

CURRICULUM VITAE

IDENTITY

J r mie Deray

Robotics Software Engineer

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FIND ME ONLINE



KEYWORDS

ROS (2) - Gazebo - OpenCV - PCL - Eigen - Ceres - IpOpt - C++ - Python - Git|Hub|Lab - LXC/Docker/Snap - CI/CD - VSCode - Matlab - Linux - SLAM - Perception - Sensor Fusion - Trajectory Planning - Non-Linear Optimization - Kalman Filter - Computer Vision

LANGUAGE

French - native
English - proficient
Spanish - basic

PROFESSIONAL EXPERIENCE

Software Engineer II

2019 - now

Canonical - Montreal, Canada - remote

Development and maintenance of ROS 1/2/ESM - security features for ROS 2 (DDS plugin), miscellaneous upstream features, packages port, bugfixes, internal CI/CD setup. Snapcraft ROS(2) support & Snap packaging of ROS-based apps/stacks. Junior training & supervision. Client training & support. Tuto & comm around portfolio. Representative: ROS 2 TSC & Security WG, conferences & conventions.

Navigation Software Engineer

2014 - 2019

PAL Robotics - Barcelona, Spain

SLAM/nav stack development & maintenance - C++/ROS; visual place-recognition & 2D Lidar loop-closure development & integration. Mobile-base motion planner & automatic kinematics calibration development. Navigation framework unification, maintenance & deployment for various robots (mobile-base/manipulator/humanoid). Camera calibration, object detection. Client training & support. Representative at conferences & conventions. MSc students internship supervision.

Master Research Training

6 month - 2014

PAL Robotics - Barcelona, Spain

Omnidirectional camera-rig design - hardware & software -, alt-azimuthal-complete, for the topological localization of a humanoid robot. Interfacing with a VR headset for remote monitoring.

EDUCATION

Philosophi  Doctor

2015 - 2020

"Robust Navigation for Industrial Service Robots", Control, Robotics and Vision - Excellent Cum Laude.

IRI, Universitat Polit cnica De Catalunya - Barcelona, Spain

Master of Science

2012 - 2014

Computer Vision and Robotics.

Universit  de Bourgogne - Le Creusot, France

Bachelor Degree

2011 - 2012

Industrial Control using Artificial Vision.

IUT - Le Creusot, France

Higher National Diploma

2009 - 2011

Electrical Engineering & Industrial Computing.

IUT - Le Creusot, France

EXTRACURRICULAR

NASA's Space Robotics Challenge 3rd place

Team Olympus Mons - June 2017.

Homelab / 3D printing enthusiast.

PUBLICATIONS AND CONFERENCES

- J. Deray and J. Sol . Manif: A micro lie theory library for state estimation in robotics applications. *Journal of Open Source Software*, 5(46):1371, 2020. Library available at github.com/artivis/manif ★953
- J. Deray, B. Magyar, J. Sol , and J. Andrade-Cetto. Timed-elastic smooth curve optimization for mobile-base motion planning. In *Proceedings IEEE/RSJ International Conference on Intelligent Robots and Systems*, pages 3143–3149, Macau, Nov 2019. Presented at IROS 2019, Macau.
- B. Magyar, N. Tsiogkas, J. Deray, S. Pfeiffer, and D. Lane. Timed-elastic bands for manipulation motion planning. *IEEE Robotics and Automation Letters*, 4:3513–3520, Oct 2019
- J. Deray, J. Sol , and J. Andrade-Cetto. Joint on-manifold self-calibration of odometry model and sensor extrinsics using pre-integration. In *Proceedings European Conference on Mobile Robots*, pages 1–6, Prague, Sep 2019
- J. Sol , J. Deray, and D. Atchuthan. A micro Lie theory for state estimation in robotics. Technical Report IRI-TR-18-01, Institut de Rob tica i Inform tica Industrial, Barcelona, 2018
- J. Deray, J. Sol , and J. Andrade-Cetto. Word ordering and document adjacency for large loop closure detection in 2D laser maps. *IEEE Robotics and Automation Letters*, 2(3):1532–1539, Jul 2017. Presented at ICRA 2017, Singapore.
- D. Gurung, C. Jiang, J. Deray, and D. Sidib . Hand Gestures Recognition and Tracking. HAL-00903898 preprint, Jun 2013