

Technical Sessions IEEE LARS/SBR 2019

| Date / Hour | Place / Session |
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| 23/10 | João Rocha Auditorium |
| 9:00-10:30 | Robot Soccer and Humanoids |
| 1 | 199306 Comparison and analysis of the DVG+A* and Rapidly-exploring Random Trees Path-Planners for the RoboCup-Small Size League |
| 2 | 199696 Solving the time lapse from vision system in a robot soccer game using Kalman filter |
| 3 | 199723 Model Predictive Control for Omnidirectional Small Size Robot with Motor and Non-Slipping Constraints |
| 4 | 199727 Performing and blocking passes in Small Size League |
| 5 | 199752 Object detection under constrained hardware scenarios: a comparative study of reduced convolutional network architectures |
| 6 | 199970 A Multiclass Object and Depth Estimation Deep Model for Humanoids Robots in a Soccer Simulated Dataset |
| 7 | 199980 Learning Humanoid Robot Running Skills through Proximal Policy Optimization |
| 8 | 200035 Learning When to Kick through Deep Neural Networks |
| 9 | 200030 Height Varying Humanoid Robot Walking through Model Predictive Control |
| 23/10 | João Rocha Auditorium |
| 13:30-15:30 | Perception and Vision |
| 1 | 199473 Masking Salient Object Detection, a Mask Region-based Convolutional Neural Network Analysis for Segmentation of Salient Objects |
| 2 | 199677 Can Exposure, Noise and Compression affect Image Recognition? An Assessment of the Impacts on State-of-the-art ConvNets |
| 3 | 199701 Facial Recognition Experiments on a Robotic System Using One-Shot Learning |
| 4 | 199728 Accurate stereo Visual Odometry based on keypoint selection |
| 5 | 199976 Localization correction using road signs |
| 6 | 200032 A Perception System for an Autonomous Pesticide Boom Sprayer |
| 7 | 198775 Advanced Driver Assistance System based on NeuroFSM applied in the detection of autonomous human faults and support to semi-autonomous control for robotic vehicles |
| 8 | 200071 Remote control for mobile robots using gestures captured by the RGB camera and recognized by deep learning techniques. |
| 9 | 199834 Development of a Mobile Robot: Robotic guide dog for Aid of Visual Disabilities in urban environments |
| 10 | 199707 Satellite and Underwater Sonar Image Matching using Deep Learning |
| 11 | 1997203D Surfaces Reconstruct in Underwater Environments Using Obtained Data From MSIS Sonar |
| 12 | 199738 Temporal Approaches for Human Activity Recognition using Inertial Sensor |
| 23/10 | João Rocha Auditorium |
| 17:00-18:00 | Localization, Mapping and Navigation |
| 1 | 199709 An Approach for Representing Maps in SLAMbased on Grid Maps and Sparse Matrices |
| 2 | 200045 A Systematic Mapping Study on Multi-sensor Fusion in Wheeled Mobile Robot Self-localization |
| 3 | 200043 Multi-sensor Fusion Method based on Artificial Neural Network for Mobile Robot Self-localization |
| 4 | 200053 Proposal of a New Model for Social Navigation Based on Extraction of Social Contexts from Ontology in Service Robots |
| 5 | 200080 Performance Evaluation of Data Fusion for Orientation Estimation in an Intelligent Inertial Measurement Unit |
| 6 | 199724 Performance evaluation of ROS local trajectory planning algorithms to Social Navigation |
| 24/10 | Building 5 |
| 9:00-10:30 | Computing Architectures and Systems |
| 1 | 199259 Raspberry Pi performance analysis in real-time applications with the RT-Preempt patch |
| 2 | 199316 ROS architecture for nonlinear control in singularly perturbed wheeled mobile robots: dynamic confined space-based approach |
| 3 | 199605 TurtleUI: A Generic Graphical User Interface for Robot Control |
| 4 | 199702 Fuzzy System for Obstacle Detection and Avoidance for Mobile Robot |
| 5 | 199744 Robotics Development using Real-Time Embedded System |
| 6 | 199747 Autonomic Computing Towards Resource Management in Embedded Mobile Robots |
