Takahiro Kushida

Curriculum Vitae

Graduate School of Science and Technology
Nara Institute of Science and Technology
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Education

2017–2020 **Ph.D., Engineering**, *Nara Institute of Science and Technology*, Nara, Japan.
Advisor: Yasuhiro Mukaigawa

2015–2016 **Master of Engineering**, *Nara Institute of Science and Technology*, Nara, Japan.
Advisor: Yasuhiro Mukaigawa

2009–2013 **Bachelor of Engineering**, *Hiroshima University*, Hiroshima, Japan.

Publications

Journal Articles

2021 Daiki Kijima, **Takahiro Kushida**, Hiromu Kitajima, Kenichiro Tanaka, Hiroyuki Kubo, Hiroyuki Kubo, Takuya Funatomi, and Yasuhiro Mukaigawa. Time-of-flight imaging in fog using multiple time-gated exposures. *Optics Express*, volume 29, pages 6453–6467, March 2021. Publisher: Optical Society of America.

2020 **Takahiro Kushida**, Kenichiro Tanaka, Takahito Aoto, Takuya Funatomi, and Yasuhiro Mukaigawa. Phase disambiguation using spatio-temporally modulated illumination in depth sensing. *IPSJ Transactions on Computer Vision and Applications*, volume 12, page 1, December 2020.

2019 Masaki Kaga, **Takahiro Kushida**, Tsuyoshi Takatani, Kenichiro Tanaka, Takuya Funatomi, and Yasuhiro Mukaigawa. Thermal non-line-of-sight imaging from specular and diffuse reflections. *IPSJ Transactions on Computer Vision and Applications*, volume 11, page 8, November 2019.

2015 Bingzhi Yuan, Toru Tamaki, **Takahiro Kushida**, Yasuhiro Mukaigawa, Hiroyuki Kubo, Bisser Raytchev, and Kazufumi Kaneda. Optical tomography with discretized path integral. *Journal of Medical Imaging*, volume 2, page 033501, August 2015.

In Conference Proceedings

2022 Yasuto Nagase, **Takahiro Kushida**, Kenichiro Tanaka, Takuya Funatomi, and Yasuhiro Mukaigawa. Shape from thermal radiation: Passive ranging using multispectral far infrared measurements. In *2022 IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, June 2022.

2021 **Takahiro Kushida**, Kenichiro Tanaka, Takuya Funatomi, Komei Tahara, Yukihiro Kagawa, and Yasuhiro Mukaigawa. Practical Descattering of Transmissive Inspection Using Slanted Linear Image Sensors. In *2021 17th International Conference on Machine Vision and Applications (MVA)*, pages 1–5, Aichi, Japan, July 2021. IEEE.

2019 **Takahiro Kushida**, Kenichiro Tanaka, Takahito Aoto, Takuya Funatomi, and Yasuhiro Mukaigawa. Spatio-temporal Phase Disambiguation in Depth Sensing. In *2019 IEEE International Conference on Computational Photography (ICCP)*, pages 1–7, Tokyo, Japan, May 2019. IEEE.

2015 Bingzhi Yuan, Toru Tamaki, **Takahiro Kushida**, Bisser Raytchev, Kazufumi Kanedal, Yasuhiro Mukaigawa, and Hiroyuki Kubo. Layered optical tomography of multiple scattering media with combined constraint optimization. In *2015 21st Korea-Japan Joint Workshop on Frontiers of Computer Vision (FCV)*, pages 1–6, Mokpo, South Korea, January 2015. IEEE.

Research Experience

June,2020 – present **Postdoctoral researcher**, Nara Institute of Science and Technology.

Advisor : Yasuhiro Mukaigawa

Computer skills

Programming Languages, Libraries

Python, C++, Mitsuba2, OpenCV

Professional Services

Reviewer Optics Express

Research Interests

Computational imaging, Phisics based vision, 3D sensing