Ta-Ying Cheng (Tim)

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EDUCATION

University of Oxford Oxford, United Kingdom
Doctor of Philosophy (D. Phil.) in Computer Science. Supervision: Prof. Niki Trigoni, Prof. Andrew Markham Oct 2021 – Present

- Focus: **3D Reconstruction, 3D Computer Vision**

Hong Kong University of Science and Technology (HKUST) Hong Kong
First Class Honours in B.Eng – Computer Science Sept 2016 – June 2020

- Academics: **Graduation Grade Average 3.850, Major GPA 3.972**, Dean's List x 4, Admission Scholarship

Ecole Polytechnique Fédérale de Lausanne (EPFL) Lausanne, Switzerland
Exchange Student in Computer Science (Informatique) Sept 2018 – Dec 2018

- Graduate Level Courses: Machine Learning Programming, Android Programming

PUBLICATIONS

3DMiner: Discovering Shapes from Large-Scale Unannotated Image Datasets. ***In Submission.***
Ta-Ying Cheng, *Matheus Gadelha, Soren Pirk, Thibault Groueix, Radomir Mech, Andrew Markham, Niki Trigoni*

Meta-Sampler: Almost-Universal yet Task-Oriented Sampling for Point Clouds. ***ECCV 2022.***
Ta-Ying Cheng, *Qingyong Hu, Qian Xie, Niki Trigoni, Andrew Markham*

Pose Adaptive Dual Mixup for Few-Shot Single-View 3D Reconstruction. ***AAAI 2022.***
Ta-Ying Cheng*, *Hsuan-Ru Yang*, Niki Trigoni, Hwann-Tzong Chen, Tyng-Luh Liu (*=Equal Contribution)*

SeqDynamics: Visual Analytics for Evaluating Online Problem-solving Dynamics.
Computer Graphics Forum, vol. 39, no.3, pp. 511-522, 2020.
Meng Xia, Min Xu, Chuan-en Lin, ***Ta-Ying Cheng,*** *Huamin Qu, Xiaojuan Ma*

ARchitect: Building Interactive Virtual Experiences from Physical Affordances by Bringing Human-in-the-Loop. ***ACM CHI 2020.***
Chuan-En Lin,* ***Ta-Ying Cheng*,*** *Xiaojuan Ma (*=Equal Contribution)*

RESEARCH/INTERNSHIP EXPERIENCES

Research Scientist Intern at **Adobe Inc.,** *London, UK* June 2022 – Dec 2022

- Proposed a new task of mining 3D out of large-scale unannotated images
- Proposed an end-to-end pipeline to reconstruct an occupancy field given large-scale in-the-wild images
- Work submitted for CVPR 2023

Research Assistant (Computer Vision) at **Academia Sinica,** *Taiwan* Sept 2020 – Sept 2021

- Proposed a novel mixup method and few-shot learning procedure for 3D reconstruction
- Achieved state-of-the-art under 1, 10 and 25-shot settings in the ShapeNet dataset
- Provided new benchmarks for new Pix3D in-the-wild dataset

Research Intern at **HKUST HCI Initiative,** *Hong Kong* Feb 2019 – Sept 2019

- Developed ARchitect, a system for interactive virtual experiences through AR and deep learning
- Deployed Inception V3 and Mobile-Net SSD to android phone through C# in ARchitect
- Measured presence, trust, and workload of users using ARchitect and provided future design guidelines

PROFESSIONAL SERVICES/TEACHING

Reviewer: AAAI (2022), CVPR (2023)
Teaching Assistant: Advanced Topics in Machine Learning (Spring 2022) Deep Learning (Spring 2022)