

Pan Wei

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Education

Singapore University of Technology and Design

Ph.D

Pillar of Engineering Product Development

Supervisors: Prof. CHEN Lujie

Singapore

Sep. 2013 – Mar. 2018

Zhejiang University

B.Eng, 3.6/4.0

Chu KoChen Honors College in Optical Engineering

Supervisors: Prof. LIU Xu, Prof. KUANG Cuifang

Hangzhou, China

Aug. 2009 – July 2013

Research Interests

Mesh Processing, Computational Geometry, Geometric Learning, Rapid Prototyping, Computer Aided Design, Algorithm and Optimization, Automation Design

Publications

1. **Wei Pan**, Yuanhao Gong, Wenming Tang, Jun Liu, Guoping Qiu. "HLO: Half-kernel Laplacian Operator for Surface Smoothing." arXiv:1905.04678 (2019).
2. **Wei Pan**, Yuanhao Gong, Guoping Qiu. "Parallel Curvature Filter for High Performance Image Processing.", *IWAIT-IFMIA2019*, Singapore.
3. **Wei Pan**, Lujie Chen. "Transformation of LEGO Models.", *Computer Aided Design and Applications*, 2018
4. **Wei Pan**, Lujie Chen. "Design of LEGO assembly transformation." in Proceedings of CAD'17, Okayama, Japan, 2017.
5. **Wei Pan**, Lujie Chen, and Stylianos Dritsas. "Pick-and-place process sequencing for transformation of rasterized 3D structures." *Automation in Construction* 75 (2017): 56-64. doi: j.autcon.2016.12.007
6. **Wei Pan**, Lujie Chen. "Moving Sequence Generation Based on Hungarian Method for Pick-and-Place Process." page 47-52, in Proceedings of CAD'15, London, United Kingdom, 2015.
7. Si Guang Yuan, Eunice Sok Ping Leong, **Wei Pan**, Chan Choy Chum, and Yan Jun Liu. "Plasmon-induced transparency in coupled triangle-rod arrays." *Nanotechnology* 26, no. 2 (2014): 025201.

Patents:

1. 刘军, 潘威, 唐文明, 龚元浩, 邱国平. 一种3D成像扫描设备及扫描方法: 中国, CN109141281A[P], 2019.01.04.
2. 唐文名, 龚元浩, 潘威, 刘军, 邱国平. 一种基于三维物体识别的机械臂手眼标定方法及装置. CN2018113113701. 2018.11.06.

3. 潘威, 龚元浩, 唐文名, 刘军, 邱国平. 基于拉普拉斯算子的三角网格滤波方法及终端设备. CN2019102347071. 2019.03.26.

Experience

Research Fellow

Shenzhen University, Shenzhen

Advisor: Prof. QIU Guoping

Jun 2018 – now

3d learning-based vision algorithm, computer graphics and 3 dimensional robotic pick and place process.

PhD Researcher

SUTD, Singapore

Advisor: Prof. CHEN Lujie

Sep. 2013 – Mar. 2018

Algorithm and software development in C++ to achieve large scale rapid prototyping and fabrication. Developed algorithms for rasterized model transformations and rendering tools in computer graphics; Projects include: Fresh Press Modeler: a novel system that generates tailored geometry for ease of assembly, Embodied Prototyping: a design-fabrication framework for large-scale model manufacturing, Pick-and-place sequencing development for voxels and Lego bricks, etc.

Research Intern

IMRE, A*STAR, Singapore

Advisor: Dr. LIU Yanjun

May 2014 – Sep. 2014

Tested the plasmon-induced transparency (PIT) phenomena on a gold triangle-rod hybrid nanostructure arrays using transmission spectroscopy and FDTD simulation.

Thesis Project

Zhejiang University, Hangzhou

Advisor: Prof. KUANG Cuifang, Prof. Liu Xu

Jan. 2013 – July 2013

Software development in C++ for STORM microscope.

Visiting Student

University of Alberta, Edmonton

Advisor: Prof. Zubin Jacob

Sep. 2012 – Dec. 2012

Survey on Super Resolution Fluorescence Microscopy: STED and STORM.

Research Intern

Kuang-Chi Institute, Shenzhen

Advisor: Dr. GUO Jie

July 2012 – Aug. 2012

Antenna's design and simulation with COMSOL and CST using metamaterials; Kuang-Chi Young Talents Awards.

Optical Design Competition

Zhejiang University, Hangzhou

Project Leader

Feb. 2012 – July 2012

Fabricated a laser spying device to restore sound signals from the spots reflected from vibrated glass windows, and programmed in Labview to locate the source of sound; Awarded the only first prize.

Zhejiang Xinmiao Talents Program

Zhejiang University, Hangzhou

Advisor: Prof. LIU Chong

Feb. 2012 – May 2013

Tested aerosol's absorbing coefficient by laser and resonator and fix the length of resonator based on Piezoelectric ceramics with LABVIEW.

China Undergraduate Innovation Program

Zhejiang University, Hangzhou

Advisor: Dr. LIN Shisheng, Prof. Tong Limin

Mar. 2011 – June 2012

Mass production of one-layer large graphene on 10-micron scale with the taping method.

Awards

- President's Graduate Fellowship, Singapore, 2013-2018

- Outstanding Graduate Student, Zhejiang University, China, 2013
- Kuang-Chi Young Talents Awards, China, 2012
- 1st Prize Winner in Optical Design Competition in Zhejiang University, China, 2012
- First-Class Scholarship for Outstanding Students, Zhejiang University, China, 2009
- Excellent Student Awards, Zhejiang University, China, 2009-2013 (every year)
- Scholarship for Excellent Students in Sports and Arts, Zhejiang University, China, 2009-2013 (every year)

Skills

Languages: Mandarin (Native), English (Fluent), Japanese (Elementary)

Programming: C++, Python, MATLAB, PyTorch, TensorFlow

Interests: Badminton, Soccer, Swimming

Activities

Teaching Assistant: System and Controls (30.101) SUTD, EPD, 2015, Lecturer: Prof. Shaohui Foong

Teaching and Lab Assistant: Digital Systems Lab (30.110) SUTD, EPD, 2014, Lecturer: Prof. Jiajia Chen, Prof. Yuen Chau

Volunteering English Teacher: Teaching English in Thang Long Middle School, Hanoi, Vietnam, June 2015

Vice Captain of Soccer Team: Initiated and co-established SUTD Diraja soccer team.