

Shaodi You, Ph.D.

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Leadership

Projects and funding

Principle Investigator:

2018-2019 Fingerprint Extraction and Validation for Fraud Detection (133K AUD)

Design algorithm and hardware solution for “fingerprint” in food chain using computer vision and machine learning technology.

Principle Investigator:

2018-2019 Global co-Investment: Strategic project on transfer Australian technology to Chinese products. (15K AUD)

Principle Investigator:

2017-2018 Research on Computer Vision and Perception for Autonomous Driving with [Zongmu](#). (200K AUD)

Deep Learning and Traditional Computer Vision Based Algorithms for ADAS: including Semantic Segmentation, Multi-task Detection, Underground SLAM, Panoramic Image Stitching and etc.

Principle Investigator:

2018-2019 NII-Data61 Joint Research Funding. 2018-2019(30K AUD)

Member:

2015-2018 Visual Processing for Bionic Vision. (430K AUD) Visual processing to enable an extremely down-sampled and monochronic processing of natural scenes for blind people: salient object detection, color-to-gray processing, and image filtering.

Supervising

Ph.D. students:

Yahui Zhang, UvA (with Prof. Theo Gevers)

Wei Wang, UvA (with Prof. Theo Gevers)

Yunfei Liu, BUAA (with Prof. Feng Lu)

Lu Liu, NUS (with Assoc. Prof. Robby T. Tan)

Wen Shao, U Tokyo (with Asst. Prof. Rei Kawakami)

Research Master:

Yinan Wang, U Tokyo (with Asst. Prof. Rei Kawakami)
Kenta Moriwaki, U Tokyo (with Asst. Prof. Rei Kawakami)
Jing Liu, U Kyushu (with Prof. Kawasaki)
Xingyu, Nanjing U (with Prof. Xun Cao)

- Alumni

Ryota Yoshihashi, PhD, U Tokyo
Xiang Wang, PhD, Tsinghua
Ziang Cheng, ANU (continued as PhD at ANU)
David Feng, PhD, ANU (now at Seeing Machine)
Xiudong Wang, PhD, ANU (visiting student from Tsinghua)
Xiaofeng Han, PhD, ANU (visiting student from NJUST)
Zhixiang, BUAA (now at SenseTime)
Kaiyue Lu, Master, ANU (continue as PhD)
Junxuan Li, Master, ANU (continue as PhD)
Chenyao Qian, Master, ANU (now at Meitu)
Tu Tuan Trinh, Master, U Tokyo
Zhichen Zhao, Master, Tsinghua (Now at Face++)
Seichirou Fukuta, Master, U Tokyo
Oliver Johnson, Bachelor with Honor ANU, University Medalist
Yicong Hong, Bachelor with Honor ANU
Yuxuan Long, Bachelor with Honor ANU
Wen Shao, Bachelor with Honor, U Tokyo (continued as Master)
Xinyi Liu, Bachelor with Honor, ANU
Weixuan Sun, Bachelor with Honor, ANU
Kunming Li, Bachelor with Honor, ANU
Riku Shigematsu, Bachelor with Honor, visiting from U Tokyo
Zhipeng Bao, Bachelor with Honor, visiting student from Tsinghua

Conference
organizer

Program Chair, ICCV Joint Workshop: Physics Based Vision meets
Deep Learning and Hyperspectral City Challenge, Soule, Korea. 2019
[PBDL2019](#)

Program Chair, ICCV Joint Workshop: 3rd ICCV Workshop on e-
Heritage and Dunhuang Challenge. Soule, Korea. 2019 [www.eheritage-
ws.org/](http://www.eheritage-
ws.org/)

Area Chair, The 9 th Pacific-Rim Symposium on Image and Video
Technology (PSIVT), Sydney, 2019.

General Chair, 2018 The IEEE International Conference on Digital
Image Computing: Techniques and Applications (DICTA). Canberra,
Australia.

