

CURRICULUM VITAE

April 18, 2019

Philippe MERMOD

Birth: 08.08.1978 in Geneva

Nationality: Swiss

Marital status: married, 3 children

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Qualifications**04.2002–07.2006 PhD degree, Uppsala U., Sweden**

Project Measurement of neutron scattering angular distributions at 95 MeV with three independent setups; tests of three-nucleon forces

Scholarship AIM graduate education, including student travel money

10.1997–04.2002 MSc - Physics degree, U. Geneva, Switzerland

Project Photon structure function measurement with the L3 detector at LEP

Mobility CERN summer student

One year as exchange student at Humboldt U., Berlin

Research**10.2014–present Assistant professor, U. Geneva, Switzerland**

Project leadership Pioneering search for displaced heavy neutral lepton decays at ATLAS run-2

Highly-ionising particle search at ATLAS run-2

Trapped magnetic monopole searches at MoEDAL

Scintillator-based timing detector for the SHiP experiment

Time-of-flight detector for T2K ND280 detector upgrade

Other projects Nuclear-track detector calibration and scanning tests for MoEDAL

Coordination MoEDAL analysis coordinator and trapping detector coordinator

SHiP timing detector convener

Awarded grants SNSF Professor Fellowship (CHF 1'580'000, 10.2014–09.2018)

SERI-COST fast scintillator timing detector R&D (CHF 157'000, 10.2016–09.2018)

SNSF Professor Fellowship follow-up (CHF 560'000, 10.2018–09.2020)

SNSF Project TOF detector design for ND280 upgrade (CHF 72'000, 10.2018–09.2020)

SNSF FLARE Project TOF detector construction for ND280 upgrade (CHF 240'000, 03.2019–09.2020)

In 2017, awarded lecturer position at Queen Mary University London, UK; declined for family reasons

10.2011–09.2014 Research associate, U. Geneva, Switzerland

- Project leadership* New trigger and search for highly-ionising particles at ATLAS run-1
 Pioneering trapped monopole search at MoEDAL
 Search for monopoles in polar volcanic rocks
 Review on stable massive particle searches at non-collider facilities
 Study of LHC sensitivity to highly-ionising particles
- Other projects* Physics motivation for an enhanced ATLAS TRT FastOR level-1 trigger
 Exotic physics prospects with ATLAS Forward Protons (AFP)
- Coordination* ATLAS exotic long-lived particles subgroup convener
 MoEDAL software coordinator and trapping detector coordinator
- Awarded grants* SNSF Ambizione Fellowship (CHF 545'300)
 Ernst and Lucie Schmidheiny Foundation travel grant (CHF 3'000)
 Academic Society of Geneva grant covering magnetometer runs (CHF 5'000)

08.2009–09.2011 Advanced postdoc, U. Oxford, England

- Project leadership* Pioneering ATLAS highly-ionising particle search
- Other projects* Contributions to the first ATLAS R -hadron search
 Commissioning duties for ATLAS missing transverse energy trigger
- Supervisor* Prof. Cigdem Issever (c.issever1@physics.ox.ac.uk)
- Awarded grant* SNSF Advanced Researcher Fellowship (CHF 172'000)

08.2007–07.2009 Postdoc, Stockholm U., Sweden

- Projects* Study of ATLAS R -hadron search strategy and discovery potential
 Development of slow-moving particle identification techniques
 Effects of calorimeter failures on jet and missing energy reconstruction
- Supervisor* Prof. David Milstead (milstead@fysik.su.se)

08.2006–07.2007 One year parental leave following birth of second child**Student and postdoc supervision**

- 01.2016–present Mentor: research associate Alexander Korzenev, U. Geneva
- 10.2014–present Supervisor: PhD students Anthony Lioni and Arnaud Dubreuil (degrees in 2019), and four Master students, U. Geneva
- 10.2014–12.2015 Mentor: postdoc Avishek Chatterjee, U. Geneva
- 02.2012–09.2016 Supervisor: PhD student Akshay Katre (degree in 2016), U. Geneva
- 08.2007–12.2014 Co-supervisor: PhD student Christian Ohm, and two undergraduate students, Stockholm U.
- 03.2004–09.2005 Co-supervisor: three undergraduate students, Uppsala U.

Academic teaching

- 02.2015–09.2018 Spring terms, general physics course for students in biology, U. Geneva
04.2016–05.2016 CUSO graduate course on new long-lived particles
09.2012–06.2013 Exercises and exams for electrodynamics course, U. Geneva
10.2011–12.2012 Introductory lectures in applied statistics, U. Geneva
04.2008–05.2009 Tutorials in quantum mechanics, Stockholm U.
10.2003–05.2005 Laboratories and exercises in electrical engineering, Uppsala U.
10.2002–02.2003 Completion of a course in pedagogy for university teachers (4 weeks full-time studies), Uppsala U.
10.2000–04.2002 Physics laboratories, U. Geneva

Talks and seminars

Over the past 5 years: invited talks at 15 international workshops and conferences; seminars and colloquia at 12 universities and research centres.

Spoken languages

French (native), **English** (fluent), **Swedish** (fluent), **German** (conversational)

List of references

The following senior people worked closely with me during the indicated time periods.

2007–present **Prof. David Milstead**

Relationship Postdoc supervisor (2007–2009), mentor and collaborator

Contact Fysikum, Stockholm U.

SE–106 91 Stockholm

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2010–present **Prof. Wendy Taylor**

Relationship Collaborator ATLAS monopole searches

Contact Department of Physics and Astronomy, York U.

Toronto, ON Canada M3J 1P3

taylorw@yorku.ca • +1 (0)416 7362100

2011–present **Prof. James Pinfold**

Relationship Collaborator, spokesperson MoEDAL experiment

Contact Department of Physics, U. Alberta

Edmonton, AB Canada T6G 2R3

jpinfold@ualberta.ca • +1 (0)780 4922498

2011–present **Prof. Albert de Roeck**

Relationship Collaborator trapped monopole searches at the LHC

Contact Physics Department, CERN
CH–1217 Meyrin, Switzerland
albert.de.roeck@cern.ch • +41 (0)22 7677384 / +41 (0)76 4874568

2014–present **Prof. Alain Blondel**

Relationship Mentor and collaborator T2K experiment

Contact DPNC, U. Geneva
CH - 1211 Geneva 4, Switzerland
alain.blondel@unige.ch • +41 (0)22 3796227 / +41 (0)75 4114058

2014–present **Prof. Heiko Lacker**

Relationship Collaborator ATLAS displaced HNLs and SHiP veto detectors

Contact Physics Department, Humboldt U. Berlin
D–12489 Berlin
lacker@physik.hu-berlin.de • +49 (0)30 20937817

2015–present **Prof. Teresa Montaruli**

Relationship Shared teaching responsibilities for course in general physics

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