

James MURE-DUBOIS
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Swiss and french citizen

**RESEARCH SCIENTIST, DIGITAL
SIGNAL PROCESSING**
PHD IN SCIENCE
MICRO- AND NANOTECHNOLOGY
Specialist in radar signal processing
and image processing

Professional record

- Feb. 2012 –
Nov. 2012**
(10 months) NANYANG TECHNOLOGICAL UNIVERSITY - SINGAPORE. RESEARCH SCIENTIST IN TEMASEK LABORATORIES RADAR CENTRE.
Algorithms for high-resolution SAR imaging from highly unstable platforms
▷ *Motion compensation and autofocus algorithms in the unstable SAR imaging context.*
▷ *High robustness to undesired motion requires dedicated SAR imaging chain.*
- Dec. 2009 –
Nov. 2011**
(2 years) TÉSA (TELECOMMUNICATIONS FOR SPACE AND AERONAUTICS) - TOULOUSE.
RESEARCH SCIENTIST IN THE SIGNAL PROCESSING UNIT.
Signal processing algorithms for radar data measured with embedded automotive sensors, for driver assistance applications.
▷ *High resolution applications of synthetic aperture radar and digital beamforming algorithms.* ▷ *Required compliance with stringent automotive industry requirements.*
- 2005-2009**
(4 years) INSTITUTE OF MICROTECHNOLOGY, (UNI. OF NEUCHÂTEL - EPFL).
RESEARCH-ASSISTANT IN THE PATTERN RECOGNITION LABORATORY.
Contributing to various research projects in the lab, involvement in teaching for the pattern recognition and microprocessors lectures.
▷ *Research projects in collaboration with industry (CTI).* ▷ *Mentoring students for semester and diploma projects.*
- 2005**
(6 months) LOGITECH, FREMONT, CALIFORNIA. INTERN IN THE SYSTEM ENGINEERING DEPARTMENT OF THE WEBCAM DIVISION.
Working on a project aiming to improve audio quality in webcam conversations.
▷ *Audio signal processing.* ▷ *Study taking into account constraints for mass produced devices.*
- 2004**
(3 months) PAUL SCHERRER INSTITUTE, VILLIGEN - SUISSE. INTERN AT THE LABORATORY OF MICRO ET NANO-TECHNOLOGY (LMN).
Optimization of a setup producing large structures with sub-micron resolutions.
▷ *Work in clean room environment.* ▷ *Laser interference lithography.*

Education

- 2005-2009** IMT-PARLAB, UNIV. OF NEUCHÂTEL - EPFL. PHD IN SCIENCE.
Contributions to image processing algorithms for advanced 3D vision devices.
▷ *Image processing.* ▷ *Time-of-flight cameras.* ▷ *Real-time network of 3D cameras.* ▷ *Fast filtering for measurement errors reduction.*
- 2000-2005** UNIVERSITY OF NEUCHÂTEL. MASTER OF SCIENCE IN MICROTECHNOLOGY.
Cum laude.
▷ *Microfabrication.* ▷ *Signal processing.* ▷ *Micro-optics.* ▷ *Material science.*
- 1997-2000** LYCÉE DENIS-DE-ROUGEMONT, NEUCHÂTEL. SCIENTIFIC BACCALAUREATE.
magna cum laude.

IT skills

Operating systems : MS Windows (7, XP), Mac OS X, Linux (Ubuntu, CentOS)
Programmation : Matlab, C, C++, Java, Python, Labview
Development : MS Visual Studio, CodeBlocks, Eclipse, Xcode, git, hg, SVN, CVS
Libraries : VTK, wxWidgets, OpenCV, Matrox MIL, FFTW, IDL, Qt

Languages

French : Mother tongue.
English : Fluent (spoken, written).
German : Read, basic redaction, general conversation.