

# Roland Giraud

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## PHD STUDENT IN BIOELECTRONICS AND EMBEDDED SYSTEM

### EDUCATION

#### ENSEA (Electronics engineering graduate school):

Master degree with major in analog electronics and bio-electronics

2016-2020

#### UCP (University of Cergy Pontoise):

Master of research in electronics for embedded systems

2019-2020

#### Undergraduate level preparatory classes:

Intensive preparation for the Grandes Ecoles major physics

2014-2016

### PROFESSIONAL EXPERIENCE

#### Research engineer at ETIS (Equipe Traitement de l'Information et Système) :

2020-2022

Modelling of axonal response to a high frequency electrical stimulation

- Biophysical modelling of an axon with NEURON
- Conception of a Python interface for model simulation
- Nerve model characterisation

#### Intern at Politecnico di Milano in the Laboratorio di Tecnologia biomedica:

May-August 2019

Development of a respiratory movement analysis system for disease prevention and characterisation.

- Microcontroller programming for wireless communication via ANT protocol
- Acquisition and processing of IMU measurements

#### Master project at ETIS (Equipe Traitement de l'Information et Système) :

November-March 2020

Conception of a micro-strip resonator for biological tissue characterisation

- FEM analysis of the system
- Development of a protocol to extract RF parameters

#### Intern at Ecole Polytechnique Federale of Lausanne, Defitech Foundation Chair in Brain Machine Interface:

June-August 2018

Realisation of an in vitro system for modelling effect of concurrent neurostimulation and sensing in saline solution.

- Electronic optimisation of the device
- Analogic and numeric signal processing

### SKILLS

#### Electronic design and simulation:

Eagle PCB design, SPICE simulation, FPGA (Vivado), ADS

#### Programming languages:

Matlab, Python, C, embedded C (Arduino, STM, Keil)

#### Simulation:

Comsol, Neuron

#### Languages:

French: mother tongue

English: fluent, TOEIC (950/990)

Italian and Spanish: A2+ level

### HOBBIES AND ACHIEVEMENTS

#### Music:

Viola diploma 17 years practice

#### Sport:

Judo brown belt

#### Association:

TYO cinema club vice-president

#### Driving license:

B permit