

University of Pisa

Master of Science in Computer Science

Course of Robotics (ROB)

A.Y. 2019/20



Scuola Superiore
Sant'Anna

Journal Club

Group (1 to 3 students) assignment:

1. Read one the proposed papers (see next slide)
2. @ classes of May 25 and 27:
 - Present the paper to the other students in 15 minutes
 - Prepare to discuss (Q&A) with the students and the teacher
 - Outline any possible link to the topics of the course

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<http://didawiki.cli.di.unipi.it/doku.php/magistraleinformatica/rob/start>

Journal Club paper assignment

FILE NAME	TITLE	LINK	STUDENTS
AntBot 2019	AntBot: A six-legged walking robot able to home like desert ants in outdoor environments		
Autonomous Vehicles 2017	Perception, Planning, Control, and Coordination for Autonomous Vehicles	https://www.researchgate.net/publication/313834721_Perception_Planning_Control_and_Coordination_for_Autonomous_Vehicles	
Behavior-based robotics survey 2008	Behavior-based Robotics And The Reactive Paradigm - A Survey		
Biomimetic Robot Navigation 2000	Biomimetic Robot Navigation	https://www.societyofrobots.com/robottheory/Biomimetic_robot_navigation.pdf	
Braitenberg vehicles 2014	A model and formal analysis of Braitenberg vehicles 2 and 3	https://www.researchgate.net/publication/241632790	
CPG legged robots 2009	Survey of locomotion control of legged robots inspired by biological concept	http://users.dimi.uniud.it/~antonio.dangelo/Robotica/2018/holder/biologicallyInspired_locomotionControl_Issue.pdf	
CPG review 2008	Central pattern generators for locomotion control in animals and robots: A review		
Evolutionary soft robotics 2017	Evolving Soft Locomotion in Aquatic and Terrestrial Environments: Effects of Material Properties and Environmental Transitions	https://dl.acm.org/doi/pdf/10.1145/3067695.3082051	
Expected Perception 2015	Expected Perception based control for reaching a moving target		
Morphological Computation 2006	Morphological computation - A basis for the analysis of morphology and control requirements		
Morphological Computation 2011	Towards a theoretical foundation for morphological computation with compliant bodies	https://www.researchgate.net/publication/221791575_Towards_a_theoretical_foundation_for_morphological_computation_with_compliant_bodies	
Retina-like sensors 2002	Retina-Like Sensors: Motivations, Technology and Applications	https://www.academia.edu/10613746/18_Retina-Like_Sensors_Motivations_Technology_and_Applications	
Robot pushing 2020	Let's Push Things Forward: A Survey on Robot Pushing	https://www.frontiersin.org/articles/10.3389/frobt.2020.00008/full	
Self-driving cars 2019	Self-Driving Cars: A Survey	https://arxiv.org/pdf/1901.04407.pdf	
Soft robot control 2017	Control Strategies for Soft Robotic Manipulators: A Survey		
TorontoCity 2017	TorontoCity: Seeing the World with a Million Eyes	https://arxiv.org/pdf/1612.00423.pdf	



Journal Club paper assignment

- Find the papers in the MicroSoft Teams file repository for the 'Robotics' Team:
https://teams.microsoft.com/_#/files/Generale?threadId=19%3Ab242ebca2a6640ad80689b58ef19f943%40thread.tacv2&replyChainId=1587546000129&ctx=channel&context=Journal%2520club%2520papers&rootfolder=%252Fsites%252Fmsteams_95125f%252Fshared%2520Documents%252FGeneral%252FJournal%2520club%2520papers
- Propose your name on the right side of the paper title, in the 'STUDENTS' column
- To do so, open the excel file with 'Excel online'