TZE HO ELDEN TSE

https://eldentse.github.io

Intelligent Robotics Laboratory, School of Computer Science, University of Birmingham

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EDUCATION

University of Birmingham, United Kingdom   *Feb. 2020 - present*
Ph.D. in Computer Science
Supervised by Dr. Hyung Jin Chang, Dr. Kwang In Kim and Prof. Aleš Leonardis
Research area: Graph Neural Networks in Computer Vision

Cranfield University, United Kingdom   *Sept. 2018 - Jun. 2020*
PGDip in Engineering Competence
Part of BAE Systems graduate scheme

University of Oxford, United Kingdom   *Oct. 2014 - Jul. 2018*
M.Eng in Engineering Science (First Class Honours, 78%)
Specialised in Information Engineering

WORK EXPERIENCE

University of Birmingham, United Kingdom   Mar. 2022 - present
Research Assistant

· Collaboration with Dongguk University Machine Learning Lab.
· Project title: "*Graph Neural Network for Visual Recognition and Representation*"
· Project abstract : In this research, we are developing a deep semantic graph neural network based knowledge representation and learning framework for high-level vision tasks, such as hand-object pose estimation and representation.

BAE Systems, United Kingdom   Sept. 2018 - Jul. 2021
PLD Engineer

· Hardware sensor design for Eurofighter Typhoon (6 months)
· PLD verification for F-16 head-up-display (6months)
· AI R&D with Innovation and Growth Team (6 months)
· PLD verification for flight control computer (16 months)

PUBLICATIONS

Spectral Topology Augmentation for Message Passing Neural Networks
Jiwoong Park*, **Tze Ho Elden Tse***, Hyung Jin Chang, Jin Young Choi
The 36th Conference on Neural Information Processing Systems (NeurIPS 2022, in preparation.)

S^{2}Contact: Graph-based Network for 3D Hand-Object Contact Estimation with Semi-Supervised Learning
Tze Ho Elden Tse*, Zhongqun Zhang*, Kwang In Kim, Aleš Leonardis, Feng Zheng, Hyung Jin Chang
European Conference on Computer Vision (ECCV 2022, currently under review.)

Collaborative Learning for Hand and Object Reconstruction with Attention-guided Graph Convolution
Tze Ho Elden Tse, Kwang In Kim, Aleš Leonardis, Hyung Jin Chang
IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR 2022)

TP-AE: Temporally Primed 6D Object Pose Tracking with Auto-Encoders
Linfang Zheng, Aleš Leonardis, **Tze Ho Elden Tse**, Nora Horanyi, Wei Zhang, Hua Chen, Hyung Jin Chang
The 39th IEEE Conference on Robotics and Automation (ICRA 2022)

No Need to Scream: Robust Sound-based Speaker Localisation in Challenging Scenarios
Tze Ho Elden Tse, D. De Martini and L. Marchegiani
The 11th International Conference on Social Robotics (ICSR 2019)

TEACHING

Teaching Assistant	[02/2022-07/2022] Computer Vision and Imaging
	[09/2021-07/2022] MSc Computer Science project
	[09/2021-01/2022] Programming for Data Science and AI

ACADEMIC SERVICES

Reviewer	CVPR 2022, 2021; ICCV 2021; BMVC 2021; NeurIPS 2020

AWARDS

2014-2018	College Scholarship for Outstanding Performance in Engineering Exams

TECHNICAL STRENGTHS

Programming Languages	Python, SystemVerilog, VHDL, MATLAB
Libraries	PyTorch, PyTorch Geometric, OpenCV