Nemanja Rakićević

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Research interests

- Uncertainty-based efficient exploration methods
- Deep reinforcement learning, generative models, probabilistic graphical models

Education

2016 – now	**PhD Candidate** Robot Intelligence Lab, Imperial College London
2011 – 2013	**European Master On Advanced Robotics (EMARO), double degree program.** Thesis development: Keio University, Japan 2nd year: Ecole Centrale de Nantes, grade average A 1st year: University of Genova, grade average A
2007 – 2011	**Mechatronics, Robotics and Automatization, Faculty of Technical Sciences, University of Novi Sad.** 240 ECTS, grade average 10 [100/100]

Employment and academic activities

2019-07	Attended: Machine Learning Summer School, London, UK
2018-09 – 2019-01	**Research Intern: DeepMind, London, UK**
2017-(06 – 08)	**Data Scientist: Human (previously CitySail), London, UK** Developing and implementing models for real-time human personality estimation.
2015-01 – 2016-05	**Research Assistant: iBug group, Imperial College London, UK** Sequential probabilistic models for emotion recognition based on facial expressions and audio data. Multimodal Neural Conditional Random Fields for Behaviour Analysis.
2015 –	**Graduate Teaching Assistant: Imperial College London, UK** Machine Learning (prof Maja Pantic), Computing II, Robotics (Dr Petar Kormushev) Data Structures and Algorithms (Dr Heikki Peura)
2013-12 – 2014-07	**Research Engineer: RIS group, LAAS-CNRS, Toulouse, France.** Rover locomotion diagnostics based on proprioceptive sensor feeds.
2013-07	MSc thesis testing sessions: Japanese Aerospace Exploration Agency's (JAXA) Institute of Space and Astronautical Science on the "Cuatro" rover test bed
2011	Team leader: National robotics competition (EUROBOT)
2010-(09 – 10)	**Intern: "Mihajlo Pupin" Institute, Belgrade, Serbia** Robotic gripper and small rover movement programming. [Supervisor: Professor Aleksandar Rodić]

Publications

RP Saputra, **N Rakicevic**, P Kormushev. *"Sim-to-Real Learning for Casualty Detection from Ground Projected Point Cloud Data"*, IROS, 2019

N Rakicevic, P Kormushev. *"Active Learning via Informed Search in Movement Parameter Space for Efficient Robot Task Learning and Transfer"*, AURO, 2019

N Rakicevic, P Kormushev. "*Efficient Robot Task Learning and Transfer via Informed Search in Movement Parameter Space*", AIRW (NIPS), 2017

N Rakicevic, O Rudovic, S Petridis, M Pantic. "*Multi-Modal Neural Conditional Ordinal Random Fields for Dynamic Agreement Level Classification*", ICPR, 2016

N Rakicevic, O Rudovic, S Petridis, M Pantic. "*Neural Conditional Ordinal Random Fields for Agreement Level Estimation*", WASA, 2015.

Courses and projects

MSc:		
M1		Control of Multivariable Systems, Real-Time Systems, Neural Networks, Computer Vision, Mechanical Design Methods, Optimization Techniques, Embedded Systems, Artificial Intelligence (Machine Learning), Mobile Robotics; **Group project** - building an underwater robot to compete at the NURC SAUC-E 2012 (mechanical, control and electronics design) [Supervisor: Professor Giuseppe Casalino]
M2		Vision Based Control, Advanced Modeling of Robots, Identification and Control of Robots, Humanoid and Walking Robots, Capture and Simulation of Human Motion;
Keio		Aerospace Propulsion, Mixed Reality, Space Systems Engineering; **Thesis Topic** - "Guidance, Navigation and Control for Planetary Rover" [Supervisors: Professors Masaki Takahashi, Philippe Martinet and Giuseppe Casalino]
BSc:		Electronics (analog, digital), Industrial Robotics, PLC Programming, Mechanics, Automated Control Systems, Microprocessor Electronics, Optimization Methods, Machine Mechanics (mechanisms), Components of Technological Systems (pneumatics and hydraulics); **Group project** - building a mobile robot to compete at the EUROBOT 2011 competition (group leader; electronics design, movement programming) **Thesis topic** - "Realization of the Robot Sensor System and Motion Control for the EUROBOT 2011 Competition, within the Team MAXIMILIAN" [Supervisor: Professor Branislav Borovac]

Awards and recognitions

2016 – 2020	Imperial College London President's PhD Scholarship
2011 – 2013	Erasmus Mundus scholarship laureate for the EMARO MSc programme
2010/2011	Declared best student in generation 2010/11, University of Novi Sad
2010 – 2013	"Dositeja" scholarship laureate, Ministry of Youth and Sport, Republic of Serbia
2009/2010	University of Novi Sad scholarship laureate
2008 – 2012	Annual award to exceptional students for their achievements during studies, Ministry of Education, Republic of Serbia

Skills

Computer skills	[active] Python, Tensorflow, MuJoCo, PyBullet, LaTeX, Git [passive] MATLAB, C/C++, Solid Edge, Pro/ENGINEER
Languages	Serbian, English, Italian, Spanish, French
Hobbies	Capoeira Club "Capoeira Associação Sérvia" (since 2005), Surfing, Drawing