

YANG LI

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<http://ihpdep.github.io> \diamond Updated December 13, 2019

EDUCATION

Zhejiang University (ZJU)

September 2016 - Present

Ph.D. student in Computer Science & Technology. Supervised by Prof. Jianke Zhu.

Research focus: Computer Vision & Machine Learning.

University of California, San Diego (UCSD)

September 2018 - September 2019

Visiting Ph.D. student in Electrical & Computer Engineering. Supervised by Prof. Michael Yip.

Research focus: Robotic Perception & Reinforcement Learning.

Zhejiang University (ZJU)

September 2013 - March 2016

Master in Computer Science & Technology. Supervised by Prof. Jianke Zhu.

Research focus: Computer Vision & Machine Learning.

East China Normal University (ECNU)

September 2007 - July 2011

B.E. in Software Engineering. Supervised by Prof. Changbo Wang.

Research focus: Computer Graphics.

PUBLICATIONS

Yang Li, Florian Richter, Jingpei Lu, Emily K. Funk, Ryan K. Orosco, Jianke Zhu and Michael C. Yip. SuPer: A Surgical Perception Framework for Endoscopic Tissue Manipulation with Surgical Robotics. (Under review 2019)

Jialiang Zhang, Lixiang Lin, **Yang Li**, Yun-chen Chen, Jianke Zhu, Yao Hu, Steven C.H. Hoi. Attribute-aware Pedestrian Detection in a Crowd. (Under review 2019)

Hantang Liu, Yinghao Xu, Jialiang Zhang, Jianke Zhu, **Yang Li**, Steve C.H. Hoi. DeepFacade: A deep learning approach to facade parsing with symmetric loss. (Accepted with minor revision in IEEE Trans. Multimedia)

Yang Li, Jianke Zhu, Steven C.H. Hoi, Wenjie Song, Zhefeng Wang, Hantang Liu. Robust Estimation of Similarity Transformation for Visual Object Tracking. AAAI Conference on Artificial Intelligence (AAAI), 2019.

Wenjie Song, **Yang Li**, Jianke Zhu, Chun Chen. Temporally-Adjusted Correlation Filter-based Tracking. Neurocomputing, 2018.

Yang Li, Zhan Xu and Jianke Zhu. CFNN: Correlation Filter Neural Network for Visual Object Tracking. International Joint Conference on Artificial Intelligence (IJCAI), 2017.

M. Kristan, R. Pflugfelder, et al. The visual object tracking vot2016 challenge results. In ECCV2016 Workshops, Workshop on Visual Object Tracking Challenge 2016. (Co-author)

Yang Li, Jianke Zhu, Steven C.H. Hoi. Reliable Patch Trackers: Robust Visual Tracking by Exploiting Reliable Patches. Computer Vision and Pattern Recognition (CVPR), 2015.

Wenjie Song, Jianke Zhu, **Yang Li**, Chun Chen. Image Alignment by Online Robust PCA via Stochastic Gradient Descent. IEEE Transactions on Circuits and Systems for Video Technology (TCSVT), 2015.

Yang Li, Jianke Zhu. A Scale Adaptive Kernel Correlation Filter Tracker with Feature Integration. European Conference on Computer Vision Workshops, VOT2014 (ECCVW), 2014. (Oral presentation at Zurich)

M. Kristan, R. Pflugfelder, et al. The visual object tracking vot2014 challenge results. In ECCV2014 Workshops, Workshop on Visual Object Tracking Challenge 2014. (Co-author)

M. Kristan, R. Pflugfelder, et al. The visual object tracking vot2013 challenge results. In ICCV2013 Workshops, Workshop on Visual Object Tracking Challenge 2013. (Co-author)

Changbo Wang, Chenhui Li, Jinqiu Dai, **Yang Li**: Adaptive lattice-based light rendering of participating media. Journal of Computer Animation and Virtual World 22(6): 487-498 (2011).

Chenhui Li, Changbo Wang, **Yang Li**, Min Zhao, et al. Real-time realistic rendering of under seawater scene. Journal of Image and Graphics. 2011.16(8):1497-1502.