Workshop Chair, 2018 Asian Conference on Computer Vision. (ACCV). Perth, Australia. Review and make decision for workshop proposals. Manage and running all the 10+ workshops.

Program Chair, ICCV Joint Workshop: Physics Based Vision meets Deep Learning, Venice, Italy. [PBDL2017](#)

2016-present, Chair of Computer Society, ACT Section, IEEE.

-IEEE R10, Outstanding Small Section Award, 2017

2014 International Conference on 3D Vision (3DV2014). Tokyo, Japan.

Teaching

2019 Computer Vision 1 (UvA, Lecturer)

2018 Computer Vision (ANU, ENGN4528, ENGN6528, Lecturer)

2018 Advanced Research Project (ANU, COMP8800, Lecturer)

2018 Individual Project (ANU, ENGN4200, Lecturer)

2017 Robotics (ANU, ENGN4627, Guest Lecturer)

2017 Data Analysis (ANU, ENG8735, Guest Lecturer)

2017 Advanced Research Project (ANU, COMP8800, Lecturer)

2017 Individual Project (ANU, ENGN4200, Lecturer)

2016 Robotics (ANU, ENGN4627, Guest Lecturer)

2016 Document Analysis (ANU, COMP4650, Lecturer)

2016 Individual Project (ANU, ENGN4200, Lecturer)

Reviewing

IEEE Transaction on Pattern Recognition and Machine Intelligence (TPAMI)

International Journal on Computer Vision (IJCV)

IEEE Transaction on Image Processing (TIP)

ACM SIGGRAPH

IEEE Conference on Computer Vision and Pattern Recognition (CVPR)

International Computer on Computer Vision (ICCV)

European Conference on Computer Vision (ECCV)

Invited Talks

Keynote speaker: ACCV Workshop on Learning and Inference Methods for High Performance Imaging, Dec. 2018

ACCV Tutorial Speaker: Classic VS Deep Vision. Perth, Dec. 2018.

Physic Based Vision meets Deep Learning, International Workshop on Machine Vision Application, Xi'an, June. 2018

Physic Based Vision meets Deep Learning, Nanjing University, Apr. 2018

Physic Based Vision meets Deep Learning, ShanghaiTech University, Apr. 2018

Physic Based Vision meets Deep Learning, Jiangsu University, Apr.

2018

Physic Based Vision meets Deep Learning, Tsinghua University
Shenzhen Research Campus, Apr. 2018

Physic Based Vision meets Deep Learning, Harbin Institute of
Technology Shenzhen Research Campus, Apr. 2018

Smart Computational Imaging, Nanjing University, Apr. 2017

Smart Computational Imaging, Jiangnan University, Apr. 2017

A Multi-view Light Field Camera from a Single Lens, Microsoft
Research Asia, Sep, 2016

Vision in Bad Weather and Prosthetic Vision, Peking University, Sep,
2016

Vision in Bad Weather and Prosthetic Vision, Nankai University, Sep,
2016

Prosthetic Vision and Artificial Vision, Microsoft Research Asia, Aug,
2016

Vision in Bad Weather and Prosthetic Vision, Microsoft Research Asia,
Aug, 2016

Vision in Bad Weather and Prosthetic Vision, Tsinghua University,
Aug, 2016

Vision in Bad Weather and Prosthetic Vision, Jiangnan University,
Aug, 2016

Adherent Raindrop Detection and Removal in Video. Meeting on
Image Recognition and Understanding (MIRU 2013), Japan.

Social Activities 2011-2012 Group Leader, Chinese Student Union, Tokyo University.
Managing a group of 50+ students for international cultural exchange
activities.

2006-2009 Group Leader, Red Cross Society, Tsinghua Branch.
Managing a group of 15+ students for publicities online and offline.
Including website, newspaper, posters and etc. Also managing events
such as blood donation, first aid training and etc.

2007-2008 Group Leader, Class W54, Tsinghua University. Managing
a group of 26 students for various events including sports competition,
team building, and field study and community services.

