Romain Michalec

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39 years old, French citizen

Glasgow, United Kingdom

Experience

2020 – 2023	**University of Strathclyde**, Glasgow

Research associate/Research software engineer, Maritime Safety Research Centre

Software engineering for the assessment of ship vulnerability to flooding, in the context of two European research projects on ship safety involving 15+ partner organisations each. Organisation of the leading international conference in the field, attended by 300 delegates.

2019 – 2020 *Research associate/Research software engineer*, Centre for Ultrasonic Engineering

Software engineering for ultrasound data visualisation in automated non-destructive testing. Automatic detection of defects in composite materials.

2017 – 2019 *Research assistant*, Space Mechatronics Laboratory

Development of a software framework for sensor data fusion in planetary and orbital robotics. Experimental validation at the German space agency and in a Mars analogue site in the Sahara desert. Work part of a cluster of coordinated European research projects in space robotics.

2013 – 2015 **Georgia Institute of Technology** and **CNRS**, France
Research assistant, Field Robotics Laboratory

Terrain-based navigation of autonomous underwater vehicles using sidescan sonars, for a European research project on underwater robotics.

2007 – 2011 **Atomic Energy Commission (CEA)**, France
Ph.D. student, Interactive Simulation Laboratory

Modelling and control of multifingered dextrous manipulation for humanoid robot hands. Applications in robotics, virtual reality, computer animation, prosthetics.

2006 **University of Tübingen**, Germany
Research intern, Computer Networks Laboratory

Detection of distributed denial of service attacks by statistical methods. Implementation into a distributed firewall for a European research project.

Education

2007 – 2011 **Ph.D. in robotics**
Pierre and Marie Curie University and Atomic Energy Commission

2006 – 2007 **M.S. in computer science**
University of Paris-Sud. Virtual and augmented reality, statistical data analysis.

2004 – 2007 **M.S. in general engineering**
ENSTA Paris. Applied mathematics and computer science: control theory, mathematical programming, scientific computing, differential geometry, probability theory, robotics, computer graphics, image processing.

Language skills

French	Native
English	Fluent
German	Conversational

Software skills

Programming and data analysis	Python, C/C++, Bash, MATLAB
Frameworks, libraries, and tools	Qt, ROS, CMake, Git, Docker, Linux
Authoring and publishing	LaTeX, HTML/CSS

Social activities

Researcher support	I help grow a community of research software engineers at the University of Strathclyde. We run software engineering clinics to help researchers write better software to produce better research.
Sport involvement	I am a member of the University of Strathclyde's swimming and lacrosse teams, and a qualified lacrosse referee with experience of officiating national league matches and tournaments.
Diversity and inclusion	I participate in Strathclyde's LGBT+ staff and Ph.D. students network, with a view to fighting LGBT+ invisibility in STEM.
Open-source software	I triage and fix bugs in Ubuntu Linux to help improve it for everyone in the community.
First aid training	QA Level 3 Award in First Aid at Work (RQF), May 2022.

Selected publications and presentations

IMDC 2022	*A multi-level approach to flooding risk estimation of passenger ships*. Dracos Vassalos et al. International Marine Design Conference. Vancouver, BC, Canada, June 2022.
STAB&S 2021	*A computer program for lifecycle flooding risk assessment according to the FLARE Framework process*. Romain Michalec et al. International Conference on the Stability and Safety of Ships and Ocean Vehicles. Glasgow, Scotland, June 2021.
IJARS 2020	*Common Data Fusion Framework: an open-source common data fusion framework for space robotics*. Raúl Domínguez et al. International Journal of Advanced Robotics Systems, Mar. 2020.
RSEConUK 2019	*"It works on my machine": working as a research software engineer in a multi-partner international research project*. Romain Michalec et al. Conference of Research Software Engineers. Birmingham, England, Sept. 2019.
IAC 2018	*InFuse data fusion methodology for space robotics, awareness and machine learning*. Mark Post, Romain Michalec et al. International Astronautical Congress. Bremen, Germany, Oct. 2018.
i-SAIRAS 2018	*A common data fusion framework for space robotics: architecture and data fusion methods*. Raúl Domínguez et al. International Symposium on Artificial Intelligence, Robotics, and Automation in Space. Madrid, Spain, June 2018.
OCEANS 2014	*Sidescan sonar aided inertial drift compensation in autonomous underwater vehicles*. Romain Michalec and Cédric Pradalier. MTS/IEEE Oceans. St. John's, NL, Canada, Sept. 2014.
Ph.D. dissertation	*Modeling and control of multifingered dextrous manipulation for humanoid robot hands*. Romain Michalec. Ph.D. thesis. Fontenay-aux-Roses, France, Dec. 2011.
HUMANOIDS 2010 *Best Paper Finalist*	*Stiffness modeling for multifingered grasping with rolling contacts*. Romain Michalec and Alain Micaelli. IEEE/RAS International Conference on Humanoid Robots. Nashville, TN, USA, Dec. 2010.
IROS 2009	*Optimal tightening forces for multifingered robust manipulation*. Romain Michalec and Alain Micaelli. IEEE/RSJ International Conference on Intelligent Robots and Systems. St. Louis, MO, USA, Oct. 2009.
SYROCO 2009	*Dynamic optimization-based control of dextrous manipulation*. Romain Michalec and Alain Micaelli. IFAC International Symposium on Robot Control. Gifu, Japan, Sept. 2009.