# Georgios Georgakis

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## 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

## Papers

*Bridge Data: Boosting Generalization of Robotic Skills with Cross-Domain Datasets*
F. Ebert*, Y. Yang*, K. Schmeckpeper, B. Bucher, **G. Georgakis**, K. Daniilidis, C. Finn, S. Levine
arXiv:2109.13396

*Learning to Map for Active Semantic Goal Navigation*
**G. Georgakis***, B. Bucher*, K. Schmeckpeper, S. Singh, K. Daniilidis
arXiv:2106.15648

*Object-centric Video Prediction without Annotation*
K. Schmeckpeper*, **G. Georgakis***, K. Daniilidis
International Conference on Robotics and Automation (ICRA) 2021

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

*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

*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

*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

* Denotes equal contribution

## Patents Pending

*Systems and Methods for Human Pose and Mesh Recovery*
Z. Wu, S. Karanam, C. Cai, **G. Georgakis**
US16/995,446, filed August 2020, Application no. US20210158028A1

*Systems and Methods for Human Mesh Recovery*
S. Karanam, Z. Wu, **G. Georgakis**
US16/863,382, filed April 2020, Application no. US20210158107A1

*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

CVPR, CVPRW, ICCV, WACV, ACCV, TPAMI, ICRA, RA-L, Pattern Recognition Letters, Transactions on Image Processing (TIP), Signal Processing: Image Communication, IEEE Access, MDPI: Sensors, International Journal of Digital Earth

## Teaching Experience

*Graduate Teaching Assistant*

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|---|---|
| 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*

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|---|---|
| CS112: Introduction to Programming - Python | Fall 2015 |
| CS685: Autonomous Robotics | Fall 2018 |
| CS687: Advanced Artificial Intelligence | Spring 2019 |
| CS747: Deep Learning | Spring 2020 |