Gabriel Urbain

135, SintPietersaalststraat   9000 Gent   Belgium
http://gabs48.github.io/
gabriel.urbain@gmail.com | (+32) 484 102088

EXPERIENCE

UGENT | PhD Student - Research Assistant at the IDLab - imec
Since October 2015 | Ghent, Belgium
Topic: *Brain-inspired CPG architectures for robust locomotion learning on quadruped robots.*
Human Brain Project. Neurorobotics branch.

UMONS | Researcher at the numediart Institute
February - October 2015 | Mons, Belgium
Topic: *Development of a Search Engine Based on Audio Similarities for Large Collections of Foley Sounds.*
Research in partnership with Dame Blanche SA and CETIC. The produced algorithm is currently in the process of patenting.

THALES ALENIA SPACE | Research and Innovation Internship
August - September 2013 | Charleroi, Belgium
Topic: *Feasibility Analysis of an Electro-Mechanical Control System for Ariane Rocket Boosters.* Supervisor: Prof. Dr. Marc Bekemans.

UMONS | Research Initiation Internship
July - August 2011 | Mons, Belgium
Topic: *Semi-Automatic Creation of a 3D Model for the City of Mons.* Supervisor: Prof. Dr. T. Dutoit. IT Cluster

UMONS | Research Initiation Internship
July - August 2010 | Mons, Belgium
Topic: *Implementation of C/C++ Libraries in TRNSYS 16.1 for Heat Pump Study.* Supervisor: R. Lepore. Energy Cluster

EDUCATION

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
Master Project at the Space Systems Laboratory
June 2014 – November 2014 | Cambridge, USA
Topic: *Calibration and Fusion of Stereoscopic and Time-of-Flight Cameras for Zero Gravity Targets Inspection.* Supervisor: Dr. Alvar Saenz-Otero. Passed with the highest mention.

ISAE | SUPAERO
Master of Science in AeroSpace Engineering
August 2012 – November 2014 | Toulouse, France
Double Master Degree trough *T.I.M.E.* Network. Major : Space Systems, Telecommunications and Networks.

UMONS | FACULTÉ POLYTECHNIQUE
Master of Science in Electrical Engineering
September 2011 – November 2014 | Mons, Belgium
Major: Multimedia et Telecommunications. Graduated with Honors.

Bachelor of Science in Engineering
September 2008 – June 2011 | Mons, Belgium
Graduated with Honors.

PUBLICATIONS

Morphological Properties of Mass-Spring Networks for Optimal Locomotion Learning.
G. Urbain, J. Degrave, B. Carette, F. wyffels and J. Dambre. In *Frontiers in Neurorobotics*. 2017

A Semantic and Content-Based Search User Interface for Browsing Large Collections of Foley Sounds.
G. Urbain, C. Frisson, A. Moinet and T. Dutoit. In: *Audio Mostly - A conference on interaction with sound*. 2016

INSPECT Sensor Suite for On-Orbit Inspection and Characterization with Extravehicular Activity Spacecraft.
D. Steinberg, T. Sheerin and G. Urbain. In: *45th International Conference on Environmental Systems*. 2015

WORKSHOPS - SYMPOSIUMS

4th HBP School | Future of Artificial Intelligence
Lightning talk and poster session. June 2017, Obergurgl, Austria.

1st Neurorobotics Platform User Workshop
April 2017, Munich, Germany.

3rd HBP School | Future of Neuroscience
Lightning talk and poster session. December 2016, Obergurgl, Austria.

4th HBP Education Workshop | Future of Computing
Lightning talk and poster session. January 2016. Manchester, UK.

5th Cubesat Symposium and the 6th QB50 Workshop
Lightning talk and poster session. June 2013. Brussels, Belgium.

IT SKILLS

SOFTWARE

Operating Systems | Middleware
Linux • Embedded Linux • Windows • ROS

Programming
C • C++ • Python • Matlab • Simulink • Java • Bash • VHDL • OpenCV • Git • LaTeX

Embedded Platforms
Low-level development on: X86 • Atmel AVR (Arduinos, self-designed boards) • ARM (BeagleBone, RaspberryPI, Odroid) • Neuromorphic Hardware (SpiNNaker, BrainScaleS)

TECHNICAL

Embedded Systems • Image and Audio Processing • Neural Networks • Machine Learning • Robotics • Electronics • Telecommunications • Space Systems

LANGUAGES

French (Native. C2) • **English** (Fluent. C1. TOEFL IBT 105/120 in 2014) • **Dutch** (Medium. B1) • **Spanish** (Basic. A2)

ASSOCIATIVE LIFE

IROBOTIQUE | ADMINISTRATOR
2004 - 2017 | Mons, Belgium

- Design and development of robotic platform for museum guided tours (from 2014)
- Presentation of the association and its projects in different events: Mariemont Cultural Mediation Symposium, Museomix, Open FabLab Mons, Make Wallonia, Business To Museum and Tourism, ... (from 2014)
- Robot design for a Eurobot Junior competitions (2005, 2006, 2008) and Eurobot (2011, 2013)
- Creativity Award (2006), Belgian Junior Champions Award (2008), 8th European Junior position (2008), 7th European position (2013)
- Atmel AVR, OMAP processor and FPGA Programming Classes (2010-2012)

MUSEOMIX BELGIUM | ADMINISTRATOR AND ORGANISER
2015 - 2017 | Brussels, Belgium
Organization of hackatons and events confronting people from technological and cultural backgrounds to define the future of museum mediation in Belgium. Communication and website manager.

ART AND CAMPUS ACTIVITIES

Gent Universitair Symphonisch Orkest (2016-2017) • Sailing (2014) • CubeSat (2012-2014) • Scuba Diving (2013-2014) • Supaero Jazz Band (2012-2014) • Rowing (2013) • Winner of a GDF Suez scholarship (2012) • Student Culture Committee (2010-2011) • Student Regional Committee (2009-2012) • Board of Faculty (2011-2012) • Auto-evaluation Commission (2011-2012) • Board of Libraries (2010-2011) • Jazz Band Baudour (2001-2011) • Drums • Trumpet • Piano • Choral music