| 7 | 199794 Sensory Integration of a Mobile Robot Using the Embedded System Odroid-XU4 and ROS |
| 8 | 200081 Integrating an MPSoC to a Robotics Environment |
| 9 | 200052 Development of an Embedded System for use in Real-Time Intelligent Traps to Detecting Fruit Fly (Diptera:Tephritidae) |
| 24/10 | João Rocha Auditorium |
| 17:00-18:00 | Control and Modelling |
| 1 | 198833 Design, modelling, control and simulation of Biomimetic Underwater Robot |
| 2 | 199690 A Motion Control Scheme for a WMR based on Input-Output Feedback Linearization and PID |
| 3 | 199735 Evaluation of the Pressure-Flow Relationship in a Boom of an Autonomous Robotic Agricultural Sprayer |
| 4 | 199641 Flying robots with wind awareness: estimation of the wind velocity and direction through the data log and a closed-form energy model |
| 5 | 199694 A Genetic Approach for Trajectory Optimization applied to a Didactic Robot |
| 6 | 199717 Custom made low-cost optoelectronic flex sensor and its parameterization |
| 25/10 | João Rocha Auditorium |
| 9:00-10:30 | Industrial Applications |
| 1 | 199719 Rigorous Tracking of Weld Beads for the Autonomous Inspection with a Climbing Robot |
| 2 | 199767 Height Measurement and Adjustment of Welding Torch for Linear Welding Robot |
| 3 | 199655 Online Sound Based Arc-Welding Defect Detection using Artificial Neural Networks |
| 4 | 199679 Semiotics Applied to Human-Robot Interaction in Welding Processes |
| 5 | 199890 An Optimized Image Fusion Method for Fume Removal in Automated Welding Robots Field |
| 6 | 200034 Non-Invasive Visual Computing Modelling for Obstruction Inspection of Pipes in the Fertilizer Industry |
| 7 | 199706 Automated Inspection of Pressure Vessels through a Climbing Robot with Sliding Autonomy |
| 8 | 199645 WsBot: A Tiny, Low-Cost Swarm Robot for Experimentation on Industry 4.0 |
| 9 | 199722Tabu search for the surveillance task optimization of a robot controlled by two-dimensional stochastic cellular automata ants model |
| 25/10 | João Rocha Auditorium |
| 13:30-15:30 | Learning and Multi-Robots |
| 1 | 199504 Sim-to-Real in Reinforcement Learning for Everyone |
| 2 | 199944 A Simulated Environment for Long-term Interactions |
| 3 | 199675 Decentralized Strategies based on Node Marks for Multi-robot Patrolling on Weighted Graphs |
| 4 | 198782 Multi-robot Navigation and Exploration in a Graph with Entrance-dependent Identification of the Edges |
| 5 | 199856 A Multi-Robot Path Planning Approach Based on Probabilistic Foam |
| 6 | 200066 Local Coordination Diagrams for Collision Avoidance in Multi-Robot Path Planning |
| 7 | 198752 Prototyping and validating the CORA ontology: case study on a simulated reconnaissance mission |
| 8 | 199739 Patrolling Strategy for Multiple UAVs with Recharging Stations in Unknown Environments |
| 9 | 199729 A flying IoT network to help in disaster recovery |
| 10 | 199745A decentralized approach to drone formation based on leader-follower technique |
| 11 | 200079 Particle Swarm Optimization Algorithm Implementation for Multiple Drones Control in Continuous Task Simulation |
| 12 | 199695 A novel stop criterion to support efficient Multi-robot mapping |
| 25/10 | João Rocha Auditorium |
| 16:00-17:00 | Novel Applications |
| 1 | 199674 Contradictions in assessing human morals and the ethical design of autonomous vehicles |
| 2 | 199726 Assistive Robotics and Muscular System Modeling for Rehabilitation of Spasticity Patients |
| 3 | 199972 Using Assistive Robotics for Aphasia Rehabilitation |
| 4 | 200078 A novel sequential activation method for the locomotion of quadrupedal soft robots |
| 5 | 199749Kinematics and Workspace of a Reconfigurable Robotic Leg Based on the Peaucellier-Lipkin Mechanism |
| 6 | 199989 Convolutional Neural Network Based Object Detection for Additive Manufacturing Robotics |