



Robot Vision S

PhD course spring

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Goals

- System design and programming
 - OpenCV 3.0 rc1
 - ROS (robot operating system)
- focus part 1: visual computation
 - basically same as OpenCV core
 - platform for own computation and feature estimation methods
 - own vision models and visualizations
- combining with high-level task programming by OpenCV in the project

Goals

- lectures concentrate on the data structures and how to use them and extend those
- focus part 2: robot vision systems
 - distributed computing with ROS
 - efficient use of OpenCV in ROS
- access to robotic hardware during the course – make use of your own resources from your lab
- simulation as fallback

Prerequisite

- solid background in
 - mathematics (linear algebra, methods)
 - signal/image processing
 - computer vision
 - C++ programming
- own laptop with internet access and admin rights to install software
- camera supported by Ubuntu (15.04 ?)

Organizati

- lectures
 - core features of OpenCV 3.0
 - systems basics in ROS Indigo
- seminars
 - participants present topics
 - one seminar presentation rec
- exercises
 - installation of OpenCV and R
 - going through essential first s
- project (example applicatio

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