

Suryansh Kumar

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Education

- [THE AUSTRALIAN NATIONAL UNIVERSITY](#). Sept.2015 - Till date.
Ph.D in Engineering and Computer Science.
Research Area: Computer Vision.
Supervisory Panel: Yuchao Dai, Hongdong Li, Richard Hartley.
- [IIIT-HYDERABAD](#). July 2011 - July 2013.
M.S. in Computer Science and Engineering.
Research Area: Robot Vision.
Supervisor: K Madhava Krishna.

Research Interests

- [COMPUTER VISION](#): Structure from Motion, Motion Segmentation, Optical Flow, Object Tracking.
- [APPLIED MATHEMATICS](#): Mathematical Optimisation, Compressed Sensing, Topological Manifold, Machine Learning.
- [ROBOTICS](#): SLAM, Visual SLAM.

Awards and Achievements

- Winner of CVPR NRSFM challenge 2017 sponsored by Disney Research.
- Student funding to attend ICML 17, Sydney Australia and ICCV 17, Venice Italy.
- Student funding to attend Robot Vision Summer School 2016, Kiola, Australia.
- Recipient of “Australian National University Higher Degree Research” Merit Scholarship Award.
- Recipient of “Best Innovative Group 2014”, by Urmil Systems Private Limited, India.
- Full-Time Funded Student for research internship at INRIA, Grenoble-France.
- Full-Time Scholarship Student for MS program in IIIT-Hyderabad, India.
- Winner of “8085 Programming” and “Project Demonstration” contest at TITIKSHA 2008.

Publications

1. [Suryansh Kumar](#), Yuchao Dai, Hongdong Li. “[Monocular Dense 3D Reconstruction of a Complex Dynamic Scene from Two Perspective Images](#)”, International Conference on Computer Vision ([ICCV](#)), IEEE, 2017, Venice, Italy.
2. [Suryansh Kumar](#), Yuchao Dai, Hongdong Li. “[Spatio-Temporal Union of Subspaces for Multi-body Non-rigid Structure-from-Motion](#)”, Pattern Recognition Journal ([PR](#)), Elsevier, 2017, Impact Factor: 4.582.
3. [Suryansh Kumar](#), Yuchao Dai, Hongdong Li. “[Multi-body Non-rigid Structure from Motion](#)”, International Conference on 3D Vision ([3DV](#)), IEEE, 2016, Stanford University, USA.
4. [Suryansh Kumar](#), Siva Karthik M, K. Madhava Krishna. “[Markov Random Field based Small Obstacle discovery over Images](#)”, International Conference on Robotics and Automation ([ICRA](#)), IEEE, 2014, Hong Kong, China.
5. [Suryansh Kumar](#), Ayush Dewan, K. Madhava Krishna. “[A Bayes filter based adaptive floor segmentation with homography and appearance cues](#)”, Indian Conference on Computer Vision, Graphics and Image Processing ([ICVGIP](#)) ACM, 2012, IIT-Bombay, India. ([Oral](#))

Professional Service

- [REVIEWER](#): 3DV 2017, ICRA 2018.
- [TA, INDIVIDUAL ENGINEERING PROJECT COURSE](#). (ENGN4200) Feb. 2017 - July 2017.
Course Instructor: Yuchao Dai.
- [TA, COMPUTER VISION COURSE](#). (ENGN4528/6528) Feb. 2017 - July 2017.
Course Instructor: Jonghyuk Kim.
- [CONSULTANT-ENGINEER, ALGORITHM DEVELOPER](#). July 2014 - July 2015.
Company: Uurmi Systems, Hyderabad, India.

Research Experience

- [INRIA, E-MOTION, RHONE ALPES, GRENOBLE-FRANCE](#). Sept. 2013 - Feb. 2014.
Research Intern.
Topic: Autonomous Driving
Supervisors: Dizan Vasquez, Christian Laugier.
- [IIIT-HYDERABAD, INDIA](#). Jan. 2011 - Aug. 2013.
Research Assistant.
Topic: Robot Vision
Supervisors: K Madhava Krishna.
- [IIT-HYDERABAD, INDIA](#). Aug. 2010 - Dec. 2010.
Project Associate.
Topic: Pervasive Sensor Networks
Supervisor: P. Rajalakshmi.

Technical Skill Set

- [Programming Language](#): C/C++ (5+years of experience), Python, Java and Assembly.
- [Scripting Language](#): Matlab, Octave, Unix Shell Programming.
- [Libraries and APIs](#): OpenCV, OpenGL, ROS, Eigen, STL(C++, Java), Pangolin.
- [Web and Documentation](#): HTML, CSS, Latex.
- [Others](#): Embedded C, Unix System Programming.

Languages

English, Hindi, Magahi.

References available on request