



# BERTRAND HIGY

## PhD CANDIDATE



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http://bhigy.github.io

### LANGUAGES



French	<div><div></div><div></div><div></div><div></div><div></div></div>
English	<div><div></div><div></div><div></div><div></div><div></div></div>
Italian	<div><div></div><div></div><div></div><div></div><div></div></div>
German	<div><div></div><div></div><div></div><div></div><div></div></div>

### PROGRAMMING



Python	<div><div></div><div></div><div></div><div></div><div></div></div>
C++	<div><div></div><div></div><div></div><div></div><div></div></div>
Matlab	<div><div></div><div></div><div></div><div></div><div></div></div>
Tensorflow	<div><div></div><div></div><div></div><div></div><div></div></div>
Pytorch	<div><div></div><div></div><div></div><div></div><div></div></div>
HTK	<div><div></div><div></div><div></div><div></div><div></div></div>
Kaldi	<div><div></div><div></div><div></div><div></div><div></div></div>
ESPnet	<div><div></div><div></div><div></div><div></div><div></div></div>
Git	<div><div></div><div></div><div></div><div></div><div></div></div>

### INTERESTS



Japanese culture, Hiking  
Board Games, Books



### Education

#### PhD student, 11/15 - 04/19

Istituto Italiano di Tecnologia, Genoa, Italy

Subject: Spoken command recognition for robotics

Supervisors: Giorgio Metta, Leonardo Badino

#### Visiting student, 04/18 - 07/18

Centre for Speech Technology Research, Edinburgh, UK

Supervisor: Peter Bell

### Professional experience



#### Research Assistant, 05/15 - 10/15

Istituto Italiano di Tecnologia, Genoa, Italy

Subject: Haptic object recognition for the robot iCub

Supervisor: Lorenzo Natale

#### Software engineer, 12/10 - 04/15

Abase Europe, Strasbourg, France

Technologies: SAP, ABAP, C#, Java, HTML, Javascript, JQuery

#### Master degree in Cognitive Sciences, 09/08 - 06/10

Université Lumières, Lyon, France

First in my class

1st year internship under the supervision of Emmanuel Reynaud on  
Connectionist modelling of multimodal integration

2nd year internship under the supervision of Salima Hassas on  
Collective representations, language and tagging systems

#### Teaching assistant in Computer Science, 09/09 - 01/10

Université Lumières, Lyon, France

#### Bachelor degree in Psychology, 09/05 - 06/08

Université Louis Pasteur, Strasbourg, France

#### Experimental assistant, 01/08 - 04/08

Laboratoire d'Imagerie et Neurosciences Cognitives (LINC), Strasbourg, France

EEG study on sleep and attention

#### Bachelor degree in Computer Science, 09/03 - 06/06

Université Louis Pasteur, Strasbourg, France

First in my class

## Publications



Higy, B., & Bell, P. **“Few-shot learning with attention-based sequence-to-sequence models”**. Submitted to the IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP). Brighton, UK, 2019.

Higy, B., Mereta, A., Metta, G., & Badino., L. **“Speech Recognition for the ICub Platform.”** Frontiers in Robotics and AI 5 (2018).

Savran, A., Tavarone, R., Higgy, B., Badino, L., & Bartolozzi, C. **“Energy and Computation Efficient Audio-Visual Voice Activity Detection Driven by Event-Cameras.”** In Proceedings of 13th IEEE International Conference on Automatic Face Gesture Recognition. Xi'an, China, 2018.

Higy, B., Ciliberto, C., Rosasco, L., & Natale., L. **“Combining Sensory Modalities and Exploratory Procedures to Improve Haptic Object Recognition in Robotics.”**. In IEEE-RAS 16th International Conference on Humanoid Robots (Humanoids), 117–24. Cancun, Mexico, 2016.

## Training



### **Introduction to convex optimization, 2018**

Taught by Saverio Salzo and Silvia Villa, at University of Genoa, Italy

### **Barcelona Cognition, Brain and Technology summer school, 2017**

in Barcelona, Spain

### **International Summit and Summer School on Deep Learning 2017**

in Bilbao, Spain

### **Artificial Cognitive Systems, 2017**

Taught by David Vernon, at the Italian Institute of Technology

### **Neurophysiology of the Sensory Systems and Multisensory Integration, 2017**

Taught by Monica Gori, at the Italian Institute of Technology

### **RegML 2016**

Regularization Methods for Machine Learning

Taught by Prof. Lorenzo Rosasco, at University of Genoa, Italy

### **Brains, Minds and Machines Workshop, 2016**

in Sestri Levante, Italy

### **MLCC 2015**

A Machine Learning Crash Course

Taught by Prof. Francesca Odone and Lorenzo Rosasco, at University of Genoa, Italy