



Erwin Wu, PhD

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Feb 11, 1994

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Homepage

<https://www.erwin-wu.com/>

Languages

German Chinese
Japanese English
Spanish (ing...)

Skills

Programming Language:

C/C++, C#, Python, Java, Matlab, R

Framework:

OpenCV, Qt, ffmpeg, CUDA, TensorFlow,
pyTorch, caffe, chainer

Others:

Unity3D, 3DS Max, Blender, SteamVR

About

Erwin Wu is a Research Assistant Professor at Tokyo Institute of Technology. He received his B.Sc.CS (with Honor) from Shanghai Jiao Tong University and received his M.Eng. and Ph.D. from Tokyo Institute of Technology, and he currently also works at SonyCSL as a research scientist. He is keen on learning different languages and culture, thus already mastered 4 languages. His research interests lies at the intersection of computer vision, vision-based HCI, and mixed reality. He is particularly interested in human pose analysis for sports now.

Education

2019-2022 **Tokyo Institute of Technology** PhD of Computer Science
School of Computing, Department of Computer Science
2017-2019 **Tokyo Institute of Technology** Master of Engineering
School of Computing, Department of Computer Science
2013-2017 **Shanghai Jiao Tong University** Bachelor of C.S. (with Honor)
School of Electronic Information and Electrical Engineering,
Department of Information Security Engineering

Experience

2022.9 - now **Tokyo Institute of Technology** Research Assistant Professor
Department of Computer Science
2022.9 - now **Sony Computer Science Laboratory** Researcher
Research in Hand Pose for Piano Learning
2021.6 - **Sony Computer Science Laboratory** Research Internship
2022.9 Research in Hand Pose Estimation supervised by Furuya Shinichi
2020.4 - **Japan Society for the Promotion of Science** Research Fellow
2022.9 Research fellowship for Young Scientists DC1 (2020-2023)
2020.7 - **Huawei Research Japan** Research Internship
2020.10 Research Intern in 3D Vision supervised by Bo Zheng
2020.1 - **Carnegie Mellon University** Visiting Scholar
2020.4 School of Computer Science, The Robotics Institute
Advisor: Kris Kitani
2017.9 - **Japan Science and Technology Agency** Research Assistant
2020.4 JST CREST Research Assistant supervised by Hideki Koike

Fellowships & Scholarships

2020 "Gakushin" Fellowship for Young Scientist (DC1) JSPS
2019 TSUBAME Doctoral Student Scholarship TokyoTech
2016 "Star of the Month" Scholarship Shanghai Jiaotong U.
2015-2016 Scholarship for Excellent Exchange Student JASSO
2013-2017 Excellent International Student Scholarship (B) Shanghai

Other Activities

2018 Student Volunteer of WISS 2018
2016-2017 President of the International Student Union at SJTU
2015-2016 Exchange Student at Kyoto University & Ritsumeikan University
2014-2015 Research Project (PRP) at Shanghai Jiao Tong University
2014 Champion of the SJTU "Hope Cup" soccer tournament 2014

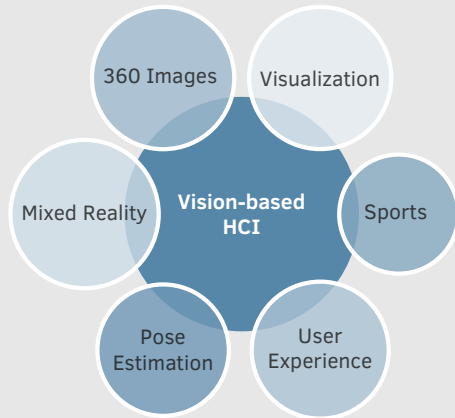
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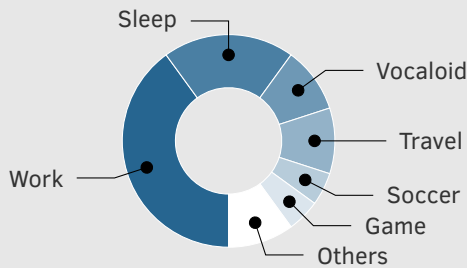
Keywords

Outgoing Talkative HCI AR/VR
Multilingual Soccer Table Tennis
Future Pose Computer Vision

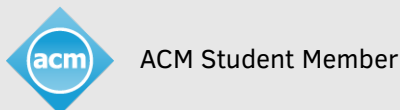
Research Interest



Daily



Memberships



ACM Student Member



IEEE Student Member

Researcher at JST CREST:
<https://sites.google.com/site/jstcrestproject/>

Representative Publications

- 2022.03 **Skiing, Fast and Slow: Evaluation of Time Distortion for VR Ski Training**
Matsumoto Takashi, Erwin Wu et al. (AH 2022)
- 2021.05 **SPinPong - Virtual Reality Table Tennis Skill Acquisition using Visual, Haptic and Temporal Cues**
Erwin Wu, Mitski Piekenbrock et al. (TVCG)
- 2020.10 **Back-Hand-Pose: 3D Hand Pose Estimation for Wrist-worn Devices via Dorsum Deformation Analysis**
Erwin Wu, Ye Yuan et al. (UIST 2020)
- 2020.6 **VR Alpine Ski Training Augmentation using Visual Cues of Leading Skier**
Erwin Wu, Florian Perteneder, Hideki Koike. (CVPR 2020)
- 2020.3 **FuturePong: Real-time Table Tennis Trajectory Forecasting using Pose Prediction Network**
Erwin Wu and Hideki Koike. (CHI'20 LBW)
- 2019.11 **How to VizSki: Visualizing Captured Skier Motion in a VR Ski Training Simulator**
Erwin Wu, Takayuki Nozawa, Florian Perteneder, Hideki Koike. (VRCAI'19)
- 2019.10 **Opisthenar: Hand Poses and Finger Tapping Recognition by Observing Back of Hand Using Embedded Wrist Camera**
Hui-Shyong Yeo, Erwin Wu, et al. (UIST'19)
- 2019.6 **OmniGlobe: An Interactive I/O System For Symmetric 360-Degree Video Communication**
Zhengqing Li, Shio Miyafuji, Erwin Wu, et al. (DIS'19)
- 2019.3 **Bitobody: Real-time Human Contact Detection and Dynamic Projection System**
Erwin Wu, Mistki Piekenbrock, Hideki Koike. (AH'19)
- 2019.1 **FuturePose - Mixed Reality Martial Arts Training Using Real-Time 3D Human Pose Forecasting with a RGB Camera**
Erwin Wu and Hideki Koike. (WACV 2019)

For a full list of my latest publications, please visit my homepage.

Honors & Awards

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|---------|---|-------------------------------|
| 2022.9 | Best Poster Award | 10th JST CREST Symposium |
| 2022.5 | Seiichi Tejima Research Award | Tokyo Institute of Technology |
| 2022.1 | AIP Network Director Award | 7th JST CREST AIP Challenge |
| 2019.11 | Best Paper Award | VRCAI 2019 |
| 2019.3 | Best Research Demo Runner-up | IEEE VR 2019 |
| 2018.12 | Best Poster Award Honorable Mention | VRST 2018 |
| 2017 | Outstanding Graduates Award | Shanghai Jiao Tong U. |
| 2016 | Excellent Exchange Program Graduates | Ritsumeikan U. |
| 2015 | Excellent International Student of the year | Shanghai Jiao Tong U. |

Patents

- 2022 US Patents, Measurement support device, method and computer program product, US Patent App. 17/066.233.
- 2021 US Patents, Measurement support device, method and computer program product, US Patent App. 63/089.139.
- 2021 Japanese Patents. Application Number: 2021-143847