CHANGJIAN LI

GraphDeco, 2004 route des lucioles BP 93, FR-06902, Sophia Antipolis, France
(+33)0781960521 ⋄ chjili2011@gmail.com ⋄ Google Scholar

RESEARCH INTEREST

I have a great passion for working on Graphics and Vision problems with a broad range of interests in sketch-based shape modeling, 3D reconstruction, 3D vision, medical image processing, deep learning and geometry processing.

PROFESSIONAL EXPERIENCE

Starting Researcher *Oct. 2021 - present*
GraphDeco Group, Inria Sophia-Antipolis, France

Postdoctoral Research Associate *Oct. 2019 - Sep. 2021*
Smart Geometry Processing Group, University College London, UK
Hosted by Prof. Niloy Mitra

EDUCATION

The University of Hong Kong, Hong Kong *Aug. 2014 - Sep. 2019*
Ph.D., Department of Computer Science
Supervisor: Prof. Wenping Wang

Shandong University, Jinan *Sep. 2010 - Jun. 2014*
BEng, Software Engineering
Software College

SELECTED PUBLICATIONS

- **corresponding author,* $^{\#}$*joint first author*
- ACM Transactions on Graphics, along with the associated SIGGRAPH conference, is the most prestigious journal in Computer Graphics. IEEE CVPR is one of the three top Vision conferences. MICCAI and IPMI are the leading conferences in Medical Image Processing.

1. **Changjian Li**, Hao Pan, Adrien Bousseau, Niloy Mitra. 2020. *Sketch2CAD: Sequential CAD Modeling by Sketching in Context.* ACM Trans. Graph., 39(6), 2020, proceedings of SIGGRAPH Asia, 2020.

2. Zhiming Cui$^{\#}$, Bojun Zhang$^{\#}$, Chunfeng Lian, **Changjian Li***, Lei Yang, Min Zhu*, Wenping Wang, Dinggang Shen*. 2021. *Hierarchical Morphology-Guided Tooth Instance Segmentation from CBCT Images.* Information Processing in Medical Imaging (IPMI) 2021. (Oral Presentation)

3. Cheng Lin, **Changjian Li***, Yuan Liu, Nenglun Chen, Yi-King Choi, Wenping Wang*. 2021. *Point2Skeleton: Learning Skeletal Representations from Point Clouds.* IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2021. (Oral Presentation, Best Paper Nomination)

4. **Changjian Li**, Hao Pan, Yang Liu, Xin Tong, Alla Sheffer, Wenping Wang. 2018. *Robust Flow-Guided Neural Prediction for Sketch-Based Freeform Surface Modeling.* ACM Trans. Graph., 37(6), 2018, proceedings of SIGGRAPH Asia 2018.

5. **Changjian Li**, Hao Pan, Yang Liu, Xin Tong, Alla Sheffer, Wenping Wang. 2017. *BendSketch:*

Modeling Freeform Surfaces Through 2D Sketching. ACM Trans. Graph., 36(4), 2017, proceedings of SIGGRAPH 2017.

FULL PUBLICATION LIST

**corresponding author, #joint first author*

3D Shape Modeling

1. **Changjian Li**, Hao Pan, Adrien Bousseau, Niloy Mitra. 2020. *Sketch2CAD: Sequential CAD Modeling by Sketching in Context.* ACM Trans. Graph., 39(6), 2020, proceedings of SIGGRAPH Asia, 2020.

2. **Changjian Li**, Hao Pan, Yang Liu, Xin Tong, Alla Sheffer, Wenping Wang. 2018. *Robust Flow-Guided Neural Prediction for Sketch-Based Freeform Surface Modeling.* ACM Trans. Graph., 37(6), 2018, proceedings of SIGGRAPH Asia 2018.

3. **Changjian Li**, Hao Pan, Yang Liu, Xin Tong, Alla Sheffer, Wenping Wang. 2017. *BendSketch: Modeling Freeform Surfaces Through 2D Sketching.* ACM Trans. Graph., 36(4), 2017, proceedings of SIGGRAPH 2017.

