

## **Changjae Oh, PhD**

Lecturer (Assistant Professor), Fellow of HEA

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### **Career**

- 2019. 09 – present** **Lecturer (Assistant Professor)**, School of Electronic Engineering and Computer Science, Queen Mary University of London, UK
- 2018. 05 – 2019. 08** **Postdoctoral Researcher**, School of Electronic Engineering and Computer Science, Queen Mary University of London, UK

### **Education**

- 2013. 03 – 2018. 02** **Ph.D.**, School of Electrical and Electronic Engineering, Yonsei University, Seoul, Republic of Korea.
- 2011. 03 – 2013. 02** **M.S.**, School of Electrical and Electronic Engineering, Yonsei University, Seoul, Republic of Korea.
- 2007. 03 – 2011. 02** **B.S.**, School of Electrical and Electronic Engineering, Yonsei University, Seoul, Republic of Korea.

### **Selected Projects**

- 2025. 10 – 2027. 10** **(Principal Investigator)** Uncertainty Aware Data Attribution Of Vision-Language Models, Huawei Technologies Duesseldorf GmbH (£326,000)
- 2024. 10 – 2025. 09** **(Principal Investigator)** Generative models-based Human-to-Robot Handover Environment, The Royal Society, UK (£19,751)
- 2024. 08 – 2027. 07** **(Principal Investigator)** Development of Multi-Modal Foundational Models and AI Accelerators for Zero-shot Intelligent Surveillance System, Korea Institute for Advancement of Technology, South Korea (£384,699)
- 09. 2019 – 12. 2022** **(Project Member)** Collaborative Object Recognition, Shared Manipulation and Learning, EPSRC, UK
- 05. 2018 – 08. 2019** **(Post-doctoral Research Assistant)** Nuclear Centre for Nuclear Robotics (NCNR) EPSRC, UK

### **Academic Experience**

#### Organizing committee

- 2022** CIS Intelligent Sensing Summer School (organizer)  
International Conference on System-Integrated Intelligence (Track chair)  
IEEE International Conference on Image Processing (Session chair)
- 2023** CIS Intelligent Sensing Winter School (organizer)
- 2024** CIS Intelligent Sensing Winter School (organizer)  
ACM SIGGRAPH European Conference on Visual Media Production (Local arrangement)  
British Machine Vision Conference (Area chair)
- 2025** Robotic Grasping and Manipulation Competition @ IEEE International Conference on Robotics and Automation (Track chair)  
Benchmarking via Competitions in Robotic Grasping and Manipulation Workshop @ IEEE/RSJ International Conference on Intelligent Robots and Systems (Organiser)  
ACM SIGGRAPH European Conference on Visual Media Production (Short papers chair)
- 2026** Robotic Grasping and Manipulation Competition @ IEEE International Conference on Robotics and Automation (Track chair)  
ACM SIGGRAPH European Conference on Visual Media Production

## Selected Publications (since 2021)

### Book chapter

- **C. Oh**, A. Xompero, A. Cavallaro, "Visual adversarial attacks and defenses," *Advanced Methods and Deep Learning in Computer Vision*, pp. 511-543, Academic Press, 2022.