2005-2007 Group Leader, Art Society, Tsinghua University. Managing
a group of 30+ students for regular training in art and exhibitions.

2017-present, Member, ANU Chinese Classical Music Ensemble.
Regular practice and performances cultural exchange events.

Working Experience

- 2019.11-2020.3 Visiting Researcher, Microsoft Research, Redmond, USA
- Strategic Research
- 2018.1-present Senior Research Scientist, Data61, CSIRO, Australia
- Computer vision group
- Projects: Autonomous Driving (principle investigator), Bionic Vision (member), Non-rigid 3D (member)
- 2018.2-present Senior Adjunct Lecturer, Australian National University
- Teaching in School of Engineering and Computer Science
- Supervising 9 Ph.D. students, 5 master students.
- 2015.9-2017.12 Research Scientist, Data61, CSIRO, Australia
- Computer vision group
- Projects: Autonomous Driving (principle investigator), Bionic Vision (member), Non-rigid 3D (member)
- Tenure Position
- 2015.10-2018.1 Adjunct Lecturer, Australian National University
- Teaching in School of Engineering and Computer Science
- Supervising 9 Ph.D. students, 5 master students.
- 2013.2-2013.3 Visiting Staff, Multimedia and Geometry Group, Utrecht University, The Netherlands
- Working on video enhancement
- 2013.4-2015.9 Research Assistant, Global Creative Leader Program, The University of Tokyo
- Bayon Digital Archiving Project, Cambodia
- Virtual Asuka-kyo project, Nara, Japan
- 3D Preah Vehear project, Cambodia
- Digital Archiving of 3-11 Earthquake project, Japan
- Coordinating international and domestic research activities
- Mentoring students
- 2010.4-2010.9 Research Student, Computer Vision Lab, The University of Tokyo
- Research topic algebraic surface fitting
- Digital Archiving Khufu Boat project, Egypt
- Journal paper in Neural Computing
- 2008.1-2010.3 Research Assistant, 3D Vision Lab, Tsinghua University, China
- Research topic: manifold learning
- Journal paper in Pattern Recognition. Three papers published.

Education

- 2012.10-2015.9 Ph.D. of Engineering, Computer Vision Lab. The University of Tokyo, Japan.
- Full Scholarship (Mext, Global Creative Leader)
- Overall GPA: 4/4 .
- Supervisors: [Prof. Katsushi Ikeuchi](#) , [Asst. Prof. Robby T. Tan](#), [Asst. Prof. Rei Kawakami](#)
- Topics: robust outdoor vision, rainy scenes, computational photometry, 3D shape modeling
- 2010.4-2012.9 Master of Engineering, Computer Vision Lab. The University of Tokyo, Japan
- Full Scholarship (Panasonic)
- Overall GPA: 3.93/4
- 2005.8-2009.7 Bachelor of Engineering, Department of Electrical Engineering, Tsinghua University, China.
- Advanced Courses in Math and Physics (sub major)
- Recommend for direct admission (free of entrance exam)
- Overall GPA: 88.4/100 (3.71/4)
- 2002.8-2005.7 Experimental High School Attached to Beijing Normal University, China
- National Experimental Science Program directly by The Ministry of Education. 80 students in China per year.
- Eligible for enrollment in any university in China without exam.

Patents

- [P4] Guoxing Ma, Yu Han, Jianing Sun, Yi Zhao, Fengyu Yang, Yueqin Gu and Shaodi You, “An Automatic Surveillance System for Bracket Safety Inspection in Construction Site.” (Chinese Patent No. 201710799023.7)
- [P3] A. Robles-Kelly, “Hyperspectral Image Sensor”, Australian Provisional Patent Application No 2016900098, 2016.
- [P2] A System and A Method for Automatic Inspection of Protection Equipment and Operational Capability for Workers' Safety. (Chinese Patent No. 201610279988.9)
- [P1] An Automatic System and Methodology for Dust Pollution Monitoring in Construction Site using Image Captured by UAV. (Chinese Patent No. 201610489505.8)

Selected Publications (Peer reviewed)

Journals Impact factor are from 2016 InCites Journal Citation Report

Journals - Published

[J19] Xiang Wang, Huimin Ma, **Shaodi You**, Deep Clustering for Weakly-Supervised Semantic Segmentation in Complex Object-Clustered Scenes. *Neurocomputing*, 2019. Accepted. Impact factor: 3.32.