AWARDS/HONORS

Zhejiang University Academic Award for Outstanding Doctoral Candidates, 2018

Second Prize, China Graduate Contest on Application, Design and Innovation of Mobile-Terminal 2017

1st/70 Place with Staple+ in realtime track on Visual Object Tracking Challenge 2016

Outstanding Postgraduates of Zhejiang University, 2016

Google Excellence Scholarship 2015

Tang Lixin Scholarship 2015

2nd/38 Place with SAMF on Visual Object Tracking Challenge 2014

7th/27 Place with SCTT on Visual Object Tracking Challenge 2013

Third Prize, National Undergraduate Software Innovation Competition 2009

PROFESSIONAL EXPERIENCES

<p>Internet Vision Group, ZJU <i>Research Assistant</i></p> <ul style="list-style-type: none"> • LDES tracker: a tracking method with similarity transformation estimation. • CFNN tracker: a tracking method based on CNN with a fast non-pretrain initialization. • Staple+ tracker: an algorithm to employ motion information in tracking visual objects. • Reliable Patch tracker: an algorithm to track with those reliable patches in the image space and to use those patches to enhance the robustness of the final tracker's results in the sequences. • SAMF tracker: an extension version of the kernelized correlation filter based tracker with the ability of scale adaptive and multiple feature integration. • ORPCA tracker: I helped to transform the ORPCA learning algorithm into a tracking version algorithm and took the responsible of validation of the tracker. • SCT tracker: a convolutional treelets based tracker has a high accuracy performance in VOT2013. 	<p>March 2013 - Present <i>Hangzhou, China</i></p>
<p>ARCLab, UC San Diego <i>Visiting Scholar</i></p> <ul style="list-style-type: none"> • Robotic Perception: a 3D reconstruction algorithm to track the dynamic scene in the surgical environment with robotic control. • Reinforcement Learning: a project investigating the performance of manual reward function in the traditional RL algorithm. 	<p>September 2018 - September 2019 <i>San Diego, CA, U.S.A</i></p>
<p>iDST, Alibaba <i>Intern</i></p>	<p>January 2017 - October 2017 <i>Hangzhou, China</i></p>

- **Tracking and Detection project:** I led an intern team that designed and implemented a tracking and detection app running on iOS. The app detects about 20 categories object and tracks these objects in realtime. The running fps is 25+ and the detection model is about 1.4MB.
- **Research on tracking in practice:** I designed and implemented practical trackers which need to run fast and track precisely in the project.

UWA, Youhu Co., Ltd (Startup)

July 2016 - September 2016

Intern

Shanghai, China

- **GPU profiling tools** (Android with Unity3D): I designed and implemented GPU profiling tools with two modes, overdraw and mipmap, in mobile game runtime to demonstrate the GPU status and statistical analysis in realtime.
- **Research on Unity3D rendering:** I wrote and published a report about soft shadow and physical based rendering implementation in Unity3D on the company's WeChat Subscription.

Virtuos

July 2010 - July 2012

Programmer

Shanghai, China

- **Generator Rex Project** (Xbox360/PS3/Wii): I designed and implemented the object movement system in the game play.
- **Optimization of Da Vinci game engine:** core team member responsible for message-based event control system, memory-related bugs and optimization of our all-platform game engine.
- **Pipeline tool:** I designed and implemented an auto-pipeline Maya tool helping artists to simplify the operations for pipeline work, like file path management, revision control management, auto-rendering and so on.

Sea Rendering Group, ECNU

January 2009 - July 2011

Research Assistant

Shanghai, China

- **Sea Rendering Project:** I designed and implemented a graph construction module of sea surface and a whole module of underwater god ray realistic rendering.
- **Voxel Render Project:** a converting tool which transforms the graphic material from polygen data to voxel data for volume based participating media rendering.

SERVICES

Reviewer of IEEE Transactions on Multimedia 2019

Reviewer of IEEE Robotics and Automation Letters 2019

Program committee of AAAI 2019, 2020

Session chair of AAAI 2019

Program committee of IJCAI-ECAI 2018, 2019

Reviewer (16,17,18,19,20) of Neurocomputing (NEUCOM)

Reviewer (15,17,18) of IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)

Reviewer (17) of IEEE Transactions on Image Processing (TIP)

Reviewer (17) of Computer Vision and Image Understanding (CVIU)

Reviewer (15) of International Joint Conferences on Artificial Intelligence (IJCAI)

Reviewer (15) of ACM Transactions on Multimedia Computing, Communications, and Applications (TOMM)

Reviewer (14) of International Conference on Behavioral, Economic and Socio-Cultural Computing (BESC)

INVITED TALKS

Tsinghua University, Beijing, China

24th November 2019

- One step forward: A Computer Vision Perspective of Surgical Robotics. Invited by Prof. Yebin Liu

Zhejiang University City College, Hangzhou, China

13th December 2019

- One step forward: A Computer Vision Perspective of Surgical Robotics. Invited by Prof. Zengwei Zheng

TEACHING EXPERIENCES

Teaching Assistant

- **Visual Recognition and Retrieval**

ZJU, Fall 2013, 2014, 2015

- **Information Retrieval and Search Engine**

ZJU, Summer 2014, 2015

OTHERS

Programming	Matlab, C++, C#, OpenGL, OpenCL, Python with practical experiences.
Language	Chinese Mandarin (native), Shanghainese (native), English (fluent).
Date-of-birth	March 1989
Hobbies	Climbing and swimming