

NICOLAS BEUCHAT

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Swiss
21 years old



Education

- 2010-Now** **EPFL: École Polytechnique Fédérale de Lausanne**
Master in Bioengineering with a Minor in Biocomputing
- 2007-2010** **EPFL**
Bachelor in Life Sciences and Technologies. Grade: 5.5/6
- 2004-2007** **Gymnase de Nyon (High school)**
Mention *Excellent* for my *Travail de Maturité* (in English) named *The English Navy from Henry VII to the end of the Elizabethan Era*

Professional Experiences

- Summer 2009** **University of Cambridge**
I received a Scholarship from the Amgen foundation and worked in the laboratory of Dr Richard Adams for 2 months on *paramagnetic beads manipulation in living Zebrafish embryos* in order to study developmental process. Based on my good results, the project is still carried on today.
- 2008-2010** **EPFL**
Student-Assistant for various courses and laboratories (in the School of Computer and Communication Sciences and at the Institute of Bio-Engineering). I gained experience in teaching and technical works.

Projects

- Next year** **Harvard Medical School**
I received a fellowship from the Bertarelli Foundation for a master thesis in the field of Neuroengineering. I will study motor learning for the lower limbs using the Lokomat lower limb orthosis.
- 2011** **EPFL: Minor project in Biocomputing**
I developed algorithms and used statistical tools in Matlab so as to understand and reverse engineer the behaviour of *Drosophila Melanogaster* in response to olfactive stimuli. This project was held at the Laboratory of Intelligent Systems.
- 2010** **EPFL: Bachelor project**
I developed a characterization method for a silicon micro-actuator device as well as a cell counter application using Matlab. Both methods were greatly time-saving for several people working on the project. Project carried on at the Laboratory of Biomechanical Orthopedics.

Technical skills

- Computer** Matlab, C/C++, Perl, Latex, MS-Office, Comsol, Webots, TurboCad
- Algorithmic** SVM, GMM, Artificial Neural Networks, PCA, Genetic Algorithms, PSO, ACO

Imaging	Immunohistochemistry, mRNA injection for time-lapse microscopy, image processing with Matlab, microscopy (spinning-disk, confocal, brightfield)
Biotechnology	Mammalian cell culture (fibroblast, MSC), cell quantification, transfection of recombinant proteins, SDS-PAGE, PCR, Western blot, ECG, EMG, EEG

Languages

French	Native
English	Good (C1) TOEFL score of 108/120, linguistic school in Malta in 2004
Italian	Basic (B1) Linguistic school in Florence in 2006

Extra-curricular activities

Scuba-diving	PADI Advanced OWD Certificate
Arts	Tango Salsa Figurines painting Photography
Sports	Snowboard Basketball (2006 Junior Swiss Champion with BBC Nyon)
Charity work	I-to-I: China We worked for the protection of Giant Pandas in a Wildlife Conservation Center in Xi'an, China (Summer 2010). Nouvelle Planète: Madagascar We helped the construction of a school in a rural area of Madagascar (Summer 2007).

References

EPFL	Dr Hicham Majd, Dr Christophe Yamahata, Prof. Dominique Pioletti
University of Cambridge	Dr Richard Adams, Dr Alexandre Kabla