Yuyin ZHOU

email: zhouyuyiner@gmail.com   homepage: https://yuyinzhou.github.io/

EDUCATION

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

ACADEMIC EXPERIENCE

Jun 2019 - Sep 2019	**Research Intern, Google Health** Medical image registration Supervisor: Dr. Atilla Kiraly, Shahar Jamshy
Jan 2019 - May 2019	**Teaching Assistant, Johns Hopkins University** TA for course *Vison as Baysian Inference*
Jun 2017 - Nov 2017	**Research Intern, Google AI** Medical image analysis Supervisor: Dr. Mei Han
Aug 2016 - Current	**Research Assistant, Johns Hopkins University** Medical image analysis (the FELIX project: webpage) featured in: National Public Radio Collaborators: Prof. Bert Vogelstein, Prof. Elliot K. Fishman
Jun 2013 - Aug 2013	**Research Undergraduate Assistant, Princeton University** Supervisor: Prof. Jason W. Fleischer

PUBLICATIONS

Yingda Xia*, Qihang Yu*, Wei Shen, **Yuyin Zhou**, Elliot Fishman, Alan Yuille. **Detecting Pancreatic Adenocarcinoma in Multi-phase CT Scans via Alignment Ensemble**, in International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), 2020

Shuhao Fu, Yongyi Lu, Yan Wang, **Yuyin Zhou**, Wei Shen, Elliot Fishman, Alan Yuille. **Domain Adaptive Relational Reasoning for 3D Multi-Organ Segmentation**, in International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), 2020

David Dreizin, **Yuyin Zhou**, Tina Chen, Guang Li, Alan Yuille, Ashley McLenithan, Jonathan Morrison. **Deep learning-based quantitative visualization and measurement of extraperitoneal hematoma volumes in patients with pelvic fractures**, in Journal of Trauma and Acute Care Surgery, 2020

Yingwei Li, Xiaojie Jin, Jieru Mei, Xiaochen Lian, Linjie Yang, Cihang Xie, Qihang Yu, **Yuyin Zhou**, Song Bai, Alan Yuille. **Neural Architecture Search for Lightweight Non-Local Networks**, in IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2020

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 IEEE Conference on Computer Vision and Pattern Recognition (CVPR, **Oral**), 2020

Lifeng Huang, Chengying Gao, **Yuyin Zhou**, Cihang Xie, Alan Yuille, Changqing Zou, Ning Liu. **UPC: Learning Universal Physical Camouflage Attacks on Object Detectors**, in IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2020

Yingwei Li, Song Bai, **Yuyin Zhou**, Cihang Xie, Zhishuai Zhang, Alan 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 Yuille, Ralph H. Hruban, Kenneth W. Kinzler, Bert Vogelstein, Elliot 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 Fishman, and Alan 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 Fishman and Alan 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, **Yuyin Zhou**, Yan Wang, Elliot Fishman, Alan 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 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 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 Fishman, Alan 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 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 Fishman, Alan 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 Yuille. **Prior-aware Neural Network for Partially-Supervised Multi-Organ Segmentation**, in IEEE International Conference on Computer Vision (ICCV), 2019

Cihang Xie, Zhishuai Zhang, **Yuyin Zhou**, Song Bai, Jianyu Wang, Zhou Ren, Alan Yuille.

Improving Transferability of Adversarial Examples with Input Diversity, in IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2019

Yan Wang*, **Yuyin Zhou***, Wei Shen, Seyoun Park, Elliot 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 Fishman, Alan 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 Fishman, Alan 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 Fishman, Alan Yuille. **Recurrent Saliency Transformation Network: Incorporating Multi-Stage Visual Cues for Small Organ Segmentation**, in IEEE 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 Yuille. **Adversarial Examples for Semantic Segmentation and Object Detection**, in IEEE International Conference on Computer Vision (ICCV), 2017

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

SELECTED AWARDS

MICCAI 2017 Travel Award

2nd place at MICCAI 2018 - Computational Precision Medicine: Pancreatic Cancer Survival Prediction Challenge

TALKS

Lesion Detection by Efficiently Bridging 3D Context
Machine Learning in Medical Imaging Workshop of MICCAI   Oct 2019

Prior-aware Neural Network for Partially-Supervised Multi-Organ Segmentation and Hyper-Pairing Network for Multi-Phase PDAC Segmentation
PAII-JHU Workshop on Medical Imaging   Sep 2019

Medical Image Registration
Google Health   Sep 2019

Semi-supervised 3D abdominal multi-organ segmentation via deep multi-planar co-training

1st JHU Computer Vision Workshop   Apr 2019

3D network-based pancreatic cancer survival prediction from CT scans
MICCAI'18 Workshop and Challenges in Computational Precision Medicine   Sep 2018

Training Multi-organ Segmentation Networks with Sample Selection by Relaxed Upper Confident Bound
MICCAI 2018   Sep 2018

Introduction to Medical Image Segmentation
Google Cloud AI   Jun 2017

ACADEMIC SERVICES

Conference Reviewer

- Computer Vision and Pattern Recognition (CVPR)
- European Conference on Computer Vision (ECCV)
- International Conference on Computer Vision (ICCV)
- Conference on Neural Information Processing Systems (NeurIPS)
- International Conference on Machine Learning (ICML)
- AAAI Conference on Artificial Intelligence (AAAI)
- International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI)
- Asian Conference on Computer Vision (ACCV)

Journal Reviewer

- IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)
- IEEE Transactions on Medical Imaging (TMI)
- IEEE Journal of Biomedical and Health Informatics (JBHI)
- Journal of Medical Imaging
- Neurocomputing

REFERENCES

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

Bloomberg Distinguished Professor, Department of Cognitive Science and Computer Science at Johns Hopkins

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

Professor, Department of Oncology and Surgery; Director of Diagnostic Imaging and Body Computed Tomography at Johns Hopkins

Dr. Mei Han (hanmei613@gmail.com)

Director of Silicon Valley Lab, PAII, Inc.