

Georgios Georgakis

GRASP Laboratory, Levine 403
3330 Walnut St. Philadelphia, PA, 19104
<http://cs.gmu.edu/~ggeorgak/>
ggeorgak@seas.upenn.edu

Education

PhD in Computer Science, George Mason University 2013-2020
Research Interests: Computer Vision, Robotics, Machine Learning
Thesis: 3D Model-Assisted Learning for Object Detection and Pose Estimation [pdf]
Advisor: Prof. Jana Kosecka

MSc in Computer Science, George Mason University 2013-2015

Diploma in Electronic and Computer Engineering, Technical University of Crete 2006-2012
Thesis: Field Landmark Recognition and Localization for the RobotStadium
Online Soccer Competition [pdf]
Advisor: Associate Prof. Michail G. Lagoudakis

Research Experience

Postdoctoral Researcher Mar 2020-
GRASP Lab. Advised by Dr. Kostas Daniilidis
CIS Department, University of Pennsylvania

Graduate Research Assistant Aug 2019-Dec 2019
Computer Vision and Robotics Lab Aug 2017-May 2018
Department of Computer Science, George Mason University Aug 2013-Aug 2014

Research Intern Summer 2019
United Imaging Intelligence, Cambridge MA

Ph.D Research Intern - Vision and Deep Learning Summer 2017, 2018
Siemens Corporate Technology, Princeton NJ

Publications

Hierarchical Kinematic Human Mesh Recovery
G. Georgakis*, R. Li*, S. Karanam, T. Chen, J. Kosecka, Z. Wu
European Conference on Computer Vision (ECCV) 2020
* equal contribution

Robust Multi-modal 3D Patient Body Modeling
F. Yang, R. Li, **G. Georgakis**, S. Karanam, T. Chen, H. Ling, Z. Wu
Medical Image Computing and Computer Assisted Interventions (MICCAI) 2020

Learning Local RGB-to-CAD Correspondences for Object Pose Estimation
G. Georgakis, S. Karanam, Z. Wu, J. Kosecka
IEEE International Conference on Computer Vision (ICCV) 2019

End-to-end Learning for Keypoint Detection and Descriptor for Pose Invariant 3D Matching

G. Georgakis, S. Karanam, Z. Wu, J. Ernst, J. Kosecka

IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2018

Label Propagation in RGB-D Video

Md. A. Reza, H. Zheng, **G. Georgakis**, J. Kosecka

IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2017

Synthesizing Training Data for Object Detection in Indoor Scenes

G. Georgakis, A. Mousavian, A. C. Berg, J. Kosecka

Robotics: Science and Systems (RSS) 2017

A Contact Exploitative Approach to the Amazon Robotics Challenge

E. Dessalene, **G. Georgakis**, Md. A. Reza, Y. Li, Y. Ovcharik, A. Shapiro, J. Kosecka, D. Lofaro

Warehouse Picking Automation Workshop (ICRA) 2017

Multiview RGB-D Dataset for Object Instance Detection

G. Georgakis, Md. A. Reza, A. Mousavian, P. H. Le, J. Kosecka

International Conference on 3D Vision (3DV), 2016

RGB-D Multiview Object Detection with Object Proposals and Shape Context

G. Georgakis, Md. A. Reza, J. Kosecka

IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2016

Automatic Foreground Extraction with Kinect

S. Christodoulou, **G. Georgakis**, I. Konstantinou, Y. Chrysanthou

6th Cyprus Workshop on Signal Processing and Informatics (CWSPI) 2013

Preprints

Simultaneous Mapping and Target Driven Navigation

G. Georgakis, Y. Li, J. Kosecka

arXiv:1911.07980

Towards Robust RGB-D Human Mesh Recovery

R. Li, C. Cai, **G. Georgakis**, S. Karanam, T. Chen, Z. Wu

arXiv:1911.07383

Patents Pending

Learning Keypoints and Matching RGB Images to CAD Models

G. Georgakis, S. Karanam, Z. Wu, J. Ernst

PCT/US2019/053827, filed September 2019, Application no. WO2020086217

Matching RGB Images to CAD Models

G. Georgakis, S. Karanam, Z. Wu, J. Ernst

PCT/US2019/040913, filed July 2019, Application no. WO2020014170A1

Spare Part Identification Using a Locally Learned 3D Landmark Database

G. Georgakis, S. Karanam, Z. Wu, J. Ernst

PCT/US2018/049100, filed September 2018, Application no. WO2019094094A1

Learning View-invariant Local Patch Representations for Pose Estimation

G. Georgakis, S. Karanam, V. Manjunatha, K-C. Peng, Z. Wu, J. Ernst
PCT/US2018/013271, filed January 2018, Application no. WO2019139587A1

Training a Convolutional Neural Network using Task-irrelevant Data

V. Manjunatha, **G. Georgakis**, K-C. Peng, Z. Wu, J. Ernst
PCT/US2017/067766, filed December 2017, Application no. WO2019125453A1

Awards

Doctoral Consortium at ICCV 2019

Outstanding Graduate Teaching Assistant Award by the Department of Computer Science,
George Mason University, for the academic year 2015-16

Selected Talks

Object-centric Video Prediction without Annotation

Honda Curious Minded Machines Seminar Series, January 2021

3D Model-Assisted Learning for Object Detection and Pose Estimation

GRASP Seminar Series, Philadelphia PA, December 2019

Keypoint Learning for Pose Estimation

Siemens CT Intern Talk Series, Princeton NJ, August 2018

Synthesizing Training Data for Object Detection in Indoor Scenes

RSS Conference Talk, Cambridge MA, July 2017

RGB-D Multiview Object Detection with Object Proposals and Shape Context

IROS Conference Talk, Daejeon, South Korea, October 2016

Reviewer

Conferences: CVPR, CVPRW, ICCV, WACV, ACCV, RA-L/ICRA

Journals: Transactions on Image Processing, Pattern Recognition Letters, IEEE Access

MDPI: Sensors, MDPI: Robotics, Signal Processing: Image Communication,
International Journal of Digital Earth

Teaching Experience

Graduate Teaching Assistant

CS112: Introduction to Programming - Python

Fall 2014 - Spring 2017

CS310: Data Structures - Java

Fall 2018

CS480: Introduction to Artificial Intelligence

Spring 2019

Taught lab sessions, held office hours, graded projects

Guest Lecturer

CS112: Introduction to Programming - Python

Fall 2015

CS685: Autonomous Robotics

Fall 2018

CS687: Advanced Artificial Intelligence

Spring 2019

CS747: Deep Learning

Spring 2020