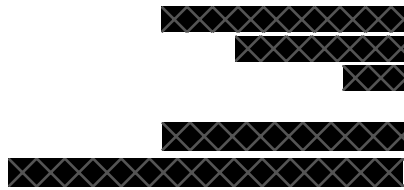# Curriculum Vitae

Maria Süveges

Personal information

Date and place of birth: April 20, 1967, Budapest (Hungary)
Nationality: Hungarian and Swiss

Education

2009   **Ph.D in statistics**
Federal Institute of Technology, Lausanne, Institute of Mathematics
Title: Statistical analysis of clusters of extreme events
Advisor: Prof. Anthony C. Davison

2003   **Master in statistics**
University of Neuchâtel, Faculty of Economics

1993   **Master in physics and astrophysics**
Eötvös Loránd University, Budapest, Faculty of Natural Sciences

Experience

December 2019 – present: Ecole Polytechnique Fédérale de Lausanne, Switzerland

- Scientist, working on the statistical analysis of dynamic networks.
- Lecturer (Statistics for Mathematicians, Bachelor course).

October 2018 – September 2019: University of Geneva, Switzerland

- Development of machine learning methodology for the European Space Agency's astrophysical satellite mission Gaia (analysis of function-valued time series, signal processing, classification, anomaly detection).
- Deep learning and generative adversarial networks for image classification for the Cherenkov Telescope Array project.

October 2016 – September 2018: Max Planck Institute for Astronomy, Heidelberg, Germany

Post-doctoral researcher on the development of statistical methodology for the European Space Agency's astrophysical satellite mission Gaia (classification, anomaly detection, domain adaptation, probabilistic model combination).

May 2013 – September 2016: University of Geneva

Post-doctoral researcher on the development of statistical learning methodology for the European Space Agency's astrophysical satellite missions Gaia (classification and time series analysis) and Euclid (high-dimensional regression, probabilistic model combination).

September 2012 – April 2013: Ecole Polytechnique Fédérale de Lausanne, Switzerland

- Post-doctoral researcher working on the Open Support Platform for Environmental Research (OSPER) project (part-time until February 2013, together with working at the University of Geneva).
- Member of the working group "Extreme Weather" for the assessment of risks associated to weather extremes for the four Swiss nuclear sites.

March 2010 – February 2013: University of Geneva

- March 2010 – February 2012: grantee of the SNSF subsidy PMPDP2_129178 (clustering methods, time series analysis, signal processing).
- March 2012 – February 2013: Post-doctoral researcher on the development of statistical learning methodology for the European Space Agency's astrophysical satellite mission Gaia (time series analysis and classification; part-time from September 2012, together with working at EPFL).

October 2009 – February 2010: Editorial Assistant for Biometrika

October 2003 – September 2009: Ecole Polytechnique Fédérale de Lausanne, Switzerland

PhD student/assistant

1997 – 2003:

Following my husband (1997–1999: France, after 1999: Switzerland); at home, taking care of the children and completing the post-graduate statistics course in Neuchâtel.

1996 – 1997: MultiRáció Ltd, Budapest, Hungary

Development of statistical software for the short-term prediction of unemployment rates.

1993 – 1996: Research Institute for Particle and Nuclear Physics, Budapest, Hungary

Awards

Marie Heim-Vögtlin subsidy, Swiss National Science Foundation (2009)

Students and teaching

PhD student
Prince John, 2015–2017: Finite Dirichlet mixture models for the classification and detection of new classes of periodic variable stars (in co-direction with Prof. A. R. Brazzale, University of Padova, Italy).

Summer internship
Léonid Rousniak (Master student at EPFL, statistics), 2014: Simulations of realistic planet populations and exploration of their detectability by the satellite Gaia.

Master and semester projects

Advising several projects during my PhD years in time series analysis, extreme-value statistics, and network analysis, as well as providing subjects from astrophysics for EPFL statistics students during my post-doc years in supervised classification and in multiple hypothesis testing.

Courses

- Lectures given as part of the Statistics Seminars in the Astronomy Department of the University of Geneva for Master and PhD students (classical hypothesis testing and non-Gaussian statistics).
- Exploring the Milky Way: statistical analysis of Gaia data. Course in the 41st Heidelberg Physics Graduate Days, Oct. 8–12 2018, Heidelberg, Germany)
- Semester course Statistics for Mathematicians, Bachelor level (2021 spring, Ecole Polytechnique Fédérale de Lausanne, Switzerland)

Invited talks and courses

- *A new method for modelling clusters of extreme weather events based on the M4 process.* (Invited seminar, MeteoSwiss, 2008)

- *Introduction to Statistics* and *Time Series Analysis.* (Courses for PhD students in astronomy, LSST DFSP Summer School, August 1-5, 2016, Chicago, US)

- *Quasars: the Beacons of the Universe and the Challenge for Machine Learning.* (Astro@Stats 2017, 8 September 2017, Padova, Italy)

Public service

- Referee for statistical and astrophysical journals.

- Committee member for the Doctoral Consortium at the UNED Intelligent Systems Doctoral School, Madrid, 2015

- Jury member for doctoral thesis (S. Sulis, Nice, 2017)

Additional skills

Languages:

English: fluent
French: fluent
German, Spanish: basic
Hungarian: mother tongue

Software:

R, S-PLUS, Python, Java
LaTeX
MS Office: Word, Excel, PowerPoint
SQL