

N DINESH REDDY

Smith Hall 117
Robotics Institute
5000 Forbes Avenue
Pittsburgh PA 15213-3890

PHONE: +14127081492
WEBSITE:[link](#)
GITHUB:[link](#)
EMAIL:dnarapur@andrew.cmu.edu

EDUCATION

- JAN '17 - CUR PhD in Robotics, **CMU RI**, USA
Advisor: [Prof. Srinivasa Narasimhan](#)
- DEC '13- MAR '16 Master of Science in Computer Science, **IIIT-Hyderabad**, INDIA
Advisor: [Prof. K Madhava Krishna](#)
- AUG '09 - AUG '13 Bachelor of Engineering (hons) in EEE, **BITS-Pilani**,INDIA
Advisor: [Prof. Suman Kapur](#)

RESEARCH EXPERIENCE

- JAN '17 - CUR Graduate Research Assistant, **ILIM Lab, CMU, USA**
Project: Worked on using multi-view information for improvement.
Consequently creating a virtual time machine to browse through events
Advisor: [Prof. Srinivasa Narasimhan](#)
- MAR '16 - DEC '16 PHD Intern, **Max Planck institute for intelligent systems, Germany**
Project: Learning reconstruction using deep neural networks. leveraging
advances in neural networks for accurate large scale reconstructions
Advisor: [Dr. Andreas Geiger](#)
- AUG '13 - MAR '16 Graduate Research Assistant,**RRC, IIIT hyderabad, INDIA**
Project: Exploiting Semantic Information for Accurate Segmentation,
Localization in Dynamic Environments. Helping in autonomous navigation
of challenging environments
Advisor: [Prof. K Madhava Krishna](#)
- JAN '13 - AUG '13 Undergraduate Research Assistant,**Biology lab, BITS-Pilani, INDIA**
Project: Creating low cost medical research for indian rural population.
Worked on 2 rupee(5 cent) diabetic sensor currently being manufactured
Advisor: [Prof. Suman Kapur](#)

TEACHING EXPERIENCE

Geometry Based Methods in Vision(Instructor [Prof. Martial Hebert](#))

PEER-REVIEWED PUBLICATIONS

- N Dinesh Reddy**, Minh Vo, Srinivasa Narasimhan. Occlusion-Net: Occlusion-Net: 2D/3D Occluded Keypoint Localization Using Graph Networks *Int' conf on Computer vision and pattern recognition(CVPR)*, 2019. [\[Project\]](#)
- N Dinesh Reddy**, Minh Vo, Srinivasa Narasimhan. CarFusion: Combining Point Tracking and Part Detection for Dynamic 3D Reconstruction of Vehicles *Int' conf on Computer vision and pattern recognition(CVPR)*, 2018. [\[Project\]](#)
- N Dinesh Reddy**, Iman Abbasnejad, Sheetal Reddy, Amit K Mondal and Vindhya Devalla. Incremental Real-time Multibody VSLAM with Trajectory Optimization Using Stereo Camera. *Int' Conf on Intelligent Robots and Systems(IROS)*, 2016. [\[Project\]](#)
- N Dinesh Reddy***, Falak Chayya*, Sarthak Upadhyay, Vishes Chari, Zeeshan Zia and K Madhava Krishna. Monocular Reconstruction of vehicles : Combining SLAM with Shape Priors. *IEEE Int' Conf on Robotics and Automation(ICRA)*, 2016.[\[Project\]](#)

N Dinesh Reddy, Prateek, Visesh Chari and Madhava Krishna. Dynamic Body VSLAM with Semantic Constraints. *Int' Conf on Intelligent Robots and Systems(IROS)*, 2015. [\[Project\]](#)

Nazrul Athar, **N Dinesh Reddy**, K Madhava Krishna Temporal Semantic Motion Segmentation using Spatio Temporal Optimization *Int' Conf on Energy Minimization Methods in Computer Vision and Pattern Recognition (EMMCVPR)*, 2017.(ORAL)

Nazrul Athar, **N Dinesh Reddy**, K Madhava Krishna Monocular Semantic Motion Segmentation using Dilated Convolutions *Int' Conf on Computer Vision Theory and Applications (VISAPP)*, 2017.[\[Project\]](#) (ORAL)

