# EDUARDO DA VEIGA BELTRAME

Brazilian, 24 years old. Personal website: www.munfred.com

## EDUCATION

**Electronics Technician (2010)**
Federal Institute of Santa Catarina (IFSC, Brazil) — 2007 to 2010

**Biological Physics Major (2016)**
Federal University of Santa Catarina (UFSC, Brazil) — 2011 to 2014
Exchange and transfer to Brandeis University — 2014 to 2016

## RESEARCH EXPERIENCE

**Institute for Power Electronics**
Internship - 2010
Implemented a fuzzy logic controller for DC-DC converters using AVR microcontrollers, with publication of ensuing results.
Beltrame, E.V., Petry, C.A., Mussa, S.A. *Implementação de um controlador fuzzy para conversor buck em microcontrolador AVR de 8 bits.* Ilha Digital, v. 3, p. 41-46, 2012.

**Catalysis and Interfacial Phenomena Laboratory**
Research Assistant – 2011 (UFSC)
Activities realized included synthesis of organic compounds and reaction kinetics using UV/Vis spectrophotometry.

**Stochastic processes on bacterial DNA distribution**
Project – 2012 to 2013, with prof. Marcelo Sobottka (UFSC)
A stochastic model using Markov chains for the construction of DNA sequences was investigated. Topics studied include molecular biology, mathematical analysis, measure theory and Markov chains.

**Central Laboratory for Molecular Structural Biology**
Research assistant – 2013 to 2014 (UFSC)
Activities realized include cell culture, protein expression and purification, gel electrophoresis and characterization of novel cyclopeptides using mass spectrometry.

**Molecular Electronic Structure Group**
Member – 2013 to 2014 (UFSC)
The main activity developed were studies in computational chemistry and the investigation of the nitrosylation reaction of Protein tyrosine phosphatase A (PtpA) using molecular dynamics.

**New Valence Robotics**
Internship – 2015 (Boston)
Developed biomolecular content for lesson plans and 3D printed models, assembled, repaired and tested printers and materials.

**Don Katz Laboratory**
Research Assistant – 2015 to 2016 (Brandeis University)
The current research project investigates the role played by the basolateral amygdala during the formation of new memories utilizing electrophysiology, molecular and behavioral techniques.

**Kondev Biophysics Group**
Project – 2015 to 2016 (Brandeis University)
Analytic and computational models for bacterial transcription and gene expression are being developed and investigated. Partial results at www.genesim.org.

## CONTACT

Mobile
**(781) 813-0380**

Email
**veigabeltrame@gmail.com**

## SKILLS

| | average | good | skilled |
|---|---|---|---|
| 3D printing | | | ①②③④⑤ |
| Electronics | | | ①②③④⑤ |
| Python | | | ①②③④ |
| MATLAB | | | ①②③④ |
| Molecular Dynamics | ①② | | |
| Linux environment | ①②③ | | |

(3D printing: 1 2 3 4 5 all filled; Electronics: 1 2 3 4 5 all filled; Python: 1 2 3 4 filled, 5 empty; MATLAB: 1 2 3 4 filled, 5 empty; Molecular Dynamics: 1 2 filled, 3 4 5 empty; Linux environment: 1 2 3 filled, 4 5 empty)

## LANGUAGES

| | basic | good | fluent |
|---|---|---|---|
| English | | | 1 2 3 4 5 |
| Portuguese | | | 1 2 3 4 5 |
| Spanish | | | 1 2 3 4 5 |
| Chinese | 1 2 | | |

(English: 1 2 3 4 5 all filled; Portuguese: all filled; Spanish: all filled; Chinese: 1 2 filled, 3 4 5 empty)

## HIGHLIGHTS

- **International experience**, having studied in Brazil, Spain and the US.

- Worked as president of the **Brandeis 3D Printing Club**, Deis3D (www.deis3d.org).

- Experience in **project management** and event organization such as the **Brandeis University Printathon** (www.printathon.org) and **Ideation Sustainability Challenge** (www.deisic.com).

- **Pedagogy experience**: created hundreds of 3D printed biomolecular models for teaching and research. Assisted teaching several courses and trained dozens of students on printing proteins. Workflow protocol submitted to the the Journal of Visualized Experiments (www.jove.com).

- Helped **develop, coordinate and teach** a pilot biochemistry summer course at Brandeis University for Waltham high school students using 3D printing as a teaching aid.

- Helped establish the **Brandeis University MakerLab** (www.brandeismakerlab.com).