

CHENG LIN (林钺)

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EDUCATION

The University of Hong Kong (HKU)

2016 - 2021

Ph.D. in Computer Science

Supervisor: Prof. Wenping Wang (IEEE Fellow, ACM Fellow)

Research Interests: Geometric Modeling, 3D Vision, Shape Analysis, Computer Graphics

Shandong University (SDU)

2012 - 2016

B.E. in Software Engineering

GPA: 91.91/100 (4.66/5.0) Ranking: 1/299

PUBLICATIONS

Yuan Liu, Peng Wang, **Cheng Lin**, Xiaoxiao Long, Jiepeng Wang, Lingjie Liu, Taku Komura, Wenping Wang*, *NeRO: Neural Geometry and BRDF Reconstruction of Reflective Objects from Multiview Images*, SIGGRAPH 2023 (conditionally accept)

Xiaoxiao Long, **Cheng Lin***, Lingjie Liu, Yuan Liu, Peng Wang, Christian Theobalt, Taku Komura, Wenping Wang*, *NeuralUDF: Learning Unsigned Distance Fields for Multi-view Reconstruction of Surfaces with Arbitrary Topologies*, CVPR 2023 (* corresponding authors)

Xiaoxiao Long, **Cheng Lin**, Peng Wang, Taku Komura, Wenping Wang, *SparseNeuS: Fast Generalizable Neural Surface Reconstruction from Sparse Views*, ECCV 2022

Yuan Liu, Yilin Wen, Sida Peng, **Cheng Lin**, Xiaoxiao Long, Taku Komura, Wenping Wang, *Gen6D: Generalizable Model-Free 6-DoF Object Pose Estimation from RGB Images*, ECCV 2022

Weikai Chen, **Cheng Lin**, Weiyang Li, Bo Yang, *3PSDF: Three-Pole Signed Distance Function for Learning Surfaces with Arbitrary Topologies*, CVPR 2022

Zhiyang Dou, **Cheng Lin**, Rui Xu, Lei Yang, Shiqing Xin, Taku Komura, Wenping Wang, *Coverage Axis: Inner Point Selection for 3D Shape Skeletonization*, EuroGraphics(EG) 2022

Xiaoxiao Long, **Cheng Lin**, Lingjie Liu, Wei Li, Christian Theobalt, Ruigang Yang, Wenping Wang, *Adaptive Surface Normal Constraint for Depth Estimation*, ICCV 2021

Cheng Lin, Changjian Li, Yuan Liu, Nenglun Chen, Yi-King Choi, Wenping Wang, *Point2Skeleton: Learning Skeletal Representations From Point Clouds*, CVPR 2021 (Oral, Best Paper Candidate)

Yuan Liu, Lingjie Liu, **Cheng Lin**, Zhen Dong, Wenping Wang, *Learnable Motion Coherence for Correspondence Pruning*, CVPR 2021

Cheng Lin, Tingxiang Fan, Wenping Wang, Matthias Nießner, *Modeling 3D Shapes by Reinforcement Learning*, ECCV 2020

Cheng Lin, Lingjie Liu, Changjian Li, Leif Kobbelt, Bin Wang, Shiqing Xin, Wenping Wang, *SEG-MAT: 3D Shape Segmentation Using Meidal Axis Transform*, IEEE TVCG 2020

Cheng Lin, Changjian Li, Wenping Wang, *Floorplan-Jigsaw: Jointly Estimating Scene Layout and Aligning Partial Scans*, ICCV 2019

Lingjie Liu, Duygu Ceylan, **Cheng Lin**, Wenping Wang, Niloy Mitra, *Image-based reconstruction of wire art*, SIGGRAPH(TOG) 2017

Wei Gai, Chenglei Yang, Yulong Bian, Chia Shen, Xiangxu Meng, Lu Wang, Juan Liu, Mingda Dong, Chengjie Niu, **Cheng Lin**, *Supporting easy physical-to-virtual creation of mobile vr maze games: a new genre*, SIGCHI 2017

