

Nagasrikanth Kallakuri

Audio-Visual Processing | Speech Recognition | Robotics

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Education

Doctor of Philosophy Electrical and Computer Engineering, <i>Carnegie Mellon University - Silicon Valley, Mountain View, CA, U.S.A</i>	Expected - Dec 2016
Master of Science in Electrical and Computer Engineering <i>Carnegie Mellon University, Pittsburgh, PA, U.S.A</i>	Dec 2011
Bachelor of Technology in Electronics and Communications Engg. <i>Jawaharlal Nehru Technological University, Hyderabad, INDIA</i>	May 2010

Work Experience

Research Engineer Intelligent Robotics and Communication Laboratory, <i>Advanced Telecommunications Research Institute International (ATR), Kyoto, JAPAN</i> <ul style="list-style-type: none">Autonomous wheelchair navigation in a Brain-Controlled houseCreating 3D Audio maps and Localization and Mapping of sound sources	Jan 2012 - Aug 2013
Research Assistant Robotics Institute, <i>Carnegie Mellon University, Pittsburgh, USA</i> <ul style="list-style-type: none">Design of a compact programmable mobile robotic platformDesign and implementation of an air quality monitor	Jan 2011 - Dec 2011

Select Research Projects

Audio Visual and Multimodal Speech Recognition

Investigating a multi-modal approach using audio and visual features for robust speech interactions in noisy environments using Deep Learning techniques. (Current Research)

Robust Speech Recognition in Car Environments

Currently developing a hands-free Automatic Speech Recognition in car-like noisy environments. A ROS based multi-sensor data collection platform has been developed for this purpose. (Current Research)

Creating Audio Maps: Localization and Mapping of sound sources

A sensor fusion approach was used for mapping sound sources using a microphone array on an autonomous mobile robot. A fusion of audio data, odometry information and the laser range scan data was used to precisely localize and map the audio sources in an environment. (Past Research)

Autonomous Wheelchair Navigation in Smart Living Environments

Worked on autonomous navigation of a wheelchair in a cluttered home like environment at ATR. This was a part of the Brain Machine Interface Research. (Past Research)

Relevant Coursework

Speech Recognition and Understanding
Machine Learning for Signal Processing
Computer Vision
Statistical Discovery for Learning
Pattern Recognition

Programming Skills

Programming:
C++, C, Java, CUDA,
OpenMP, Matlab and Python

Application Software:

ROS, OpenCV and
Point Cloud Library

Awards and Honors

Award of Excellence in
Research for the year,
ATR International, Japan

Outstanding Performance
Award for the class of 2006-10 ,
Padmasri Dr B.V.Raju Institute
of Technology, India

Leadership Activities

Secretary of IEEE Robotics and
Automation Society,
Silicon Valley Chapter

Director and Visiting Faculty at
Robotics Engineering Center at
Padmasri Dr B.V.Raju Institute
of Technology, India