[J18] Yinan Wang, Ryota Yoshihashi, Rei Kawakami, **Shaodi You**, Tohru Harano, Masahiko Ito, Katsura Komagome, Makoto Iida, Takeshi Naemura. Unsupervised anomaly detection with compact deep features for wind turbine blade images taken by a drone, *IPSJ Transactions on Computer Vision and Applications*. Issue 11, pp:1-3. 2019.

[J17] Wen Shao, Rei Kawakami, Ryota Yoshihashi, **Shaodi You**, Hidemichi Kawase and Takeshi Naemura, Cattle detection and counting in UAV images based on convolutional neural networks, *International Journal of Remote Sensing*. Impact factor: 1.78. 2019

[J16] Hao Zhu, Xiaoming Sun, Qi Zhang, Qing Wang, Antonio Robles-Kelly, Hongdong Li and **Shaodi You**. Full View Optical Flow Estimation Leveraged from Light Field Superpixel. *IEEE Transaction on Computational Imaging*, 2019.

[J15] Xiudong Wang, Yali Li, **Shaodi You**, Hongdong Li, and Shengjin Wang. Unidirectional Representation Based Efficient Dictionary Learning, *IEEE Transactions on Circuits and Systems for Video Technology*, 2018. Impact factor: 3.6.

[J14] Ryota Yoshihashi; Tu Tuan Trinh; Rei Kawakami; **Shaodi You**; Makoto Iida; Takeshi Naemura, Pedestrian Detection with Motion Features via Two-stream ConvNets, *IPSJ Machine Vision and Application*. 2018, Impact factor: 1.3. [pdf]

[J13] Xiaofeng Han, Jianfeng Lu, Chunxia Zhao, **Shaodi You** and Hongdong Li, *Semi-supervised and Weakly-supervised Road Detection based on Generative Adversarial Networks*, *IEEE Signal Processing Letters*. Volume: 25, Issue:4, pp: 551-555. 2018. Impact factor: 2.5.

[J12] **Shaodi You**, Yasuyuki Matsushita, Sudipta Sinha, Yusuke Bou and Katsushi Ikeuchi. *Origami: Multi-view Rectification of Folded Documents*. *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 2018, Vol.40, Issue 2, pp:505-511. Impact factor: 9.5 [pdf] [webpage]. TPAMI is the most esteemed journal in computer vision.

[J11] Xiang Wang, Huimin Ma, **Shaodi You** and Xiaozhi Chen, Edge Preserving and Multi-Scale Contextual Neural Network for Salient Object Detection, *IEEE Trans. on Image Processing (TIP)*. Volume: 27, Issue:1, pp: 121-134. 2018. Impact factor: 5.1. 10.1109/TIP.2017.2756825 [pdf]

[J10] **Shaodi You**, Robby T. Tan, Rei Kawakami, Yasuhiro Mukaigawa and Katsushi Ikeuchi. *Adherent Raindrop in Video, Modeling, Detection and Removal*. *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 2016. Impact factor: 9.5. [pdf] [webpage]. TPAMI is the most esteemed journal in computer vision.

