Gabriel Louis Cuendet — Curriculum vitae

Contact Information

Place du Petit-Saint-Jean 13
1700 Fribourg
Switzerland

30, married, Swiss nationality
Mobile: +41 79 645 67 04
gabriel.cuendet@protonmail.ch
ch.linkedin.com/in/gcuendet

Qualifications and Interests

Image analysis, image processing, pattern recognition, computer vision, machine learning, artificial intelligence, 2D/3D face models, biomedical engineering

Education

Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland

Ph.D., Electrical Engineering, expected spring 2017

- Thesis Topic: Facial Images Analysis Applications in Medical Domains
- Adviser: Prof. Jean-Philippe Thiran

M.S., Electrical Engineering, July 2012 GPA: 5.56 (6.0 scale)

- Thesis Topic: Difficult Intubation Assessment from Video
- Area of Study: Major in **information technologies** and minor in **biomedical technologies**

Professional Experience

Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland

Research assistant **September 2012 to present**

- Research topic in Computer Vision with application to 2D and 3D face analysis and modeling.
- Supervision of graduate and undergraduate students in electrical engineering and computer science in projects related to facial images analysis.

Teaching assistant **September 2008 to June 2011**

- Teaching Assistant for the courses and labs: Introduction to electrical engineering, Measurement Systems, Programming (C++)

IBM Research, Zurich, Switzerland

Research intern **September 2015 to February 2016**

- Development of a C++ framework using image processing and machine learning techniques to automatically extract numerical data from scientific charts images.

ABB, Corporate Research Center, Bangalore, India

Intern **July 2010 to September 2010**

- Worked on Real-time simulation of electrical systems
- Performed simulations and explored advanced concepts of C++ (expression templates and template meta-programming) to reduce the use of big temporary objects at execution time in order to achieve real-time performances.

Skills

Computer Programming:

- C, C++, CMake, OpenCV library, Python, Scikit-learn and NumPy libraries, MATLAB, Bash, TEX (LATEX, BIBTEX)

Languages:

- French: mother tongue
- English: Excellent knowledge (professional language since 2010)
- Swedish: Good knowledge (exchange year in Sweden, 2002-2003)
- German: School knowledge (9 years courses)

Refereed Journal Publications

[1] A. Yüce, H. Gao, **G. L. Cuendet**, J.-P. Thiran. Action Units and Their Cross-Correlations for Prediction of Cognitive Load during Driving. IEEE Transactions on Affective Computing, Jun. 2016
doi:10.1109/TAFFC.2016.2584042

[2] **G. L. Cuendet**, P. Schoettker, A. Yüce, M. Sorci, H. Gao, C. Perruchoud, and J.-P. Thiran. Facial image analysis for fully automatic prediction of difficult endotracheal intubation. IEEE Transactions on Biomedical Engineering, vol. 63, pp. 328-339, Feb. 2016.
doi:10.1109/TBME.2015.2457032

Conference Publications

[3] **G. L. Cuendet**, A. Yüce, J.-P. Thiran, M. Sorci, P. Schoettker and C. Perruchoud. Automatic Mallampati Classification Using Active Appearance Models. ICPR International Workshop on Pattern Recognition for Healthcare Analytics, 2012.

Patents

[4] P. Schoettker, **G. L. Cuendet**, C. Perruchoud, M. Sorci and J.-P. Thiran. Difficult intubation or ventilation prediction system. Patent pending at the European Patent Office, October 2013.

Awards

Institute for Pure & Applied Mathematics (IPAM), UCLA, Los Angeles, USA
- Full grant for attending the Graduate Summer School: Computer Vision, Summer 2013

Extra-curricular

Certificat amateur de violon (certificate of violin amateur studies) June 2009
Conservatoire de Fribourg, Switzerland

Chamber music **2009 to present**
- Violinist of the "Chromatique" piano trio. We perform public concerts in the french speaking part of Switzerland, playing the classical and romantic repertoire.
- Chamber music master classes in Blonay with amongst others: Paul Cocker, Joel Marosi or the Trio Lenitas.

Orchestra musician (OSUL) **2012 to present**
- Violinist in the Lausanne symphonic university orchestra. The orchestra gives 3 concerts per year and plays the romantic and modern repertoire for large symphonic orchestra.

References

Available upon request.