<table>
<tr><td colspan="2">Name:
Programming of Robot Systems</td><td>NEPTUN-code:
NBXRP1SMNE</td><td>Number of periods/week:
full-time: 2 lec + 0 sem + 2 lab</td></tr>
<tr><td colspan="2">Credit: 4
Requirement: exam</td><td colspan="2">Prerequisite:
NIXPEREMNE Parallel Programming</td></tr>
<tr><td>Responsible:
Péter GALAMBOS, Ph.D.</td><td>Position:
associate professor</td><td colspan="2">Faculty and Institute name:
John von Neumann Faculty of Informatics
Institute of Biomatics</td></tr>
<tr><td colspan="4">Way of assessment:
- signature: successful submission of assignments
- oral exam</td></tr>
<tr><td colspan="4">Competences</td></tr>
<tr><td colspan="4"></td></tr>
<tr><td colspan="4">Course description:</td></tr>
<tr><td colspan="4">Goal of the course is to give an insight to the programming paradigms of industrial and service robot systems along modern approaches. Besides the conventional robot programming languages (e.g., FANUC TP, RAPID), theory and practice of distributed, component-based software frameworks (RT-Middleware, ROS) are espacially focused during the classes thrugh practical exampples. The course introduces the basics of offline
robot programming and touches the 3D VR-based testing and system integration environments. Through the laboratory activities, special emhasise is laid on the real work with industrial and service robotic systems e.g., FANUC industrial robots, NAO humanoid robots, DaVinci surgical robot system, KUKA youbot.</td></tr>
<tr><td colspan="4">Literature</td></tr>
<tr><td colspan="4">Béla Kulcsár: Robotics, Typotex, 2013 (in Hungarian)
Assorted chapters of: Handbook of Robotics (Editors: Siciliano, Bruno, Khatib, Oussama), Springer, 2016</td></tr>
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