

## PROFESSIONAL EXPERIENCE

**Spectroswiss Inc.**  
EPFL Innovation Park, Lausanne, Switzerland, www.spectroswiss.ch



2014 - Current **CEO and Founder**

**École Polytechnique Fédérale de Lausanne (EPFL)**  
Lausanne, Switzerland



2006 - 2014 **Assistant Professor of Physical and Bioanalytical Chemistry**  
**Head of the Biomolecular Mass Spectrometry Laboratory**

2006 - 2014 **Director, Mass Spectrometry Service Facility**  
**Institute of Chemical Sciences & Engineering**

## RESEARCH EXPERIENCE

2004 - 2006 **Postdoctoral research associate, National High Magnetic Field Laboratory, FL, USA** | Advisor: Prof. Alan G. Marshall  
*Research: Mass spectrometry for improved macromolecular structure analysis*

2000 - 2004 **Ph.D. student, Angstrom Laboratory, Uppsala University, Uppsala, Sweden** | Supervisor: Prof. Per Hakansson  
*Dissertation title: High rate electron capture dissociation Fourier transform ion cyclotron resonance mass spectrometry*  
Date of degree awarded: May 24, 2004

## EDUCATION

2000 - 2004 **Ph.D. in Ion Physics**, Uppsala University, Uppsala, Sweden

1994 - 2000 **M.Sc. in Technical Physics**, State Polytechnical University, Saint-Petersburg, Russia

1997 - 1998 **Entrepreneurship License**, the Finnish Ministry of Education, Jyväskylä Institute of Technology

## AWARDS AND HONORS

- 2016 Curt Brunnée Award of the International Mass Spectrometry Foundation (IMSF), www.imss.nl  
*"For outstanding contributions to the development of instrumentation for high-resolution and tandem mass spectrometry"*
- 2015 Winner of Venture Kick Competition Stage I for Spectroswiss Inc., www.venturekick.ch
- 2014 The SGMS Award of the Swiss Group for Mass Spectrometry, www.sgms.ch
- 2012 European Young Chemist Award, Silver Medal, 4<sup>th</sup> EuCheMS Conference
- 2012 Invited Professor (1 month), Ecole Polytechnique, Palaiseau, France
- 2011 Recipient of the ERC Starting Grant (panel PE4):  
*"Super-resolution mass spectrometry for health and sustainability"*, SRMS4HESUS
- 2011 Recognized as "Outstanding reviewer for the Journal of the American Society for Mass Spectrometry" at the JASMS Editorial Board Meeting, the 59<sup>th</sup> ASMS Conference, Denver, CO
- 2011 Invited Professor (1 month), University of Vienna, Vienna, Austria
- 2009 Invited Professor (1 month), University of Claude Bernard Lyon 1, France
- 2006 Young Investigator Award, finalist. Human Proteome Organization (HUPO)

## SUPERVISION AND MENTORING

2006-2016 Supervised **6** PhD students (all graduated from EPFL), co-supervised **1** PhD student (graduated from University of Geneva), supervised **10** postdoctoral scholars, **7** M.Sc. & **3** B.Sc. students

## EDUCATIONAL ACTIVITY

- 2006-currently Organization of and teaching at Summer and Winter PhD Schools in Mass Spectrometry (English)
- 2006-2014 Teaching of an advanced PhD level course Current Topics in Mass Spectrometry (English/French) at EPFL/UNIL
- 2006-2014 Teaching at EPFL/UNIL: General Chemistry (BSc, French); Structure Analysis of Organic Molecules (BSc, French); Fundamentals of Mass Spectrometry (MSc, English)

## PUBLICATIONS

Patents/copyrights: **7**; Reviews/chapters: **6**; Research papers: **91**; h-index: **31** (Google Scholar), **27** (Scopus)

## PRESENTATIONS

Invited oral presentations, in total **>100**, including: Plenary invited talks at the International Conferences & Workshops: **>12**; Regular invited talks at the International Conferences & Workshops: **>50**; Invited talks at academia/industry seminars: **>40**; Lectures at summer/winter schools for PhD students and industrial scientists: **>20**. Regular oral presentations at major international conferences: **>20**, including ASMS: **5**; Talks at ASMS as a principal co-author: **10**. Poster presentation as an author or a co-author: **>50**, including ASMS: **>30**

## COMMITTEE ACTIVITY AND COMMUNITY SERVICE

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**Member**, for Education, Swiss Group for Mass Spectrometry Board. Details: [www.sgms.ch](http://www.sgms.ch)  
**Member**, Editorial Board for the peer-reviewed *International Journal of Mass Spectrometry*  
**Member**, Editorial Advisory Board for the peer-reviewed *European Journal of Mass Spectrometry*  
**Member**, Board of Directors of Top-Down Proteomics Consortium, [www.topdownproteomics.org](http://www.topdownproteomics.org)  
**Member**, External Expert Board for the ICR Program, National High Magnetic Field Laboratory, Tallahassee, FL, USA  
**Member**, Scientific Advisory Board for Horizon 2020 project METASPACE  
**Member**, External Reviewer Panel for the French FTMS user network, France. Details: [www.fticr.org](http://www.fticr.org)  
**Member**, External Advisory Board for the FP7 project High Speed Proteomics Analysis (HiSPRA)  
**Member**, Committee for Doctoral Program in Chemistry and Chemical Engineering, EPFL (2007-2014)  
**Expert** on PhD defenses both internally and externally to EPFL: **19**; President at PhD defenses: **2**  
**Membership**: Am. Chem. Soc.; Swiss Chem. Soc.; Am. Soc. Mass Spectrom.; Swiss Group Mass Spectrom., Human Proteome Organization; Russian Mass Spectrom. Society  
**President**: Russian Mass Spectrometry Interest Group @ American Society for Mass Spectrometry, 2014-2015, 2017-2018

