

# SHOHEI MORI, D.Eng

Junior Research Group Leader, VISUS, Univ. of Stuttgart Guest Associate Professor (Global), Faculty of Sci. & Tech., Keio Univ.

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## **EDUCATION**

Doctor of Engineering	Apr. 2013 – Mar. 2016
Graduate School of Information Science and Engineering, Ritsumeikan University	Shiga, Japan
Master of Engineering	Apr. 2011 – Mar. 2013
Graduate School of Science and Engineering, Ritsumeikan University	Shiga, Japan
Bachelor of Engineering	Apr. 2007 – Mar. 2011
Ritsumeikan University	Shiga, Japan

## WORK EXPERIENCE

Junior Research Group Leader (Lead of Mediated Reality Group)	Sep. 2024 – Present
w/ Alexander von Humboldt Prof. & Cluster of Excellence (IntCDC), VISUS, UniStuttgart Guest Associate Professor (Global)	Germany Apr. 2024 – Present
Keio University	Japan
University Assistant, Postdoctoral Researcher	Oct. 2022 – Aug. 2024
ICG, Graz University of Technology	Austria
University Project Assistant, Postdoctoral Researcher	Oct. 2018 – Sep. 2022
ICG, Graz University of Technology	Austria
Guest Lecturer (Global)	Apr. 2021 – Mar. 2024
Keio University	Japan
Guest Researcher	Aug. 2017 – Sep. 2018
ICG, Graz University of Technology	Austria
Visiting Researcher (JSPS PD)	Apr. 2016 – Sep. 2018
Keio University	Japan
Research Fellow (JSPS DC-1)	Apr. 2013 – Mar. 2016
Ritsumeikan University	Japan

# TEACHING

## **PROJECTS**

Ritsumeikan Int. Collaborative Research Promotion Program (Startup) - Immersive 3D Spatial Editing for Large Workspace with a Stretchable Stylus and a Hand-held Canvas Counterpart PI (04.2024 – 03.2025)

FWF - Real-time Three-dimensional Diminished Reality - P33634 Co-Investigator (01.2021–12.2024)

R-GIRO) - An Interdisciplinary Research Center on Supporting Cognitive and Communication for Elderly Project Member (04.2021–03.2026)

Grant-in-Aid for Young Scientists (B) - 17K12729 Principal Investigator (04.2017–09.2018)

Grant-in-Aid for JSPS Fellows (DC-1) - 13J09193 (04.2013–03.2016) (PD) 16J05114 Research Fellow (04.2016–09.2018)

Grant-in-Aid for Scientific Research (S) - 24220004 Research Collaborator (05.2012-03.2017)

# SERVICE

IPC member IEEE VR (2019–2024), IEEE ISMAR (2020–2024), 3DWeb (2020), ICAT-EGVE (2017) | DC co-chair IEEE ISMAR (2020, 2023) | Web co-chair IEEE VR (2019) | Demo co-chair IEEE ISMAR (2018) | DC mentor IEEE VR (2024) | Academic Journal Committee The Virtual Reality Society of Japan (2020 – 2024) | Support Member ISO/IEC JTC 1/SC 24/WG 9 (AR continuum concepts and reference model) (2016–2019), TrakMark (Benchmark test schemes for AR/MR geometric registration and tracking methods) (2015, 2016) | Peer-review (Journal) IEEE TVCG (2018, 2020–2023), IEEE CG&A (2020), IEEE TIM (2020), IEEE TOM (2016, 2021, 2022), Frontiers in Virtual Reality (2021), etc. Peer-review (Conference) IEEE VR (2018–2023), IEEE ISMAR (2017–2023), ACM CHI (2020, 2023), IEEE InfoVis (2020), ACM VRST (2019), AH (2019), ICAT-EGVE (2017, 2019), ACM 3DWeb (2020), APMAR (2018, 2019), etc.

<sup>&</sup>quot;Augmented Reality," TUGraz, in collab. w/D. Kalkofen (WS18–21) | P. Roth (WS18 & 19) | A. Plopski (WS22 & 23)

<sup>&</sup>quot;Virtual Reality," TUGraz, in collab. w/D. Schmalstieg (SS22) | C. Arth (SS23 & 24)

<sup>&</sup>quot;Research Seminar - Virtual Reality," TUGraz (WS22-SS24)

<sup>&</sup>quot;Biomedical Visualization | AK Computergraphics," TUGraz, in collab. w/ D. Kalkofen (WS22 & 23)

<sup>&</sup>quot;Realtime Visualisation," FHSalzburg, in collab. w/M. Tatzgern (WS20 – 23)

**Languages**: Japanese (Native), English (TOEIC: 830), German (Novice) **Programming**: C++, OpenGL/GLSL, Python, PyTorch, C# (Unity), R

National Examination: Applied Information Technology Engineer, Fundamental Information Technology Engineer

## AWARDS AND SCHOLARSHIPS

Best Paper / Demo / Presentation / Reading Group Award: IEEE ISMAR (2021, 2023), IEEE VR (2022), IIEEJ (2022), JSCAS (2022), IEEE Workshop KELVAR (2020) / IEEE ISMAR (2015) / KJMR (2014, 2015) / ICVSS (2016)

