tech
Consulting Start-up,
Development of tailor made AI solutions

Data Scientist 2021 - 2024
MCS DESY Hamburg
Accelerator Control Systems,
Fixed Term Contract,
Real-time accelerator controls algorithms for anomaly detection at EuXFEL
Improvement of DESY FAIR principles with LLM

Visiting Researcher 2020
University of Haifa,
Marine Imaging Lab
A short term research stay, lead to one publication
Supervisor: Dr. Tali Treibitz

Visiting Researcher 2019-2020
National Institute of Informatics in Tokyo,
Imari Sato Lab
A short term research stay,
Supervisor: Prof. Dr. Imari Sato

Software Engineer & Data Scientist 2014 - 2015
Vendavo Inc., Prague, Czech Republic
Development of recommender systems
Supervisor: Dr. Ludek Kopacek, Eric Bergerson

Publications

1. **A. Sulc**, A. Eichler, T. Wilksen Log Anomaly Detection on EuXFEL Nodes at The *19th Biennial International Conference on Accelerator and Large Experimental Physics Control Systems*, Cape Town, South Africa, ***oral***

2. **A. Sulc**, A. Eichler, T. Wilksen Textual Analysis of ICALEPCS and IPAC Conference Proceedings: Revealing Research Trends, Topics, and Collaborations for Future Insights and Advanced Search at *The 19th Biennial International Conference on Accelerator and Large Experimental Physics Control Systems*, Cape Town, South Africa,***oral***

3. **A. Sulc**, O. R. Kammering, T. Wilksen. A Data-Driven Beam Trajectory Monitoring at the European XFEL at *International Conference in Particle Accelerators 2022*, Bangkok, Thailand

4. **A. Sulc**, O. A. Eichler, T. Wilksen A Data-Driven Anomaly Detection on SRF Cavities at the European XFEL at *International Conference in Particle Accelerators 2022, Bangkok, Thailand and Institute of Physics Journal of Physics: Conference Series*

5. **A. Sulc**, O. Johannsen, B. Goldluecke. Recovery of Geometry, Natural Illumination and BRDF from a Single Light Field Image, In *Journal of the Optical Society of America A*, 2021,

6. **A. Sulc**, I. Sato, B. Goldluecke, T. Treibitz. Towards Monocular Shape from Refraction, In BMVC, 2021, **accepted as oral (3.3% acceptance)**

7. S. Ishihara, **A. Sulc**, I. Sato. Depth Estimation Using Spectrally Varying Defocus Blur. In *Journal of the Optical Society of America A*, 2021

8. S. Ishihara, **A. Sulc**, I. Sato. Depth from Spectral Defocus Blur. In *Proc. International Conference in Image Processing (ICIP)*, 2019

9. M. Zhu, A. Alperovich, O. Johannsen, **A. Sulc**, B. Goldluecke. An Epipolar Volume Autoencoder with Adversarial Loss for Deep Light Field Super-Resolution. In *Proc. Conference on Computer Vision and Pattern Recognition Workshop (CVPRW)*, 2019.

10. **A. Sulc**, O. Johannsen, B. Goldluecke. Inverse Lightfield Rendering for Shape, Reflection and Natural Illumination. In *Proc. 11th International Conference on Energy Minimization Methods in Computer Vision and Pattern Recognition (EMMCVPR)*, 2017.

11. O. Johannsen, **A. Sulc**[1], N. Marniok, B. Goldluecke. Layered scene reconstruction from multiple light field camera views. In *Proc. Asian Conference on Computer Vision (ACCV)*, 2016.

12. **A. Sulc**, A. Alperovich, N. Marniok, B. Goldluecke. Reflection Separation in Light Fields based on Sparse Coding and Specular Flow. In *Proc. Vision, Modelling and Visualization (VMV)*, 2016.

13. O. Johannsen, **A. Sulc**, B. Goldluecke. Occlusion-aware depth estimation using sparse light field coding. In *Proc. German Conference on Computer Vision (GCPR)*, 2016.

14. O. Johannsen, **A. Sulc**, B. Goldluecke. What Sparse Light Field Coding Reveals About Scene Structure. In *Proc. Conference on Computer Vision and Pattern Recognition (CVPR)*, 2016.

15. O. Johannsen, **A. Sulc**, B. Goldluecke. Variational Separation of Light Field Layers. In *Proc. Vision, Modelling and Visualization (VMV)*, 2015.

16. O. Johannsen, **A. Sulc**, B. Goldluecke. On Linear Structure from Motion for Light Field Cameras. In *Proc. International Conference on Computer Vision (ICCV)*, 2015.

[1] Equal Contribution