Martin HOLUB

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Personal Statement

Being student of bioengineering, I am passionate about tackling interdisciplinary challenges at the interface of engineering and biology. To develop my skills in these fields, I am on the lookout for industrial internship in the areas of bio-fabrication, microfluidics or high-content screening.

Education

Swiss Federal Institute of Technology (ETH),
MSc. in Mechanical Engineering

📍 Zürich, Switzerland
📅 Sept 2016 – ongoing

- Specialization in Bioengineering (GPA 5.5 in the first semester)

Examples of taken courses: Quantitative Big Imaging, Bioelectronics & Biosensors, Machine Learning, Practical Methods in Tissue Engineering, Synthetic Biology, Wearable Systems, Biofluiddynamics, Energy Conversion and Transport in Biosystems, Quantitative Flow Visualization, Advanced CFD Methods, …

Brno University of Technology (BUT),
B.Sc. in Mechanical Engineering

📍 Brno, Czech Republic
📅 Sept 2013 – August 2016

- GPA 1.03 from 203 credits, Honeywell award for outstanding thesis, GE Foundation Scholar-Leaders Award
- Bachelor thesis "Cavitation in Microfluidics": CFD for 2-phase flow in microfluidic device using Fluent software, output analysis and graphical representation in Matlab
- Selected subjects: Microsensors and MEMS, Fluid Dynamics, Thermodynamics & Heat Transfer, Numerical Methods, Strength of Materials, Finite Element Method & ANSYS, Dynamics, Machine Learning, Automation, Engineering Design, Introduction to Material Science, Mathematics, Physics, Chemistry

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Relevant Experience

Institute of Pharmacology and Toxicology, University of Zürich
Research Assistant

📍 Zürich, Switzerland
📅 Nov 2016 – ongoing

- Image processing and analysis in the Experimental Imaging & Neuroenergetics group
- Developing algorithms in Matlab (spectral unmixing, motion correction, automatic cell segmentation, …) to support ongoing research in the cell-to-cell communication pathways involved in energy metabolism and information processing in cerebral cortex

Laboratory of Sensors and Nanosystems, Central European Institute of Technology (CEITEC)
Research Assistant

📍 Brno, Czech Republic
📅 Jun 2016 – Aug 2016

- Microfluidics: soft lithography, chip interfacing and testing, fluorescence microscopy
- Mechatronics: 3D printing, mechanics-electronics-software integration, component sourcing

Robert Bosch, spol. s.r.o.
Summer Intern

Budweis, Czech Republic
Jun 2015 – Sept 2015

- Working in close cooperation with product technologists and interns to move current production procedure databases into new environment (SAP)
- Data management and analysis in Excel, holding employee trainings

Laboratory of Sprays and Fluid Atomization, Brno University of Technology
Research Assistant

Brno, Czech Republic
Oct 2014 – Mar 2015

- Information acquisition and organization, data analysis and processing (FFT), creating graphical output from data (Matlab)
- Cooperated on paper "Some aspects of disintegration of annular liquid sheet in pressure-swirl atomization"

Other

- Volunteering
  - Social Service (Kirchgemeinde Erlöser – Zürich, 2017-ongoing) – clothing donations coordinator
  - Education (Museum of Romani Culture – Brno, 2015-2016) – teaching after-school lectures
  - Sustainable Development (Concordia Ile-de-France – Paris, 2013)
  - Culture (Allez les Filles – Bordeaux, 2014, Budějovický Majáles – Budweis, 2010-2013)
- Coaching an Ultimate Frisbee club (~ 20 players) for 1 season
- Project Coordination at IAESTE – Internships abroad and career fair for ca. 3500 students
- Working abroad for two months (France, 2014)
- BEST Courses on Technology – Renewable Energy and E-Mobility (University of Erlangen-Nuremberg, May 2015), Recycling and Advanced Materials (Ghent University, July 2014)

Computer Skills

- *CAE Software:* Fluent, ANSYS, Matlab, Octave, AutoCAD Mechanical, Inventor
- *Programming:* Python (intermediate), JavaScript, HTML and CSS, Arduino (basic knowledge)
- *Other:* SAP, Microsoft Office, LibreOffice (all intermediate knowledge). Linux, Git, Latex (user-level knowledge), OneNote

Languages

- English ●●●●●●●○○
- French ●●●●○○○○

- German ●●●●●○○○
- Czech & Slovak ●●●●●●●●

Hobbies

Foreign Languages   Travelling   Sports   Public Speaking   Cooking   Reading

Zürich, June 5, 2017