



Recent advances in deep learning techniques have led to impressive progress in many areas of computer vision. Robotics applications present many unique challenges: real-time algorithms, accurate 3d understanding of scenes, scalability. Robotics also brings with it opportunities: the ability to use depth sensors, to control where the camera is looking, and to provide a data source for "grounded" learning of concepts, reducing the need for manual labeling. We invite contributions related to deep learning techniques in computer vision applied to a broad range of robotic devices, from self driving cars to drones to bipedal robots.

Invited speakers/panelists



Jitendra Malik (UC Berkeley) **Raquel Urtasun** (U Toronto) **Dieter Fox** (U Washington)
Honglak Lee (Google Brain / U Michigan) **Abhinav Gupta** (CMU) **Jianxiong Xiao** (AutoX)
Andrew Davison (Imperial College London) **Richard Newcombe** (Facebook)
Raia Hadsell (Google DeepMind) **Ashutosh Saxena** (Brain of Things)

We also invite the community to engage in the panel discussion and send their questions to the invited speakers.

Organizing Committee

Anelia Angelova, Gustavo Carneiro, Kevin Murphy, Niko Sünderhauf, Ian Lenz, Vijay Kumar, Jürgen Leitner, Trung T. Pham, Ingmar Posner, Michael Milford, Wolfram Burgard, Ian Reid, Peter Corke

We invite submission of 2-page abstracts related to:

- Deep learning for robotic vision.
- Other computer vision techniques applied to robotics problems.
- Deep Neural Network (DNN) based object recognition, detection and segmentation for robotics.
- End-to-end perception algorithms.
- Real-time algorithms for robotics perception.
- Vision-based Simultaneous Localization and Mapping (SLAM).
- 3D Scene understanding.
- Deep learning in navigation and autonomous driving.
- Deep learning in human-robot interaction.
- Lifelong deep learning in robotics.
- Perception algorithms deployed on various robotic systems.
- Reliable confidence measures for deep classifiers.
- Deep learning for embedded systems and platforms with limited computational power.
- Deep learning for smart environments.
- Deep learning applications for the visually impaired and for the ageing society.
- Active perception.
- Semi-supervised and self-supervised learning for robotics.

Poster / Abstract submissions: <https://tinyurl.com/deeprobotvision>

Submission deadline: 31 March 2017 (anywhere on planet) **Camera-ready deadline:** 15 May 2017
Author notification: 30 April 2017 **Workshop date:** 21 July 2017