Cheng Lin, Xiaowen Sun, Chenglei Yue, Chenglei Yang, Wei Gai, Pu Qin, Juan Liu, Xiangxu Meng, *A novel workbench for collaboratively constructing 3D virtual environment*, IIKI 2017 (Procedia Computer Science)

HONORS (SELECTED)

Outstanding Contributor [Tencent]	2022
Postgraduate Scholarship [HKU]	2016 - 2020
Computer Science Scholarship [HKU]	2016, 2018
Google Excellence Scholarship [Google]	Aug 2015
President's Scholarship [the highest honor in SDU] (Top 0.1%)	Nov 2015
Baosteel Scholarship [Baosteel]	Oct 2015
Top 100 Outstanding CS Students in China [China Computer Federation (CCF)]	Sep 2015
National Scholarship of China [Ministry of Education, China] (Top 1%)	2013, 2014, 2015

EXPERIENCE

Digital Content Technology Center, Tencent Games	2021 - Present
- Senior Researcher	
- Automatic 3D shape modeling for game avatars	
Technical University of Munich (TUM)	2019 - 2020
- Visiting Researcher Advisor: Prof. Matthias Nießner	
- 3D scene understanding, 3D shape modeling, deep reinforcement learning (DRL)	
Research Center of Digital Media Technology, Ministry of Education (SDU)	2014 - 2016
- Research Assistant Advisor: Prof. Chenglei Yang	
- Human computer interaction (HCI), ubiquitous computing, VR/AR	

SERVICES

Journal Reviewer	IEEE TPAMI 2021; IEEE TVCG 2021,2022,2023; IEEE TMI 2023; IEEE TKDE 2021; Computers & Graphics (C&G) 2022
Conference Reviewer	CVPR 2022,2023; SIGGRAPH 2022,2023; ECCV 2022, 3DV 2022, SIGGRAPH AISA 2022

TALKS

Title: 3D Digital Content Technology - Representation, Understanding, Creation	
CSIG Virtual Reality and HCI Seminar, China Society of Image and Graphics (CSIG)	July, 2022
Title: Geometric Learning and Analysis for High-level Shape Understanding	
Tencent AI Lab	October, 2021
Title: Point2Skeleton: Learning Skeletal Representations of Point Clouds	
Vision and Learning Seminar (Valse Webinar)	August, 2021

Title: State-of-the-art Applications of Medial Axis Transform in 3D Vision and Shape Analysis
 Advanced Computer Graphics, ShanghaiTech University *March, 2021*

Title: Modeling 3D Shapes by Reinforcement Learning
 Holistic Scene Structures for 3D Vision, ECCV 2020 Workshop *August, 2020*

PATENTS

A 3D modeling system with methods, devices, and storage medium. *Apr 2023*
 - China Invention Patent (Pending)

A mixed-reality game system based on ubiquitous computing
 - China Invention Patent (Granted) CN105373224B *Jun 2016*

A collaborative scene modeling system based on wide-angle folding touch screens
 - China Invention Patent (Granted) CN106406430B *Mar 2016*

A collaborative scene modeling system based on mobile terminals and holographic display
 - China Invention Patent (Granted) CN104794752B *Apr 2016*

TEACHING

Teaching Assistant of Undergraduate Courses:

COMP3359-HKU Artificial Intelligence Applications [Section 2A, 2019]

COMP2121-HKU Discrete mathematics [Section 1B, 2018]

Teaching Assistant of Graduate Courses:

COMP8504-HKU Geometric Modeling and Computing [Section 2A, 2019]

COMP7507-HKU Visualization and Visual Analytics [Section 1A, 2016, 2017]

SKILLS

Programming Languages Python, Java, C/C++, MATLAB, C#

Tools and Packages Pytorch, OpenCV, CGAL, OpenGL, OpenNI

EXTRACURRICULAR ACTIVITIES

Tenor of the Schola Cantorum, Shunhing College, HKU *Sep 2016 - Feb 2018*

Leader of the Art and Literature Department, Student Union, SDU *Sep 2013 - Jun 2014*