Joris Guérin

Personal Data

Place and Date of Birth:	Annecy, France, 25 September 1992
Address:	19 boulevard Jean Baptiste Lebas, 59000, Lille, France
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Education

Current	Ph.D student in Machine Learning and Robotics **Arts et Métiers ParisTech**, Lille, France Advisors: Pr. Olivier Gibaru, Dr. Eric Nyiri, Dr. Stéphane Thiery
August 2015	MSc. in Industrial Engineering **Texas Tech University**, Lubbock Specialties: Pattern recognition, Optimization & Control theory Gpa: 4 / 4
July 2015	Master Degree in Mechanical and Industrial Engineering **Arts et Métiers ParisTech**, Paris, France
Sep 2012 Sep 2010	Prep school for French Grandes écoles **Lycée la Martinière Monplaisir**, Lyon, France Chosen specialties: Mathematics and Physics

Research Experience

Current Oct 2015	Doctoral research at Arts et Métiers ParisTech, Lille, France *Machine Learning for robotics applications* Objective: Self-programming robots. Achievements: Local Cartesian positioning learning / smart sorting application using real objects clustering
April 2018 August 2017	Visiting Graduate Researcher at Georgia Tech, Atlanta, Georgia, USA *Image clustering for robotics applications* Objective: Advances in unsupervised image classification / Application in robot decision making. Achievements: Deep ensemble transfer clustering algorithm / Unsupervised robot sorting application.
Jul 2015 Sep 2014	Research assistant at Texas Tech University, Lubbock, Texas, USA *Habitat volume optimization in spaceships* Project for Lockheed Martin at NASA JSC Objective: Space arrangement of the different rooms during a spaceship design Achievements: Developped a preprocessing algorithm to binpacking of soft objects.

Teaching Experience

Current	Practical introduction to Machine Learning Arts et Métiers ParisTech, Lille, France Introductory lectures and labs for Robotics master students
2015-2016	Basics of programming Arts et Métiers ParisTech, Lille, France Labs of python programming to third year engineering students

Awards, Certificates and complementary formations

October 2016	IEEE-IES Student Paper Travel Award at IECON 16, Florence, Italy
2017 - 2018	Fulbright Scholarship as a visiting student researcher (Georgia Tech Atlanta) Advisor: Dr. Byron Boots
August 2018	Participation to the "Statistical physics and machine learning back together" summer school, Cargèse, France
February 2017	Participation to VVV17 (Humanoid Robot Programming), S. Margherita, Italy
May 2016	Participation to Machine Learning Summer School 2016, Cadiz, Spain
February 2014	Toefl: 96 / 120

Languages

French:	Mother tongue
English:	Fluent
Portuguese (Brazil):	Good working knowledge

Practical skills

Programming:	python, c++, matlab, java, VBA, Lua, LaTeX
Libraries:	tensorflow, keras, sci-kit learn
Softwares:	V-rep, Camstudio
Robotics:	ROS, KUKA LBR iiwa programming

Videos

Reinforcement learning: https://www.youtube.com/watch?v=Ekda9q3vv6Y
Unsupervised robotics sorting: https://www.youtube.com/watch?v=NpZIwY3H-gE&t=21s

Interests and Activities

Snow sports, Track and field
Travelling: active couchsurfer

PUBLICATIONS

Google Scholar

Accepted Guérin, Joris et al., "Improving Image Clustering with Multiple Pre-trained CNN Feature Extractors", proceedings of BMVC 2018, Newcastle, UK. (29.9% acceptance)

Guérin, Joris et al., "Semantically Meaningful View Selection", proceedings of IROS 2018, Madrid, Spain. (46.7% acceptance)

Guérin, Joris et al., "CNN features are also great at unsupervised classification", proceedings of AIFU 2018, Melbourne, Australia.

Guérin, Joris et al., "Automatic Construction of Real-World Datasets for 3D Object Localization using Two Cameras", submitted to IECON 2018, Washington D.C., USA.

Guérin, Joris et al., "Unsupervised robotic sorting: Towards autonomous decision making robots", International Journal of Artificial Intelligence & Applications (IJAIA), Vol.9,No.2, March 2018

Guérin, Joris et al., "Learning local trajectories for high precision robotic tasks: application to KUKA LBR iiwa Cartesian positioning", proceedings of IECON 2016, Florence, Italy

Guérin, Joris et al., "Locally optimal control under unknown dynamics with learnt cost function: application to industrial robot positioning", proceedings of ACD 2016, Lille, France.

Guérin, Joris et al., "Clustering for different scales of measurement: the gap-ratio weighted K-means algorithm", proceedings of AIAP 2017, Vienna, Austria.