N Dinesh Reddy, Prateek Singhal and K Madhava Krishna. Semantic Motion Segmentation Using Dense CRF Formulation. *Ind' Conf on Computer Vision, Graphics and Image Processing (ICVGIP)*, 2014. (ORAL) (10% acceptance rate) [\[Project\]](#)

Prateek Singhal, Aditya Deshpande, Harit Pandya, **N Dinesh Reddy** and K Madhava Krishna. Top Down Approach to Detect Multiple Planes from Pair of Images. *Ind' Conf on Computer Vision, Graphics and Image Processing (ICVGIP)*, 2014. (ORAL) (10% acceptance rate)

MINI-PROJECTS AND INTERNSHIPS

- Interned at Bhilai Steel plant(May '11 - Aug '11) working on AC to DC conversion of power for engines.
- Interned at Sabre holding(Aug '12 - Dec '12) working on database management for flight scheduling.
- Interned at Simulation development division, Indian Army(May '12 - Aug '12) working on trajectory of bullet.
- A Low Cost Mini-Weather Station Texas Instruments MCU design contest.[Link](#)
- Facial Expression Detection on wild images using Active shape model under Dr. Shailesh Kumar.
- Developed the product for detecting the amount of glucose in a blood sample for 2 rupee (3.3 cents).
- Developed the product for testing the antibiotic is resistant or sensitive for urinary tract infection.
- A Quadrotor Platform For Mines detection for Indian Army.
- Line follower bot following a strip of black line with PID integration.

STUDENT SUPERVISED

Xudong Chen (Masters in Computer Vision at CMU in 2019)(Now at Nvidia)

Maying Shen (Masters in Computer Vision at CMU in 2019)(Now at Nvidia)

Mengqing Jiang (Masters in Computer Vision at CMU in 2019)(Now at Waymo)

Fangyu Li (Masters in Computer Vision at CMU in 2019)(Now at Nvidia)

Zhiyu Min (Masters in Computer Vision at CMU in 2019)(Now at Google)

Yijun Luo (Masters in Computer Vision at CMU in 2019)(Now at Google)

Te-Li Wang (Masters in Computer Vision at CMU in 2018)(Now at Facebook Reality Labs)

Suriya Narayanan Lakshmanan (Masters in Computer Vision at CMU in 2018)(Now at Cyngyn)

Nazrul Athar (Masters at IIIT Hyderabad in 2017)(Now at Booking.com, Amsterdam)

COMPUTER SKILLS

Programming: C/C++, CUDA, Python, MATLAB, JAVA, PL-SQL, VERILOG

Libraries: Pytorch, TensorFlow, Torch, OpenCV, ROS, Torch, PCL ,VLFEAT, ARDUINO.

Software packages: Xilinx, PSpice, MATLAB, Arduino IDE ECLIPSE, SQL DEVELOPER, AUTOCAD.

HONOURS AND AWARDS

- Invited program committee for AAAI 2020-
- Invited Reviewer for CVPR 2019- ,ICCV 2019- , ICVGIP 2017-, ICRA 2020- and IROS 2019-
- Invited talk at perceiving systems group, Max planck Institute,Tubingen on 02-10-2015
- Microsoft Research Travel grant to attend IROS 2015.
- IROS student scholarship to attend IROS 2015.
- Research Funding for masters in Robotics- 2017
- Research Funding for masters in computer science- 2014,2015
- Undergraduate merit scholarship - 2011,2012,2013

- Finalist of the TI MCU Design Contest 2012 INDIA

EXTRA-CURRICULAR ACTIVITIES

- Batminton team member and president at BITS, IIIT and CMU.
- Active member of the IEEE student chapter and organized the IEEE Annual Conference, INDICON 2011.
- Nucleus member of the National Social Service (NSS)
- Have attended numerous Technical fests of different colleges, Technozion 2011 of NIT Warangal, Quark 2012 of BITS Goa and Magistech 2011 of MGIT Hyderabad .
- Organizing member of the cultural fest of our college, pearl 2010 and pearl 2011.