

# Urbain Gabriel

Address

Website

E-mail | Phone

## EXPERIENCE

### **UGENT | PHD STUDENT - RESEARCH ASSISTANT AT THE DATA SCIENCE LAB**

Since October 2015 | Ghent, Belgium

Topic: *Brain-inspired CPG Controller Design for Quadruped Robots Locomotion.*

Human Brain Project. Neurorobotics group.

### **UMONS | RESEARCHER AT THE NUMEDIART INSTITUTE**

February - October 2015 | Mons, Belgium

Topic: *Development of a Search Engine Based on Audio Similarities for Large Foley Sound Collections*

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**

#### **FINAL 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 through 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

Option: Electricity - Multimedia et Telecommunications. Graduated with Honors.

#### **BACHELOR OF SCIENCE IN ENGINEERING**

September 2008 - June 2011 | Mons, Belgium

Graduated with Honors.

## PUBLICATIONS

**INSPECT Sensor Suite for On-Orbit Inspection and Characterization with Extravehicular Activity Spacecraft.**

D. Steinberg, T. Sheerin, G. Urbain. In: *45th International Conference on Environmental Systems*. 2015

**A Semantic and Content-Based Search User Interface for Browsing Large Collections of Foley Sounds. (submitted)**

G. Urbain, C. Frisson, A. Moinet, T. Dutoit. In: *Audio Mostly - A conference on interaction with sound*. 2016

## WORKSHOPS - CONFERENCES - SYMPOSIUMS

### 3RD HBP EDUCATION WORKSHOP

January 2016 | Manchester, UK

Lightning talk and poster presentation: *Methodology for Closed-Loop Locomotion Control of a Mouse 3D Model using CPG Models and Reservoir Computing*. G. Urbain

## HOBBIES AND ASSOCIATIVE LIFE

### IROBOTIQUE | ADMINISTRATOR OF THE NON-PROFIT ASSOCIATION

2004 - 2016 | 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 | ORGANISATOR AND PARTICIPANT

2015 - 2016 | Brussels, Belgium

Organization of a 3-days hackaton to design prototypes for the future of museum mediation in Belgium. Website manager.

### ART

Gent Universitair Symphonic Orkest (2016) • Supaero Jazz Band (2012-2014) • Student Culture Committee (2010-2011) • Jazz Band Baudour (2001-2011) • Drums • Trumpet • Piano • Choral music

### CAMPUS ACTIVITIES

Sailing (2014) • CubeSat (2012-2014) • Scuba Diving (2013-2014) • Rowing (2013) • Winner of a GDF Suez scholarship (2012) • Student Regional Committee (2009-2012) • Board of Faculty (2011-2012) • Auto-evaluation Commission (2011-2012) • Board of Libraries (2010-2011)

## LANGUAGES

French  
Native

English  
Fluent. TOEFL IBT: 105/120  
(2014)

Dutch  
Basic. Currently 5h/week of  
lessons

Spanish  
Basic

## SKILLS

### IT

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) • SpiNNaker

### TECHNICAL

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