

# Yuyin ZHOU

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## EDUCATION

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2016 - Current	<b>Johns Hopkins University</b> , Baltimore Ph.D. student in Computer Science   Advisor: Dr. Alan Yuille
2014 - 2016	<b>University of California, Los Angeles (UCLA)</b> , Los Angeles M.S. in Electrical Engineering
2010 - 2014	<b>Huazhong University of Science and Technology</b> , Wuhan, China B.S. in Electrical Engineering

## WORK EXPERIENCE

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Jun 2013 - Aug 2013	<b>Research Undergraduate Assistant, Princeton University</b> Supervisor: Prof. Jason W. Fleischer
Aug 2016 - Current	<b>Research Assistant, Johns Hopkins University</b> Medical image analysis (the FELIX project: <a href="#">webpage</a> ) featured in: <a href="#">National Public Radio</a> Collaborators: Prof. Bert Vogelstein, Prof. Elliot K. Fishman
Jun 2017 - Nov 2017	<b>Research Intern, Google Cloud AI</b> Medical image analysis Supervisor: Dr. Mei Han
Jan 2019 - May 2019	<b>Teaching Assistant, Johns Hopkins University</b> TA for course <i>Vision as Bayesian Inference</i>
Jun 2019 - Sep 2019	<b>Research Intern, Google Brain</b> Medical image analysis Supervisor: Dr. Atilla Kiraly, Shahar Jamshy

## PUBLICATION

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Yan Wang, Xu Wei, Fengze Liu, Jieneng Chen, **Yuyin Zhou**, Wei Shen, Elliot Fishman, Alan Yuille, **Deep Distance Transform for Tubular Structure Segmentation in CT Scans**, in *Submission*

Lifeng Huang, Chengying Gao, **Yuyin Zhou**, Cihang Xie, Changqing Zou, Alan L. Yuille, Ning Liu. **UPC: Learning Universal Physical Camouflage Attacks on Object Detectors**, in *Submission*

Yingwei Li, Song Bai, **Yuyin Zhou**, Cihang Xie, Zhishuai Zhang, Alan L. Yuille, **Learning Transferable Adversarial Examples via Ghost Networks**, in AAAI Conference on Artificial Intelligence (AAAI) 2020

Linda C Chu, Seyoun Park, Satomi Kawamoto, Yan Wang, **Yuyin Zhou**, Wei Shen, Zhuotun Zhu, Yingda Xia, Lingxi Xie, Fengze Liu, Qihang Yu, Daniel F. Fouladi, Shahab Shayesteh, Eva Zinreich, Jefferson S. Graves, Karen M. Horton, Alan L. Yuille, Ralph H. Hruban, Kenneth W. Kinzler, Bert Vogelstein, Elliot K. Fishman. **Application of Deep Learning to Pancreatic Cancer Detection: Lessons Learned From Our Initial Experience**, in Journal of the American College of Radiology, 2019.

Yingwei Li\*, Zhuotun Zhu\*, **Yuyin Zhou**, Yingda Xia, Wei Shen, Elliot K. Fishman, and Alan L. Yuille, **Volumetric Medical Image Segmentation: A 3D Deep Coarse-to-fine Framework and Its Adversarial Examples**, in Deep Learning and Convolutional Neural Networks for Medical Image Computing, Advances in Computer Vision and Pattern Recognition, Springer, ISBN 978-3-030-13968-1 (\* equally contribution), 2019.

**Yuyin Zhou\***, Qihang Yu\*, Yan Wang, Lingxi Xie, Wei Shen, Elliot K. Fishman and Alan L. Yuille, **2D-Based Coarse-to-Fine Approaches for Small Target Segmentation in Abdominal CT Scans**, In Deep Learning and Convolutional Neural Networks for Medical Image and Clinical Informatics, Advances in Computer Vision and Pattern Recognition, Springer (\* equally contribution), 2019.

Lingxi Xie, Qihang Yu, Yan Wang, **Yuyin Zhou**, Elliot K. Fishman, Alan L. Yuille, **Recurrent Saliency Transformation Network for Tiny Target Segmentation in Abdominal CT Scans**, in IEEE transactions on medical imaging (TMI) 2019.

David Dreizin, **Yuyin Zhou**, Yixiao Zhang, Nikki Tirada, Alan L. Yuille, **Performance of a Deep Learning Algorithm for Automated Segmentation and Quantification of Traumatic Pelvic Hematomas on CT**, in Journal of Digital Imaging (JDI) 2019.

**Yuyin Zhou**, Yingwei Li, Zhishuai Zhang, Yan Wang, Alan L. Yuille, Seyoun Park. **Hyper-Pairing Network for Multi-Phase Pancreatic Ductal Adenocarcinoma Segmentation**, in International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI) 2019

Zhishuai Zhang, **Yuyin Zhou**, Wei Shen, Elliot K. Fishman, Alan L. Yuille, “Lesion Detection by Efficiently Bridging 3D Context”, in Machine Learning in Medical Imaging (MLMI, **Oral**) Workshop of MICCAI, 2019.

