# 郭亨

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个人主页

## 工作经历

北京邮电大学 — 北京, 中国
拔尖人才教授 — 2023年11月 – 今

大阪大学 — 大阪, 日本
特任助理教授 — 2022年4月 – 2023.10

## 教育背景

大阪大学 — 大阪, 日本
多媒体信息处理，博士 | 导师：*Yasuyuki Matsushita*，施柏鑫 — 2018年10月 – 2022年3月

电子科技大学 — 成都, 中国
信号与信息处理，硕士 | 导师：曾兵，刘帅成 — 2015年9月 – 2018年7月

电子科技大学 — 成都, 中国
电子信息工程，学士 — 2011年9月 – 2015年7月

## 主持项目

国家自然科学基金优秀青年科学基金项目（海外）项目， **主持** — 2024 - 2027
国家自然科学基金面上项目，**主持** — 2025 - 2028
国家自然科学基金企业创新发展联合基金项目，**参与** — 2025 - 2028
京津冀基础研究专项，**主持** — 2025 - 2028
河北省重大科技支撑计划项目，**主持** — 2025 - 2027

## 获奖荣誉

International Conference on Network Infrastructure and Digital Content 最佳论文 (Top 1%) — 2023年10月
Meeting on Image Recognition and Understanding 最佳学生论文 (Top 1%) — 2020年4月

## 代表性工作

(∗ Equal contribution, † Corresponding author.)

[1] Youwei Lyu*, **Heng Guo***, Kailong Zhang, Si Li, Boxin Shi. "SfPUEL: Shape from Polarization under Unknown Environment Light." Annual Conference on Neural Information Processing Systems (**NeurIPS 2024**)).

[2] Li Wenjie, **Heng Guo**†, Xuannan Liu, Kongming Liang, Jiani Hu, Zhanyu Ma, Jun Guo. "Efficient Face Super-Resolution via Wavelet-Based Feature Enhancement Network." ACM International Conference on Multimedia (**ACM MM 2024**).

[3] **Heng Guo***, Jieji Ren*, Feishi Wang*, Boxin Shi, Mingjun Ren, Yasuyuki Matsushita. "DiLiGenRT: A Photometric Stereo Dataset with Quantified Roughness and Translucency." IEEE Conference on Computer Vision and Pattern Recognition. (**CVPR 2024**).

[4] Yufei Han, **Heng Guo**†, Koki Fukai, Hiroaki Santo, Boxin Shi, Fumio Okura, Zhanyu Ma, Yunpeng Jia. "NeRSP: Neural 3D Reconstruction for Reflective Objects with Sparse Polarized Images." IEEE Conference on Computer Vision and Pattern Recognition. (**CVPR 2024**).

[5] Feishi Wang*, Jieji Ren*, **Heng Guo***, Mingjun Ren, Boxin Shi. "DiLiGenT-Pi: Photometric Stereo for Planar Surfaces with Rich Details – Benchmark Dataset and Beyond." International Conference on Computer Vision. (**ICCV 2023**).

[6] Jun Hoong Chan, Bohan Yu, **Heng Guo**, Jieji Ren, Zongqing Lu, Boxin Shi. "ReLeaPS: Reinforcement Learning-based Illumination Planning for Generalized Photometric Stereo." International Conference on Computer Vision. (**ICCV 2023**).

[7] Jipeng Lv, **Heng Guo**†, Guanying Chen, Jinxiu Liang, Boxin Shi. "Non-Lambertian Multispectral Photometric Stereo via Spectral Reflectance Decomposition." International Joint Conferences on Artificial Intelligence (**IJCAI 2023**).

[8] **Heng Guo**, Boxin Shi, Yasuyuki Matsushita. "Neural BRDF Plugin for Unsupervised Photometric Stereo." IEEE International Conference on Network Intelligence and Digital Content (**IC-NIDC 2023 best paper**).

[9] Feiran Li*, **Heng Guo***, Hiroaki Santo, Fumio Okura, Yasuyuki Matsushita. "Learning to Synthesize Photorealistic Dual-pixel Images from RGBD frames." International Conference on Computational Photography (**ICCP 2023**).

[10] Lilika Makabe, **Heng Guo**, Hiroaki Santo, Fumio Okura, Yasuyuki Matsushita. "Near-light Photometric Stereo with Symmetric Lights." International Conference on Computational Photography. (**ICCP 2023**).

[11] **Heng Guo**, Fumio Okura, Boxin Shi, Takuya Funatomi, Yasuhiro Mukaigawa, Yasuyuki Matsushita. "Multispectral Photometric Stereo for Spatially-Varying Spectral Reflectances." International Journal of Computer Vision. (**IJCV 2022**).

[12] **Heng Guo***, Zhipeng Mo*, Boxin Shi, Feng Lu, Sai-Kit Yeung, Ping Tan, Yasuyuki Matsushita. "Patch-based Uncalibrated Photometric Stereo under Natural Illumination." IEEE Transactions on Pattern Analysis and Machine Intelligence. (**TPAMI 2021**).

[13] **Heng Guo**, Fumio Okura, Boxin Shi, Takuya Funatomi, Yasuhiro Mukaigawa, Yasuyuki Matsushita. "Multispectral Photometric Stereo for Spatially-Varying Spectral Reflectances: A Well-posed Problem?" IEEE Conference on Computer Vision and Pattern Recognition. (**CVPR 2021**).

[14] **Heng Guo**, Boxin Shi, Michael Waechter, Yasuyuki Matsushita. "Self-calibrating Near-light Photometric Stereo under Anisotropic Light Emission." Meeting on Image Recognition and Understanding (**MIRU 2020 outstanding paper**).

[15] **Heng Guo**, Shuaicheng Liu, Shuyuan Zhu, Heng Tao Shen, Bing Zeng. "View-Consistent MeshFlow for Stereoscopic Video Stabilization." IEEE Transactions on Computational Imaging. (**TCI 2018**).

[16] **Heng Guo**, Shuaicheng Liu, Tong He, Shuyuan Zhu, Bing Zeng, Moncef Gabbouj. "Joint Video Stitching and Stabilization from Moving Cameras." IEEE Transactions on Image Processing (**TIP 2016**).

[17] **Heng Guo**, Shuaicheng Liu, Shuyuan Zhu, Bing Zeng. "Joint Bundled Camera Paths for Stereoscopic Video Stabilization." International Conference on Image Processing. (**ICIP 2016**) (Oral).

## 学术服务

- 期刊审稿人: IEEE TPAMI, IJCV
- 会议审稿人: CVPR, ECCV, ICCV
- 论坛报告人：第22届日本信息科学与技术论坛 (情報科学技術フォーラム)