4. Hao Pan, Yang Liu, Alla Sheffer, Nicholas Vining, **Changjian Li**, Wenping Wang. 2015. *Flow Aligned Surfacing of Curve Networks.* ACM Trans. Graph., 36(4), 2015, proceedings of SIGGRAPH 2015.

3D Shape Analysis

5. Cheng Lin, **Changjian Li***, Yuan Liu, Nenglun Chen, Yi-King Choi, Wenping Wang*. 2021. *Point2Skeleton: Learning Skeletal Representations from Point Clouds.* IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2021. (Oral Presentation, Best Paper Nomination Award)

6. Cheng Lin, Lingjie Liu, **Changjian Li**, Leif Kobbelt, Bin Wang, Shiqing Xin, Wenping Wang. 2020. *SEG-MAT: 3D Shape Segmentation Using Medial Axis Transform.* IEEE Visualization and Computer Graphics (TVCG), 2020).

Medical Image Processing

7. Zhiming Cui, **Changjian Li**, Lei Yang, Chunfeng Lian, Feng Shi, Wenping Wang, Dijia Wu, Dinggang Shen. 2021. *VertNet: Accurate Vertebra Localization and Identification Network from CT Images.* International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), 2021.

8. Zhiming Cui, **Changjian Li**, Zhixu Du, Nenglun Chen, Guodong Wei, Runnan Chen, Lei Yang, Dinggang Shen, Wenping Wang. 2021. *Structure-Driven Unsupervised Domain Adaptation for Cross-Modality Cardiac Segmentation.* IEEE Transactions on Medical Imaging (TMI), 2021.

9. Zhiming Cui#, Bojun Zhang#, Chunfeng Lian, **Changjian Li***, Lei Yang, Min Zhu*, Wenping Wang, Dinggang Shen*. 2021. *Hierarchical Morphology-Guided Tooth Instance Segmentation from CBCT Images.* Information Processing in Medical Imaging (IPMI) 2021. (Oral Presentation)

10. Zhiming Cui, **Changjian Li**, Nenglun Chen, Guodong Wei, Runnan Chen, Yuanfeng Zhou, Ding-

gang Shen*, Wenping Wang*. 2021. *TSegNet: an Efficient and Accurate Tooth Segmentation Network on 3D Dental Model.* Medical Image Analysis (MIA), 2021.

11. Zhiming Cui, **Changjian Li**, Wenping Wang. 2019. *ToothNet: Automatic Tooth Instance Segmentation and Identification from Cone Beam CT Images.* IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2019.

3D Reconstruction

12. Yushiang Wong, **Changjian Li**, Matthias Niessner, Niloy Mitra. 2021. *RigidFusion: RGB-D Scene Reconstruction with Rigidly-moving Objects.* Eurographics (EG), 2021.

13. Cheng Lin, **Changjian Li**, Wenping Wang. 2019. *Floorplan-Jigsaw: Jointly Estimating Scene Layout and Aligning Partial Scans.* International Conference on Computer Vision (ICCV), 2019.

3D Texture Synthesis

14. Hui Zhang, Lei Yang, **Changjian Li**, Bojian Wu, Wenping Wang. 2021. *ScaffoldGAN: Synthesis of Scaffold Materials based on Generative Adversarial Networks.* Computer-Aided Design (CAD), 2021.

RESEARCH EXPERIENCE

Research Intern Feb. 2016 - Aug. 2018
Microsoft Research Asia, Beijing *Multiple Times*

- **Mentor:** Dr. Hao Pan, and Dr. Xin Tong

Research Assistant Feb. 2014 - Jun. 2014
The University of Hong Kong, Hong Kong

- **Supervisor:** Prof. Wenping Wang
- Bachelor Thesis: Sketch-based Modeling: An Intuitive Modeling Interface.

INVITED TALKS

School of Software, Tsinghua University, China Dec. 2021
Creating, Analyzing and Processing 3D Data: Applications to interactive 3D modeling and to medical imaging.

School of Informatics, University of Edinburgh, UK Oct. 2021
Creating, Analyzing and Processing 3D Data: Applications to interactive 3D modeling and to medical imaging.

