

Siva Karthik Mustikovela

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EDUCATION **Ph.D Student** (4th year) (September 2016 - Present)
Advisors: Prof. Carsten Rother, Prof. Andreas Geiger (Co-Supervisor)
Visual Learning Lab, Heidelberg University, Germany

Integrated Dual Degree (Bachelor of Tech. + Masters in Robotics) (Aug 2009 - June 2015)
Advisor: Prof. K Madhava Krishna, Robotics Research Centre
International Institute of Information Technology (IIIT-H), Hyderabad, India
Thesis : Searching for small objects in indoor environments over mobile robots

INTERESTS Developing algorithms and data for semi/self-supervised learning.
Realistic data generation for scene understanding.

RESEARCH INTERNSHIPS **NVIDIA** (Learning and Perception Research) (Apr 2019 - Nov 2019)
Mentors: Varun Jampani, Shalini De Mello, Jan Kautz
Topic: Self-supervised viewpoint learning from image collections

TU-Dresden (Visual Learning Lab) (Oct 2015 - June 2016)
Mentors: Prof. Carsten Rother
Topic: Improving semantic segmentation using label propagation from videos

Siemens Research (Machine Learning Research) (April 2013 - June 2013)
Mentors: Aayush Rai, Pradeep Gopalakrishnan
Topic: Fetal heart sound analysis using Spiking Neural Networks (SNNs)

National University of Singapore (Acoustics Research Lab) (April 2012 - June 2012)
Mentors: Prof. Mandar Chitre
Topic: Long range position estimation and tracking of autonomous underwater vehicles

F&P Robotics, Zurich (Computer Vision Group)
Mentors: Dr. Hansruedi Frueh
Topic: Scene understanding, object tracking and face recognition

PUBLICATIONS LINKS INCLUDED **Self-Supervised Viewpoint Learning Using Image Collections**
CVPR 2020

Siva Karthik M, Varun Jampani, Shalini De Mello, Sifei Liu, Umar Iqbal, Carsten Rother, Jan Kautz

iPose: Instance-Aware 6D Pose Estimation of Partly Occluded Objects
ACCV 2018
Siva Karthik M*, O. H. Jafari*, K. Pertsch, E. Brachmann, Carsten Rother
(*Equal Contribution)

Bounding Boxes, Segmentations and Object Coordinates: How Important is Recognition for 3D Scene Flow Estimation in Autonomous Driving Scenarios?
ICCV 2017
Siva Karthik M*, Aseem Behl*, Omid Hosseini Jafari*, Hassan Abu Alhaja, Carsten Rother, Andreas Geiger (*Equal Contribution)

Geometric Image Synthesis
ACCV 2018
H Abu Alhaja, **Siva Karthik M**, Andreas Geiger, Carsten Rother

Augmented Reality Meets Computer Vision : Efficient Data Generation for Urban Driving Scenes

IJCV 2018

H Abu Alhaija, **Siva Karthik M**, L. Mescheder, Andreas Geiger, Carsten Rother

Augmented Reality Meets Deep Learning for Car Instance Segmentation in Urban Scenes

BMVC 2017

H Abu Alhaija, **Siva Karthik M**, Lars Mescheder, Andreas Geiger, Carsten Rother

Can Ground Truth Label Propagation from Video help Semantic Segmentation?

ECCV 2016 (Workshop on Video Segmentation) [Link]

Siva Karthik M, Michael Yang, Carsten Rother

A Hierarchical Network for Diverse Trajectory Proposals

Intelligent Vehicles 2019

Sriram N.N, Gourav K, Abhay S, **Siva Karthik M**, Saket S, Brojeshwar B, Madhava Krishna

During Masters :

Guess from Far, Recognize when Near: Searching the Floor for Small Objects

ICVGIP 2014, Indian Conf. on Vision Graphics and Image Processing

M Siva Karthik, S. Mittal, K Madhava Krishna

Markov Random Field based Small Obstacle Discovery over Images

ICRA 2014, International Conf. on Robotics and Automation

S. Kumar, **M Siva Karthik**, K Madhava Krishna

Small Object Discovery and Recognition using Actively Guided Robot

ICPR 2014, International Conf. on Pattern Recognition

M Siva Karthik, S. Mittal, K Madhava Krishna

PROFESSIONAL SERVICES Reviewing for conferences: CVPR-20, ECCV-20, ICCV-19, CVPR-19, ECCV-18, GCPR-18, CVPR-16, ECCV-16, ICRA-15

TEACHING Computer Vision: Scene Reconstruction and Understanding (Instructor and TA)

THESIS SUPERVISION Alex Bigalke - Domain Adaptation through Cross-Modal Feature Transfer

AWARDS

- Rated as an excellent reviewer for CVPR-20.
- Ranked in top 0.8% among 1 million participants in All India Engineering Examination-2009.
- Ranked 13th among Ten Thousand participants in National KVS Mathematics Olympiad 2005- 06, organized by Kendriya Vidyalaya Sangathan, India.
- Ranked 22nd at the National Mathematics Olympiad Training Camp, Group Mathematics Olympiad 2007 organized by National Board of Higher Mathematics.

TECHNICAL SKILLS

- Languages : C++, Python, Matlab
- Operating Systems : Unix/Linux, Windows
- Libraries : PyTorch, Tensorflow, Caffe, OpenCV

REFERENCES

- Prof. Carsten Rother (carsten.rother@iwr.uni-heidelberg.de) - Heidelberg University, Germany
- Dr. Varun Jampani (varunjampani@gmail.com) - Google Research, Cambridge, USA
- Dr. Shalini De Mello (shalinig@nvidia.com) - NVIDIA Research, Santa Clara, USA
- Dr. Jan Kautz (jkautz@nvidia.com) - NVIDIA Research, Santa Clara, USA
- Prof. Andreas Geiger (andreas.geiger@tuebingen.mpg.de) - Max Plank Institute, Tubingen