[J9] **Shaodi You**, Think Locally, Fit Globally, Robust and Fast Surface Matching via Algebraic Surface Fitting, *Neurocomputing, Special Issue on Multimodal Vision*, Elsevier 2016. Impact factor: 3.3, Accepted. [pdf]

[J8] **Shaodi You** and Huimin Ma. Manifold Topological Multi-Resolution Analysis Method. *Pattern Recognition*, Volume 44, Issue 8, August 2011, Pages 1629-1648. Impact factor: 4.6. [pdf]

[J7] Yu Li, **Shaodi You**, Michael Brown and Robby T. Tan, *Visibility Enhancement in Scattering Media Survey and Benchmark*, *CVIU*, Volume 165, December 2017, Pages 1-16. Impact factor: 2.5. [pdf]

[J6] Feng Lu, Lei He, **Shaodi You**, Zhixiang Hao, Identifying Surface BRDF from a Single 4D

Light Field Image via Deep Neural Network, IEEE Journal on Selected Topics in Signal Processing, Impact factor (2017): 5.3. Vol 11, Issue 7, pp 1047-1057, Doi: 10.1109/JSTSP.2017.2728001. [\[pdf\]](#)

[J5] Diming Zhang, **Shaodi You**, iFlask: Isolate Flask Security System From Dangerous Execution Environment by Using ARM TrustZone, Future Generation Computer Systems. Impact factor: 4.0. Accepted.

[J4] Diming Zhang, Fei Xue, Hao Huang and **Shaodi You**, VBMq: Pursuit Baremetal Performance by Embracing Block I/O Parallelism in Virtualization, Frontier of Computer Science. Accepted. Impact factor: 1.0. 2018, 12 (5): 873-886 [\[pdf\]](#)

[J3] Jingjie Zhang, Yu Han, Jiayue Yao, **Shaodi You**, Design and Implementation of Automatic Inspection System for Safety Equipment for Construction Workers, Construction Technology (in Chinese), accepted, to appear in 2018.

[J2] Guoxin Ma, Yu Han, Jianfei Lu, Jiayue Yao, **Shaodi You**, Design and Implementation of Automatic Monitoring System for Constructional Fugitive Dust Pollution Sources Based on UAV, Environment Monitoring of China (in Chinese), Vol. 34, No. 1, pp: 151-156. 2018.

[J1] Yu Han, Jingjie Zhang, Hao Sun, Jiayue Yao, **Shaodi You**, Design and implementation of intelligent safety inspection system for construction workers based on image recognition, Journal of Safety Science and Technology (in Chinese), Vol. 12 No. 10, pp:142 – 148. 2018

Journals – under review and arXiv pre-print

[U4] **Shaodi You**, Ran Wei, Antonio Robles-Kelly, A Multiview Light Field Camera for Scene Depth Estimation from a Single Lens. [\[pdf\]](#)

[U2] **Shaodi You**, Robby T. Tan, Rei Kawakami, Yasuhiro Mukaigawa and Katsushi Ikeuchi, Waterdrop Stereo. Submitted to International Journal on Computer Vision. [\[pdf\]](#)

Conference paper

Conferences – Published

[C29] Zhipeng Bao, **Shaodi You** and Zhenglu Yang, Single-Image Facial Expression Recognition Using Deep 3D Re-Centralization. ICCV 2019 Workshop.

[C28] Zhixiang Hao, **Shaodi You**, Yu Li, Kunming Li and Feng Lu, Learning from Synthetic Photorealistic Raindrop for Single Image Raindrop Removal. ICCV 2019 Workshop.

[C27] Ziang Cheng, Yinqiang Zheng, Sato Imari and **Shaodi You**, Intrinsic Decomposition with Near Infrared Priors. Submitted to International Conference on Computer Vision 2019. (**ICCV2019**).

[C26] Rei Kawakami, Ryota Yoshihashi, Seiichiro Fukuda, **Shaodi You**, Makoto Iida and Takeshi Naemura, Cross-connected Networks for Multi-task Learning of Detection and Segmentation. IEEE International Conference on Image Processing, 2019.