Stanford Human-Computer Interaction Group, Stanford, US Jan. 2021
Sketch2CAD: Sequential CAD Modeling by Sketching in Context.

AI Lab, Autodesk, US Jan. 2021
Sketch2CAD: Sequential CAD Modeling by Sketching in Context.

Software College, Shandong University, China Oct. 2019
Sketch-based Freeform Surface Modeling.

iDDA, The Chinese University of Hong Kong (Shenzhen), China Jul. 2019

SketchAShape: Sketch-based Freeform Surface Modeling.

IRC Lab, Shandong University, China Mar. 2019
Robust Flow-Guided Neural Prediction for Sketch-Based Freeform Surface Modeling.
Automatic Tooth Instance Segmentation and Identification from CBCT Images.

DGP Lab, University of Toronto, CA Sept. 2018
BendSketch: Modeling Freeform Surfaces Through 2D Sketching.

GAMES: Graphics And Mixed Environment Seminar, China Nov. 2018
Robust Flow-Guided Neural Prediction for Sketch-Based Freeform Surface Modeling.

IN THE PRESS

CCTV News Report. 2019
World Artificial Intelligence Conference (WAIC) - SketchCNN.

Computer Vision News, The magazine of the algorithm community. 2019
ICCV Daily 2019. - Floorplan-Jigsaw.

IEEE Computer Society. 2019
Poster Sessions Provoke Deep Discussions at the 2019 Conference on CVPR - ToothNet.

SIGGRAPH Asia Technical Paper Press Releases. 2018
SketchCNN: Making it Easier To Transform FreeForm 2D Sketching Into 3D Models.

Seamless, Virtual Reality. 2018
A new method using CNN to model 3D surface from handwritten 2D sketch.

TEACHING ASSISTANT

COMP0119 - Acquisition and Processig of 3D Geometry. UCL, CS.	2020-2021, S2
COMP2396 - Object Oriented Programming and Java. HKU, CS.	2017-2018, S2
ENGG1111 - Computer Programming and Applications. HKU, CS.	2016-2017, S1
COMP7507 - Visualization and Visual Analytics. HKU, CS.	2015-2016, S1
ENGG1111 - Computer Programming and Applications. HKU, CS.	2014-2015, S1

MENTORING

Zhiming Cui	2018-2022, HKU
Cheng Lin	2017-2021, HKU
Yushiang Wong	2019-2021, UCL
Guangshun Wei	2021-, SDU
Felix Hähnlein	2021-, INRIA

CONFERENCE PROGRAM COMMITTEES

GDC	2022

REVIEWER SERVICE

ACM SIGGRAPH	2021, 2022
ACM SIGGRAPH Asia	2015, 2019, 2020, 2021
Computer-Aided Design	2022

Conference on Computer Vision and Pattern Recognition (CVPR)	2021
International Conference on Computer Vision (ICCV)	2021
IEEE Transactions on Visualization & Computer Graphics (TVCG)	2020, 2021, 2022
Eurographics (EG)	2019, 2022
Computer Graphics Forum (CGF)	2019
Journal of Computer Science and Technology (JCST)	2019
Pacific Graphics (PG)	2018
Eurographics Symposium on Geometry Processing (SGP)	2018
International Conference on Computer-Aided Design and Graphics (CAD&CG)	2015
Sensors	2020
ACM Symposium on User Interface Software and Technology (UIST)	2020

AWARDS AND PRIZES

YS & Christabel Lung PG Scholarship (HKU).	2014
President's Scholarship of Shandong University (top **0.5%**, highest student honor).	2013
Google Excellent Student Scholarship (top **0.5%**).	2013
Nation Scholarship of China (top **2%**, twice).	2011, 2012
Excellent Student of Shandong Province (top **0.05%**).	2012
Bronze Medal - The ACM/ICPC Asia Regional Contest, Changchun Site.	2012

MISC

Language: Mandarin(native), English(fluent), Cantonese(basic)
Hobby: Basketball, Swimming, Cooking, Badminton, Hiking, Movie