## CONFERENCES & WORKSHOPS ORGANIZATION

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**Co-Organizer**, The 3<sup>rd</sup> International Mass Spectrometry Summer School, Croatia, 2017  
**Co-Organizer**, Annual Summer School on Mass Spectrometry in Biotechnology & Medicine, Croatia, 2008-2017  
**Co-Organizer**, Annual Swiss Group for Mass Spectrometry meeting, Beatenberg, Switzerland, 2010-2017  
**Coordinator**, ASMS FTMS Interest Group Annual Meetings, USA, 2007, 2008, 2009; 300 participants/year  
**Organizer**, Doctoral Summer School "Frontiers in Mass Spectrometry", Switzerland, 2009; 70 participants  
**Principal Co-Organizer**, 9<sup>th</sup> European FTMS Workshop, Switzerland, 2010; 150 participants  
**Organizer**, Winter Doctoral School "Electron capture and transfer dissociation", Switzerland, 2011  
**Organizer**, 8<sup>th</sup> UppCon Conference on Radical Ion Chemistry in the Gas Phase, Switzerland, 2011; 100 participants  
**Session chair**: numerous services at ASMS, SGMS, EFTMS, IMSC, summer schools, etc.

## REVIEWING ACTIVITY

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Journals: J. Am. Chem. Soc.; J. Am. Soc. Mass Spectrom.; Ang. Chemie Int. Ed., Anal. Chem.; Anal. Bioanal. Chem.; J. Prot. Res.; Rapid Commun. Mass Spectrom.; Int. J. Mass Spectrom., Mol. Cell. Prot., Analyst, PNAS, etc.  
Funding agencies: Swiss National Science Foundation (Switzerland), French National Research Agency (ANR, France), Hercules Foundation (EU), European Science Foundation (EU)

## FUNDING ID

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**Total (PI): 2'560 kEuro (2'890 kCHF), incl. SNSF: 733 kEuro, EU: 1'725 kEuro**

- 2017-2018 ERC Proof of Concept Grant (PI), "Precision mass spectrometry to leverage applications in life and environmental sciences". Total amount: 150'000 Euros
- 2015-2016 ERC Proof of Concept Grant (PI), "Advanced signal processing of time-domain data in mass spectrometry to leverage life sciences". Total amount: 150'000 Euros
- 2011-2016 ERC Starting Grant (PI), "Super resolution mass spectrometry for health and sustainability". Total amount: 1'425'731 Euros
- 2015-2018 SPECo (Economic and Commercial Promotional Service, canton Vaud, Switzerland) promotion of innovative start-up companies in the Vaud region (PI). Total amount: 100'000 Euros
- 2013-2016 Swiss National Science Foundation (PI), Independent Basic Research Grant. "Advancing mass spectrometry-based protein structure analysis at the proteoform level for comprehensive description of biological systems". Total amount 175'000 Euros
- 2009-2013 Swiss National Science Foundation (PI), Independent Basic Research Grant. "Understanding energy absorption & relaxation pathways in dehydrated biomolecular systems upon electron capture & transfer dissociation for probing peptide and protein structures and interactions". Total amount: 342'000 Euros
- 2013-2014 Swiss-Russia Science & Technology Cooperation Program of SNSF. PI, mobility grant: "Multi-enzyme Accurate Mass-Time Approach for Peptide Quantification in Protein Extracts" Total amount: 7'800 Euros
- 2010-2012 Swiss National Science Foundation, Swiss-Russia Science and Technology Cooperation Program (PI), "High performance mass spectrometry with predictive liquid chromatography for on-line protein characterization and in-depth systems biology data mining". Total amount: 180'000 Euros
- 2012-2013 Swiss National Science Foundation, Swiss-Russia Science and Technology Cooperation Program (PI), mobility grant: "Application of the advanced methods of statistical data analysis to improve high resolution mass spectrometry-based molecular structure analysis" Total amount: 8'300 Euros
- 2008-2011 Swiss National Science Foundation, SystemsX ([www.systemsx.ch](http://www.systemsx.ch)) Initiative (co-applicant). "Metabolic network in *Mycobacterium tuberculosis*". Total amount: 131'000 Euros
- 2009-2010 Swiss National Science Foundation & KGF Foundation, PI, Conference grants and fundraising. "Organization of the 9<sup>th</sup> European FTMS Workshop". Total amount: 46'000 Euros
- 2010-2011 Swiss National Science Foundation, SCOPES & KGF Foundation, PI, Conference grants and fundraising. "Organization of the 8<sup>th</sup> UppCon Conference on ECD & ETD". Total amount: 50'000 Euros
- 2009-2011 Partenariat Hubert Curien (PHC), Germaine de Staël (SATW). PI, mobility grant. "Hydrogen bonded networks, modifications and energy relaxation pathways of peptides and proteins probed by mass spectrometry". Total amount 14'000 Euros
- 2009-2010 Swiss-Russia Science & Technology Cooperation Program. PI, mobility grant: "High performance mass spectrometry with predictive liquid chromatography for on-line protein characterization and in-depth systems biology data mining" Total amount: 9'200 Euros
- 2010-2011 Swiss-Russia Science & Technology Coop. Program. PI, mob. grant: "Intramolecular energy relaxation in biomolecular radical cations: ion-electron & ion-photon interactions". Total amount: 6'800 Euros