

N DINESH REDDY

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WORK EXPERIENCE

JAN '23 - CUR Applied Scientist, **Amazon AWS AI**, USA

EDUCATION

JAN '17 - DEC '22 MS/PhD in Robotics, **CMU RI**, USA
Advisor: [Prof. Srinivasa Narasimhan](#)

DEC '13- MAR '16 Research Assistant, **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 '23 - CUR Applied Scientist, **Amazon AWS AI**, Santa Clara, USA

JAN '17 - DEC '22 Graduate Research Assistant, **ILIM Lab**, CMU, USA
Project: Developing algorithms to addressing the problem of occlusion in images
Advisor: [Prof. Srinivasa Narasimhan](#)

JUNE '20 - DEC '20 Applied Scientist(II) Intern, **Amazon Go**, Seattle, USA
Project: End-to-End learnable tracking framework for 3D human pose
Advisor: [Laurent Guiges](#)

MAR '16 - DEC '16 PHD Intern, **Max Planck Institute for Intelligent Systems**, Germany
Project: Learning reconstruction using deep neural networks.
Advisor: [Dr. Andreas Geiger](#)

TEACHING EXPERIENCE

Special Topics on Geometric Methods in Vision(Instructor [Prof. Srinivasa Narasimhan](#) and [Prof. Kris Kitani](#))
Geometry Based Methods in Vision(Instructor [Prof. Martial Hebert](#))
Computer Vision(Instructor [Prof. Srinivasa Narasimhan](#))

SELECTED AWARDS

- BITSAA 30Under30 2022
- Best Paper Award at IEEE Intelligent Vehicle Symposium 2021
- Qualcomm Innovation Fellowship 2021 (\$100k award)
- AMAZON GO PHD Fellowship 2020
- Microsoft Research Travel grant to attend IROS 2015.
- IROS student scholarship to attend IROS 2015.
- Finalist of the TI MCU Design Contest 2012 INDIA
- First place in the Line Follower at technical fest of NIT Warangal, Technozion 2011.

ACADEMIC SERVICES

- Invited program committee/ Reviewer for CVPR 2019-, ICCV 2019-, ICLR 2021-, ECCV 2020-, 3DV 2021-, ICRA 2020-, IROS 2019-, AAAI-2019, ACCV 2019-, ICCP 2021-
- Admission Committee for Masters in Computer Vision 2019,2020
- Admission Committee for PHD in Robotics 2022
- Masters Thesis Committee for Tanvir Parhar 2020, Divam Gupta 2021, Tom Bu 2022

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 SDD, Indian Army(May '12 - Aug '12) working on trajectory of bullet.
- A Low Cost Mini-Weather Station Texas Instruments MCU design contest.[Link](#)
- Developed the product for testing the antibiotic is resistant or sensitive for urinary tract infection.
- A Quadrotor Platform For Mines detection at Indian Army.
- Line follower bot following a strip of black line with PID integration.

STUDENT SUPERVISED

Khiem Vuong (Masters in Robotics at CMU in 2021)(Present)
Anurag Ghosh (Masters in Robotics at CMU in 2021)(Present)
Grace Su (Bachelors in Computer science at Columbia in 2022)
Neha Bolor (Masters in Computer Vision at CMU in 2021)(Now at Matician)
Shefali Srivatsava (Masters in Computer Vision at CMU in 2021)(Now at Amazon)
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)

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.

PATENTS

“END-TO-END MULTI-PERSON ARTICULATED THREE DIMENSIONAL POSE TRACKING”

U.S. Patent Appln. No. 17/218,476 Filing Date 31 Mar 2021

Inventors: **Dinesh Reddy Narapureddy**, Jean Laurent Guigues, Leonid Pishchulin, Jayakrishnan Kumar Eledath

PEER-REVIEWED PUBLICATIONS

N Dinesh Reddy, khiem Vuong, Robert Tomburo, Srinivasa Narasimhan. [\[Project\]](#)

WALT3D: Learning and Exploiting Occlusion Categories for Amodal 3D Reconstruction
Int' conf on Computer vision (ICCV), 2023.(In Submission)

Anurag Ghosh, **N Dinesh Reddy**, Christoph Mertz, Srinivasa Narasimhan.

Learned Two-Plane Perspective Prior based Image Resampling for Efficient Object Detection
Int' conf on Computer vision and pattern recognition(CVPR), 2023.

Gengshan Yang, Chaoyang Wang, **N Dinesh Reddy**, Deva Ramanan. [\[Project\]](#)

RAC: Reconstructing Animatable Categories from Videos

Int' conf on Computer vision and pattern recognition(CVPR), 2023.

N Dinesh Reddy, Robert Tomburo, Srinivasa Narasimhan. [\[Project\]](#)

WALT: Watch And Learn 2D Amodal Representation from Time-Lapse Imagery
Int' conf on Computer vision and pattern recognition(CVPR), 2022.

N Dinesh Reddy, Laurent Guigues, Leonid Pishchulin, Jayan Eladeth, Srinivasa Narasimhan. [\[Project\]](#)

TesseTrack: End-to-End Learnable Multi-Person Articulated 3D Pose Tracking
Int' conf on Computer vision and pattern recognition(CVPR), 2021.

N Dinesh Reddy, Minh Vo, Srinivasa Narasimhan. [\[Project\]](#)

Occlusion-Net: Occlusion-Net: 2D/3D Occluded Keypoint Localization Using Graph Networks
Int' conf on Computer vision and pattern recognition(CVPR), 2019.

N Dinesh Reddy, Minh Vo, Srinivasa Narasimhan. [\[Project\]](#)

CarFusion: Combining Point Tracking and Part Detection for Dynamic 3D Reconstruction of Vehicles
Int' conf on Computer vision and pattern recognition(CVPR), 2018.

Fangyu Li, **N Dinesh Reddy**, Xudong Chen, Srinivasa Narasimhan. [\[Project\]](#)

Traffic4D: Single View 4D Reconstruction of Repetitious Activity Using Longitudinal Self-Supervision
*Int' conf on Intelligent Vehicles Symposium(IV), 2021. **Best Paper Award***

Mark Shenin, **N Dinesh Reddy**, Matthew O'Toole, Srinivasa Narasimhan. [\[Project\]](#)

Diffraction Line Imaging

European Conference on Computer Vision(ECCV), 2020. (ORAL)

N Dinesh Reddy, Iman Abbasnejad, Sheetal Reddy, Amit K Mondal and Vindhya Devalla. [\[Project\]](#)

Incremental Real-time Multibody VSLAM with Trajectory Optimization Using Stereo Camera.
Int' Conf on Intelligent Robots and Systems(IROS), 2016.

N Dinesh Reddy*, Falak Chayya*, Sarthak , Visesh , Zeeshan and K Madhava Krishna.[\[Project\]](#)
Monocular Reconstruction of vehicles : Combining SLAM with Shape Priors.
IEEE Int' Conf on Robotics and Automation(ICRA), 2016.

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

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 [\[Project\]](#)
Monocular Semantic Motion Segmentation using Dilated Convolutions
Int' Conf on Computer Vision Theory and Applications (VISAPP), 2017. (**ORAL**)

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

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**)