[C25] Junxuan Li, Antonio Robles-Kelly, **Shaodi You** and Yasuyuki Matsushita, Learning to Minify Photometric Stereo. IEEE Conference on Computer Vision and Pattern Recognition 2019. (**CVPR2019**).

[C24] Ryota Yoshihashi, Rei Kawakami and **Shaodi You**, Classification-Reconstruction Learning for Open-Set Recognition. Submitted to IEEE Conference on Computer Vision and Pattern Recognition 2019. (**CVPR2019**).

[C23] Lu Liu, Robby T. Tan and **Shaodi You**, Loss Guided Activation for Action Recognition in Still Images, Asian Conference on Computer Vision, **ACCV2018**.

- [C22] Weixuan Sun, [Shaodi You](#), Janine Walker, Kunming Li and Nick Barnes, Salient Structure: Dataset and Benchmark. **DICTA2018**.
- [C21] Kaiyue Lu, [Shaodi You](#) and Nick Barnes, Deep Image Smoothing based on Texture and Structure Guidance. European Conference on Computer Vision 2018, **ECCV2018**. Accept rate <25%.
- [C20] Xiaofeng Han, Chuong Nyugen, [Shaodi You](#) and Jianfei Lu, Single Image Water Hazard Detection using FCN with Reflection Attention Units. European Conference on Computer Vision 2018, **ECCV2018**. Accept rate <25%.
- [C19] Zhixiang Hao, Yu Li, [Shaodi You](#) and Feng Lu, Detail Preserving Depth Estimation from a Single Image using Attention Guided Networks. 3D Vision, 2018 (**3DV2018**).
- [C18] Hongru Liang, Haozheng Wang, [Shaodi You](#), Jin-Mao Wei, and Zhenglu Yang. JTAV: Jointly Learning Social Media Content Representation by Fusing Textual, Acoustic, and Visual Features. The 27th International Conference on Computational Linguistics (**COLING 2018**).
- [C17] Junxuan Li, [Shaodi You](#), and Antonio Robles-Kelly. A Frequency Domain Neural Network for Fast Image Super-resolution, International Joint Conference on Neural Networks. **IJCNN 2018**, oral presentation. [[pdf](#)]
- [C16] Xiang Wang, [Shaodi You](#), Huimin Ma and Xi Li, Weakly-Supervised Semantic Segmentation by Iteratively Mining Common Object Features, IEEE Computer Society Conference on Computer Vision and Pattern Recognition. **CVPR 2018**. Accept rate <25% [[pdf](#)]
- [C15] Zhichen Zhao, Huimin Ma, [Shaodi You](#), Single Image Action Recognition via Sermantic Part Actions, International Conference on Computer Vision, **ICCV 2017**. [[pdf](#)][[webpage](#)]
- [C14] Shijie Zhang, Lizhen Qu, [Shaodi You](#), Zhenglu Yang and Jiawan Zhang, Automatic Generation of Grounded Visual Questions, International Joint Conference on Artificial Intelligence, **IJCAI 2017**. Accept rate <25%. [[pdf](#)]
- [C13] Kaiyue Lu, [Shaodi You](#), Nick Barnes, Double-Guided Filtering: Image Smoothing with Structure and Texture Guidance, The International Conference on Digital Image Computing: Techniques and Applications, **DICTA 2017**, oral presentation. [[pdf](#)]
- [C12] David Feng, [Shaodi You](#), Nick Barnes, HOSO: Histogram Of Surface Orientation for RGB-D Salient Object Detection. The International Conference on Digital Image Computing: Techniques and Applications, **DICTA 2017**, oral presentation. [[pdf](#)]
- [C11] Junxuan Li, [Shaodi You](#), Antonio Robles-Kelly, Stereo Super-resolution via a Deep Convolutional Network. The International Conference on Digital Image Computing: Techniques and Applications, **DICTA 2017**, oral presentation. [[pdf](#)]
- [C10] Changkun Ye, Huimin Ma, Xiaoqin Zhang, Kai Zhang and [Shaodi You](#), Survival-Oriented Reinforcement Learning Model: An Effcient and Robust Deep Reinforcement Learning Algorithm for Autonomous Driving Problem, IAPR International Conference on Image and Graphics, **ICIG2017**. [[pdf](#)]
- [C9] Bin Yue, Min Gui, Jiahui Guo, Zhenglu Yang, Jin-Mao Wei and [Shaodi You](#), An Effective Framework for Question Answering over Freebase via Reconstructing Natural Sequences. **WWW 2017**.
- [C8] Kunming Li, Yu Li, [Shaodi You](#) and Nick Barnes, Photo-Realistic Simulation of Road Scene for Data-Driven Methods in Bad Weather, ICCV Workshop on Physics Based Vision meets Deep Learning, 2017. [[pdf](#)]
- [C7] Riku Shigematsu, David Feng, [Shaodi You](#) and Nick Barnes, Learning RGB-D Salient Object Detection using background enclosure, depth contrast, and top-down features, ICCV Workshop on Mutual Benefit of Cognitive and Computer Vision, 2017. [[pdf](#)]
- [C6] David Feng, [Shaodi You](#) and Nick Barnes, DSD: Depth Surface Descriptor for Structural

