David Obdržálek

RNDr. David Obdržálek, Ph.D.

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Topics

· Robotics! Every kind of :-)

Since 2004, I'm the head of Czech Robotic Day: www.roboticday.org

Teaching

• See <u>Local webpage</u> or the list below.

Courses List

NAIL028 Introduction to Robotics (winter term)

This introductory course overviews key topics in robotics: kinematic and dynamic model, basic components (hardware, sensors and actuators, software), control systems, introduction to localization, mapping, planning.

Local info

• NPRG037 Microcontroller Programming (winter term)

The course is focused on microcontrollers, their programming and application usage. The course will consist of theoretical as well as practical part, where the attendees will try programming and usage of a real microcontroller.

Local info

NAIL112 Middleware for robotics (winter term)

This course provides an overview of various middleware platforms used in robotics. The course is focused towards autonomous robot control systems (UGV, UAV). We will be using ROS since it is currently one of the most widespread middleware platforms available. Throughout the course we will learn how to control either simulated or real robots.

Local info 🗗

NAIL108 Mobile Robotics (summer term)

This course concerns on topics specific to mobile robotics. The topics are focused on autonomous devices or SGVs - "Self-Guided Vehicles": hardware, software, algorithms, and theoretical problems.

Local info

NPRG025 Interfaces in Robotics (summer term)

Interconnection of robotic devices, both hardware and software. Course will consist of referative lectures and practical interconnection examples.

Local info 🗗

NAIL061 Seminar on Mobile Robotics (summer term)

Referative seminar about theoretical and practical aspects of Mobile Robotics, based on published papers.

Local info

NAIL101 Probabilistic Robotics (summer term)

During its life a robot deals with many problems: It wakes up - without knowing where it is. It is going - without knowing how and where. It is doing - without knowing what and why. These difficulties come from an inaccuracy of sensors and from a complexity of the real world, which cannot be accurately captured by a simple model. Our goal for this

class is to familiarize ourselves with various algorithmic methods, which help us with dealing with the uncertainty originating from our and robot's ignorance.

Local info

NAIL073 Robot I

Design and construction of a mobile autonomous robot, e.g. for a competition.

Local info

NAIL074 Robot II

Design and implementation of control software for a mobile autonomous robot, e.g. for a competition.

Local info

NPRG045 Individual Software Project

The goal of this course is development of a software project using any common programming language. It is organized as individual work and consultations with a supervisor. The development consists of a specification, implementation, deployment, and relevant documentation.

Personal

My old webpage