### Journal articles

- L. Forneris, R. Berta, M. Fresta, L. Lazzaroni, H. Rojhan, **C. Oh**, A. Pighetti, H. Ballout, F. Tango, F. Bellotti, "A Deployment-oriented Simulation Framework for Deep Learning-based Lane Change Prediction," *IEEE Signal Processing Letters*, (accepted).
- L. Lazzaroni, F. Bellotti, A. Pighetti, L. Forneris, M. Fresta, H. Ballout, **C. Oh**, S. Pantawane, R. Berta, "An Embedded System Architecture for Robust Deep Learning-based Traffic Light Detection," *IEEE Sensors Journal*, (accepted).
- J. Corsetti, D. Boscaini, F. Giuliani, **C. Oh**, A. Cavallaro, F. Poiesi, "High-Resolution Open-Vocabulary Object 6D Pose Estimation," *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, (accepted).
- A. Pighetti, F. Bellotti, R. Berta, A. Cavallaro, L. Lazzaroni, **C. Oh**, "RAFT: Regularized Adversarial Fine-Tuning to Enhance Deep Reinforcement Learning for Self-Parking," *IEEE Sensors Letters*, vol. 9, no. 9, 2025.
- J. Kim, **C. Oh**, H. Do, K. Sohn, "3D Semantic Image Synthesis with Geometric and Semantic Consistency," *Expert Systems with Applications (ESWA)*, vol. 295, pp.128782, Jan. 2026.
- Y. L. Pang, A. Xompero, **C. Oh**, A. Cavallaro, "Stereo Hand-Object Reconstruction for Human-to-Robot Handover," *IEEE Robotics and Automation Letters (RA-L)*, vol. 10, no. 6, pp. 5761-5768, Jun. 2025.
- M. Xing, Z. Feng, Y. Su, Y. Zhang, **C. Oh**, V. Gribova, V.F. Filaretov, D. Huang, "Spatio-temporal graph-based self-labeling for video anomaly detection," *Neurocomputing*, vol. 627, pp. 129576, Feb. 2025.
- H. A. H. Ali, Y. Abbass, C. Gianoglio, A. Ibrahim, **C. Oh**, M. Valle, "Neuromorphic Tactile Sensing System for Textural Features Classification," *IEEE Sensors Journal*, vol.24, no. 10, pp. 17193-17207, May 2024.
- L. Tian, **C. Oh**, A. Cavallaro, "Test-time Adaptation for 6D Pose Tracking," *Pattern Recognition*, vol. 152, Aug. 2024.
- I. Vitanov, I. Farkhatdinov, B. Denoun, F. Palermo, A. Otaran, J. Brown, B. Omarali, T. Abrar, M. Hansard, **C. Oh**, S. Poslad, C. Liu, H. Godaba, K. Zhang, L. Jamone, K. Althoefer, "A Suite of Robotic Solutions for Nuclear Waste Decommissioning," *Robotics*, vol. 10, no. 4, 2021.
- A. Shamsabadi, **C. Oh**, A. Cavallaro, "Semantically Adversarial Learnable Filters," *IEEE Transactions on Image Processing (TIP)*, vol. 30, pp. 8075–8087, Sep. 2021.
- **C. Oh**, A. Cavallaro, "View-Action Representation Learning for Active First-Person Vision," *IEEE Transactions on Circuits Systems and Video Technology (TCSVT)*, vol. 32, no. 2, pp. 480–491, Feb. 2021.
- Q. Fu, X. Chen, M. Asad, S. Yuan, **C. Oh**, Gregory Slabaugh , "Robust Photo-Realistic Hand Gesture Generation: from Single View to Multiple View," *ACM Multimedia (ACM MM)*, Oct. 2025.
- C. Zhu, H. Wang, Y. L. Pang, **C. Oh**, "LaVA-Man: Learning Visual Action Representations for Robot Manipulation," *Conference on Robot Learning (CoRL)*, Sep. 2025.
- Y. Wu, Y. L. Pang, A. Cavallaro, **C. Oh**, "Learning human-to-robot handovers through 3D scene reconstruction," *IEEE Int. Conf. Robot Human Interactive Commun. (RO-MAN)*, Aug. 2025.
- L. Tian, A. Sorrenti, Y. Pang, G. Bellitto, S. Palazzo, C. Spampinato, **C. Oh**, "Incremental Object 6D Pose Estimation," *International Conference on Pattern Recognition (ICPR)*, Dec. 2024.
- Z. Ye, J. Cho, **C. Oh**, "Improving Image De-Raining Using Reference-Guided Transformers," *IEEE International Conference on Image Processing (ICIP)*, Oct. 2024.
- J. Corsetti, D. Boscaini, **C. Oh**, A. Cavallaro, F. Poiesi, "Open-vocabulary object 6D pose estimation," *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, Jun. 2024.
- J. Kim, **C. Oh**, H. Do, S. Kim, K. Sohn, "Diffusion-driven GAN Inversion for Multi-Modal Face Image Generation," *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, Jun. 2024.
- M. Xing, Z. Feng, Y. Su, **C. Oh**, "Learning by Erasing: Conditional Entropy based Transferable Out-Of-Distribution Detection," *AAAI Conference on Artificial Intelligence*, Feb. 2024.
- A. Smiles, K. Chavanakunakorn, B. Omarali, **C. Oh**, I. Farkhatdinov, "Implementation of a Stereo Vision System for a Mixed Reality Robot Teleoperation Simulator," *Annual Conference Towards Autonomous Robotic Systems*, 2023.
- L. Tian, A. Cavallaro, **C. Oh**, "Cluster-based 3D Keypoint Detection for Category-agnostic 6D Pose Tracking," *IEEE International Conference on Image Processing (ICIP)*, Oct. 2022.
- H. Wang, C. Zhu, Z. Ma, **C. Oh**, "Improving Generalization of Deep Networks for Estimating Physical Properties of Containers and Fillings," *IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Grand Challenge on Audio-visual object classification for human-robot collaboration (1st place)*, May 2022.
- H. Wang, **C. Oh**, "Boosting Video Object Segmentation based on Scale Inconsistency," *IEEE International Conference on Multimedia and Expo (ICME)*, Jul. 2022.
- Z. Ma, **C. Oh**, "A Wavelet-based Dual-stream Network for Underwater Image Enhancement," *IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, May 2022.
- J. Cho, J. Lee, **C. Oh**, W. Song, K. Sohn, "Wide and Narrow: Video Prediction from Context and Motion," *British Machine Vision Conference. (BMVC)*, Nov. 2021.
- **C. Oh**, Y. Pang, A. Cavallaro, "OHPL: One-shot Hand-eye Policy Learner," *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, Sep. 2021.

### Conference proceedings

- C. Cui, C. Zhu, **C. Oh**, A. Cavallaro, "Improving Generalization of Language-Conditioned Robot Manipulation," *IEEE/RSJ Int. Conf. Intell. Robots Syst. (IROS)*, Oct. 2025.