Edge Detection, ICCV Workshop on Assistive Computer Vision and Robotics, 2017. [[pdf](#)]

[C5] David Feng, Nick Barnes, **Shaodi You** and Chris McCarthy. *Local Background Enclosure for RGB-D Salient Object Detection*. IEEE Computer Society Conference on Computer Vision and Pattern Recognition (**CVPR 2016**, Spotlight Presentation). Accept rate <10%. [[pdf](#)]. CVPR is the highest impact conference in computer vision, and top 20 highest impact conference in engineering.

[C4] **Shaodi You**, Robby T. Tan, Rei Kawakami, Yasuhiro Mukaigawa and Katsushi Ikeuchi. *Raindrop Detection and Removal from Long Range Trajectory*. 12th Asian Conference on Computer Vision (**ACCV 2014** Oral presentation), Nov. 3-5, 2014, Singapore. Accept rate < 5%. [[pdf](#)] [[webpage](#)]

[C3] **Shaodi You**, Robby T. Tan, Rei Kawakami and Katsushi Ikeuchi. *Adherent Raindrop Detection and Removal in Video*. IEEE Computer Society Conference on Computer Vision and Pattern Recognition (**CVPR 2013**), June 25-27, 2013, Portland, Oregon, USA. Accept rate < 25%. - [[pdf](#)] [[webpage](#)]. CVPR is the highest impact conference in computer vision, and top 20 highest impact conference in engineering.

[C2] **Shaodi You**, Robby T. Tan, Rei Kawakami and Katsushi Ikeuchi. *Robust and Fast Motion Estimation for Video Completion*. IAPR Machine Vision Applications (**MVA 2013** Oral), May 20-23, 2013, Kyoto, Japan. Accept rate < 7%. [[pdf](#)]

[C1] Xiao Yu, Huimin Ma, **Shaodi You** and Ze Yuan. A solution for efficient viewpoint space partition in 3D object recognition. International Conference on Image and Graphic 2009 (**ICIG2009** Oral), Xi'an, China. Accept rate < 7%. [[pdf](#)]

Conference - Under Review and arXiv pre-print:

[U12] Yunfei Liu, Yu Li, **Shaodi You** and Feng Lu, Semantic Guided Single Image Reflection Removal. Submitted to International Conference on Computer Vision 2019. (**ICCV2019**).

[U10] Kenta Moriwaki, Rei Kawakami, Ryota Yoshihashi and **Shaodi You**, Hybrid Loss for Learning Single-Image-based HDR Reconstruction. Submitted to International Conference on Computer Vision 2019. (**ICCV2019**).

[U7] Ziang Cheng, **Shaodi You**, Viorela Ila and Hongdong Li, Semantic Single-Image Dehazing.