Scholarship: Ritsumeikan Univ. KENKYU-SHOREI Scholarship S, Prize Fellowship for the Doctoral Degree Students (For the JSPS DC1/DC2 achievers) (2013–2016) / Saionji Graduate School Encouragement Scholarship (For the top graduate) (2011) / Saionji Ikuei Scholarship (For the top three high achievers) (2008 – 2010) / Dean Award (2009) / Education Award (2007, 2008)

# 10 SELECTED PUBLICATIONS (FULL LIST: MY PERSONAL WEBSITE)

- 1. Reina Ishikawa, Hideo Saito, Denis Kalkofen, and Shohei Mori, Multi-layer Scene Representation from Composed Focal Stacks, IEEE Trans. on Visualisation and Computer Graphics (TVCG), Special Issue IEEE ISMAR, Vol. 29, Issue 11, pp. 4719–4729 (2023.11) **Q** Best Journal Paper Award
- 2. <u>Shohei Mori</u>, Dieter Schmalstieg, and Denis Kalkofen, *Exemplar-Based Inpainting for 6DOF Virtual Reality Photos*, IEEE Trans. on Visualisation and Computer Graphics (TVCG), Special Issue IEEE ISMAR, Vol. 29, Issue 11, pp. 4644–4654 (2023.10) **② Best Journal Paper Award Nominee**
- 3. <u>Shohei Mori</u>, Dieter Schmalstieg, and Denis Kalkofen, *Good Keyframes to Inpaint*, IEEE Trans. on Visualisation and Computer Graphics (TVCG), Vol. 29, Issue 9, pp. 3989–4000 (2022.5) **⊘ Invited TVCG Paper at IEEE ISMAR** 2022
- 4. Christoph Ebner, Shohei Mori, Peter Mohr, Yifan Peng, Dieter Schmalstieg, Gordon Wetzstein, and Denis Kalkofen, Video See-Through Mixed Reality with Focus Cues, IEEE Trans. on Visualisation and Computer Graphics (TVCG), Special Issue IEEE VR (2022.3) **Q** Best Journal Paper Award
- 5. <u>Shohei Mori</u>, Yuta Kataoka, and Satoshi Hashiguchi, *Exploring Pseudo-Weight in Augmented Reality Extended Displays*, Proc. IEEE Virtual Reality (2022.3)
- 6. David Mandl, Peter Mohr, Tobias Langlotz, Christoph Ebner, Shohei Mori, Stefanie Zollmann, Peter Roth, and Denis Kalkofen, Neural Cameras: Learning Camera Characteristics for Coherent Mixed Reality Rendering, Proc. IEEE Symp. on Mixed and Augmented Reality (ISMAR) (2021.10) **Q** Best Conference Paper Award
- 7. Shohei Mori, Okan Erat, Wolfgang Broll, Hideo Saito, Dieter Schmalstieg, and Denis Kalkofen, *InpaintFusion: Incremental RGB-D Inpainting for 3D Scenes*, IEEE Trans. on Visualisation and Computer Graphics (TVCG), Vol. 26, Issue 10 (2020.10) **⊘ Invited TVCG Paper at IEEE ISMAR 2020**
- 8. Masahiro Yamaguchi, <u>Shohei Mori</u>, Peter Mohr, Markus Tatzgern, Ana Stanescu, Hideo Saito, and Denis Kalkofen, *Video-Annotated Augmented Reality Assembly Tutorials*, Proc. ACM Symp. on User Interface Software and Technology (UIST), pp. 1010–1022 (2020.10)
- 9. Peter Mohr-Ziak, Shohei Mori, Tobias Langlotz, Bruce H. Thomas, Dieter Schmalstieg, and Denis Kalkofen, Mixed Reality Light Fields for Interactive Remote Assistance, Proc. ACM CHI Conf. on Human Factors in Computing Systems (CHI) (2020.4)
- 10. <u>Shohei Mori</u>, Sei Ikeda, Alexander Plopski, and Christian Sandor, *BrightView: Increasing Perceived Brightness of Optical See-Through Head-Mounted Displays Through Unnoticeable Incident Light Reduction*, Proc. IEEE Virtual Reality (2018.3)

# **TUTORIALS**

Shohei Mori and Richard Skarbez, A Beginner's Guide to Neural Rendering, IEEE ISMAR 2023 (2023.10.20)

Denis Kalkofen, Shohei Mori, and Markus Tatzgern, Rendering and Visualization in Mixed Reality, EG 2021 (2021.5.4)

Shohei Mori, Diminished Reality Tutorial, IEEE ISMAR 2014 (2014.9.9)

## **INVITED TALKS**

Shohei Mori, How Far Can We Go for Diminished Reality Without Neural Networks?, Workshop on Inpainting techniques for Object Removal in Indoor Scenes (IEEE ISMAR 2022 Workshop) (2022.10.21)

Shohei Mori and Hideo Saito, *Augmented Visualization: Observing as Desire*, Asia-Pacific Signal and Information Processing Association Annual Summit and Conf. (APSIPA ASC) 2017 (2017.12.13)

Shohei Mori, Augmented and Diminished Reality: Computational Imaging of Existence and Non-Existence, Int. Display Workshop (IDW) 2017 (2017.12.8)