**Yuyin Zhou**, David Dreizin, Yingwei Li, Zhishuai Zhang, Yan Wang, Alan L. Yuille, “Multi-Scale Attentional Network for Multi-Focal Segmentation of Active Bleed after Pelvic Fractures”, in Machine Learning in Medical Imaging (MLMI) Workshop of MICCAI, 2019.

Fengze Liu, **Yuyin Zhou**, Elliot K. Fishman, Alan L. Yuille, “FusionNet: Incorporating Shape and Texture for Abnormality Detection in 3D Abdominal CT Scans”, in Machine Learning in Medical Imaging (MLMI) Workshop of MICCAI, 2019.

**Yuyin Zhou**, Zhe Li, Song Bai, Chong Wang, Xinlei Chen, Mei Han, Elliot Fishman, Alan L. Yuille, **Prior-aware Neural Network for Partially-Supervised Multi-Organ Segmentation**, in International Conference on Computer Vision (ICCV) 2019

Song Bai, Yingwei Li, **Yuyin Zhou**, Qizhu Li, Philip HS Torr, **Adversarial Metric Attack for Person Re-identification**, Submitted to IEEE Transactions on Pattern Analysis and Machine Intelligence

Cihang Xie, Zhishuai Zhang, **Yuyin Zhou**, Song Bai, Jianyu Wang, Zhou Ren, Alan L. Yuille, **Improving Transferability of Adversarial Examples with Input Diversity**, in Conference on Computer Vision and Pattern Recognition (CVPR) 2019

Yan Wang\*, **Yuyin Zhou\***, Wei Shen, Seyoun Park, Elliot K. Fishman, Alan Yuille. **Abdominal multi-organ segmentation with organ-attention networks and statistical fusion**, in Medical Image Analysis (MIA) (\* equally contribution), 2019

**Yuyin Zhou**, Yan Wang, Peng Tang, Song Bai, Wei Shen, Elliot K. Fishman, Alan L. Yuille, **Semi-Supervised 3D Multi-Organ Segmentation via Deep Multi-Planar Co-Training**, in IEEE Winter Conference on Applications of Computer Vision (WACV) 2019

Yan Wang, **Yuyin Zhou**, Peng Tang, Wei Shen, Elliot K. Fishman, Alan L. Yuille, **Training Multi-organ Segmentation Networks with Sample Selection by Relaxed Upper Confident Bound**, in International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI,**Oral**) 2018.

Qihang Yu, Lingxi Xie, Yan Wang, **Yuyin Zhou**, Elliot K. Fishman, Alan L. Yuille, **Recurrent Saliency Transformation Network: Incorporating Multi-Stage Visual Cues for Small Organ Segmentation**, in Conference on Computer Vision and Pattern Recognition (CVPR) 2018

Jianyu Wang, Zhishuai Zhang, Cihang Xie, **Yuyin Zhou**, Vittal Premachandran, Jun Zhu, Lingxi Xie, Alan Yuille, **Visual Concepts and Compositional Voting**, in Annals of Mathematical Sciences and Applications 2018

Cihang Xie, Jianyu Wang, Zhishuai Zhang, **Yuyin Zhou**, Lingxi Xie, Alan L. Yuille, **Adversarial Examples for Semantic Segmentation and Object Detection**, in International Conference on Computer Vision (ICCV) 2017

**Yuyin Zhou**, Lingxi Xie, Wei Shen, Yan Wang, Elliot K. Fishman, Alan L. Yuille, **A Fixed-Point Model for Pancreas Segmentation in Abdominal CT Scans**, in International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI) 2017

**Yuyin Zhou**, Lingxi Xie, Elliot K. Fishman, Alan L. Yuille, **Deep Supervision for Pancreatic Cyst Segmentation in Abdominal CT Scans**, in International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI) 2017

## HONOR & AWARD

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MICCAI Travel Award, 2017

## PROFESSIONAL ACTIVITY

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**Second** place at MICCAI 2018 - Computational Precision Medicine: Pancreatic Cancer Survival Prediction Challenge

Invited talk on MICCAI 2018 Workshop and Challenges in Computational Precision Medicine, Granada, Spain, September 16th, 2018

Invited conference reviewer: MICCAI 2019, ICCV 2019, NeurIPS 2019, AAAI 2019, CVPR 2020, ICML 2020, ECCV 2020

Invited Journal reviewer: Neurocomputing, TPAMI

## REFERENCES

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Dr. Elliot K. Fishman (efishman@jhmi.edu)

Professor, The Johns Hopkins University School of Medicine

Dr. Alan L. Yuille (alan.l.yuille@gmail.com)

Bloomberg Distinguished Professor, Johns Hopkins University

Dr. Mei Han (meihan@gmail.com)

Director of Silicon Valley Lab, PAII, Inc.