[U6] Ryota Yoshihashi, Tinh Tuan, Rei Kawakami, **Shaodi You**, Makoto Iida and Takeshi Naemura, Differentiating Objects by Motion: Joint Detection and Tracking of Small Flying Objects, [[pdf](#)]

[U5] **Shaodi You** and Nick Barnes, Water Splash Suppression in A Single Image, Submitted to International Conference on Computer Vision. [[pdf](#)]

Thesis

[T3] **Shaodi You**. *Detection and Removal of Raindrop Images in A Video Sequence and Their Applications to Computer Vision Algorithms*. Doctoral Thesis, The University of Tokyo, 2015. [[pdf](#)]

[T2] **Shaodi You**, *Adherent Raindrop Detection and Removal in Video*, Master Thesis, The University of Tokyo, 2013. [[pdf](#)]

[T1] **Shaodi You**, *Manifold Multi-Resolution Analysis Method using Spectral Embedding Theory*, Bachelor Thesis, Tsinghua University, 2009. Best Thesis Award (Rank 1/90) [[pdf](#)].

Awards and Honors

- 2017.11 Best Paper Award. David Feng, Nick Barnes, Shaodi You: HOSO: Histogram Of Surface Orientation for RGB-D Salient Object Detection. The International Conference on Digital Image Computing: Techniques and Applications, DICTA 2017
- 2017.9 Digital, National Facilities & Collections Awards 2017
Science Excellence : Vision processing for the Bionic Eye.
- 2017.5 iAWARDS 2017, Research and Development Project of the Year:
Vision Processing for Bionic Eye. Australian Capital Territory.
Australian Information Industry Association
- 2017.5 iAWARDS 2017, Consumer Markets:
Vision Processing for Bionic Eye. Australian Capital Territory.
Australian Information Industry Association
- 2013.4 - 2015.9 Japanese Government (Monbunkagakusho: MEXT) Scholarship
- University referenced (Rank 1 among applicants)
- Allowance 5,328,000 JPY (49,000 USD)
- Full tuition fee coverage
- Research funding 3,000,000 JPY (27,000 USD)
- 2013.4 -2016.3 SCAT Scholarship
- Allowance 3,600,000 JPY (33,000 USD).
- 2013.4 -2014.3 SEUT Doctoral Student Special Incentives Program
- Allowance 1,800,000 JPY (16,000 AUD).
- 2010.4 -2013.3 Panasonic Scholarship
- Allowance 6,120,000 JPY (56,000 AUD) Granted
- Full tuition fee coverage
- Six grants in China per year
- 2009.7 Best Thesis, Tsinghua University
- Rank 1 / 90
- 2008.10 Scholarship for Academic Excellence(Class III), Tsinghua University
- 2006.12 Scholarship for Academic Excellence(Class II), Tsinghua University
- 2005.6 Honorable mention in 2004/2005 "First Step to Nobel Prize in Physics",
Polish Academy of Science. Research Paper: Why are some mirage
inverted.
- 2004.9 First Prize, Chinese Physics Olympic Contest (province-wide)
- Eligibility for direct college admission without national standard
exam.
- 2004.9 Second Prize, Chinese Chemistry Olympic Contest (province -wide)
- Eligibility for direct college admission without national standard
exam.
- 2004.5 First Prize, Chinese Biology Olympic Contest (province-wide)
- Eligibility for direct college admission without national standard
exam.

2003.9 Second Prize, Chinese Mathematics Olympic Contest (province-wide)
- Eligibility for direct college admission without national standard exam.

Skills

Languages Chinese(native),
English(proficient), IELTS(S:7, L:8, R:8, W:7),
Japanese(proficient), JLPT: N1.

Programming Matlab, C++/C, Tensor flow (Deep learning), MatConvNet (Deep learning), Verilog HDL (Hardware language), VHDL (Hardware language), MIPS assembly, x86 assembly.