

Curriculum Vitae Paula Anna-Maria Eerola

1. Full name and address

- Paula Anna-Maria Eerola.
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- <https://www.helsinki.fi/en/university>

2. Date and place of birth, citizenship, languages

- Born January 10, 1962 in Joensuu, Finland.
- Finnish and Swedish citizen.
- Mother tongue Finnish. Fluent in Swedish and English (oral, written). A fair knowledge of French and German.

3. Current position

- *Vice-Rector*, University of Helsinki, from 2018.
- *Professor of Experimental Elementary Particle Physics*, University of Helsinki from 2008.



4. Education and training

- Docent of experimental particle physics in University of Helsinki, Finland, 1994.
- Doctor of Philosophy (PhD) in experimental particle physics, University of Helsinki, Finland, 1990.
- Master of Science in physics, University of Helsinki, Finland, 1985.
- Matriculation examination, Joensuun keskustan lukio, Joensuu, Finland, 1980.

5. Previous professional appointments

- 2018 *Dean*, Faculty of Science, University of Helsinki.
- 2016 - 2017 *Director of Helsinki Institute of Physics*, Finland.
- 2001 - 2008 *Professor of Particle Physics (permanent)*, Lund University, Sweden.
- 1998 - 2004 *Special Researcher* (Swedish Research Council), Lund University, Sweden.
- 1997 *Associate professor locum*, Physics Department, University of Helsinki, Finland.
- 1996 - 2001 *Assistant professor in experimental particle physics*, Physics Department, University of Helsinki, Finland. On leave of absence 1996 - 1997, 1998 - 2001.
- 1993 - 1997 *CERN Staff Research Physicist*, Particle Physics Experiments Division, CERN, Switzerland.
- 1994 - 1998 *Research Assistant* in the Research Institute for High Energy Physics, University of Helsinki, Finland. On leave of absence 1994 - 1998.
- 1991 - 1993 *CERN Research Fellow*, Particle Physics Experiments Division, CERN, Switzerland.
- 1991 - 1991 *Junior Research Associate locum*, Academy of Finland, Finland.
- 1988 - 1992 *Research Assistant* in the Research Institute for High Energy Physics, University of Helsinki, Finland. On leave of absence 1988 - 1990, 1991- 1992.
- 1987 - 1990 *Research Assistant*, Academy of Finland, Finland.
- 1984 - 1986 *Research Assistant locum* in the Research Institute for High Energy Physics, University of Helsinki, Finland.

6. Research leadership and coordination

Research leadership, funding and policies

- Member of the “Vision for higher education and research 2030” (*Korkeakoulutuksen ja tutkimuksen visio 2030*) action plan group “Research, Development and Innovation”, 2018. Working group set up by the Finnish Ministry of Education and Culture.
- Member of the Steering group of the Development Programme of Data Management and Computing (*Datanhallinnan ja laskennan kehittämissuhteen ohjausryhmä*) 2017- . Working group set up by the Finnish Ministry of Education and Culture.

- Delegate of Finland in the NORDSYNC Steering Committee/ESRF Council 2018-2019.
- Delegate of Finland at the CERN Council 2016-2019.
- Delegate of Finland at the FAIR Council since 2016.
- Chair, Research Council for Natural Sciences and Engineering, Academy of Finland 2013-2017.
- Chair, Research Infrastructure Sub-Committee (*Tutkimusinfrastruktuurijaosto*), Academy of Finland 2013-2014; Member, Research Infrastructure Committee (*Tutkimusinfrastruktuurikomitea*), Academy of Finland, 2014-2017.
- Member of the Board, Academy of Finland 2013-2014.
- Chair, Physics and Astronomy Panel, Publication Forum, Federation of Finnish Learned Societies 2010-2017.
- Member of the Cooperation Forum for Scientific Computing (*Tieteellisen laskennan yhteistyöfoorumi*) 2013-2015, vice-chair 2016-2018.
- Member of the NordForsk High Level Group for Research Infrastructure 2013-2017.
- Member of NOS-N, representing the Research Council for Natural Sciences and Engineering, Academy of Finland, 2013-2017.
- Member of the Tenure Track Steering Group, University of Helsinki, 2010-2012.
- Member of the Faculty Board, Science Faculty, University of Helsinki, 2010-2013, 2014-2017.
- Representative of Finland in Restricted ECFA - European Committee for Future Accelerators 1997-1998 and 2012-2017.
- Division Head, Experimental High Energy Physics, Lund University, Sweden, 2005-2008.
- Member of the Board of the Physics Institution of Lund University 2005-2008.
- Member of the Staff Appointments Committee, Science Faculty, Lund University, 2006-2008.
- Member of the Equal Opportunities Committee, Science Faculty, Lund University, 2004-2008.
- Member of the Board of Directors of SNIC, Swedish National Infrastructure for Computing 2002-2012.

Coordination responsibilities related to own research field

- Member of the Particle Data Group since 2014.
- Member, CMS B physics publication committee 2012-2015, B/top physics publication committee 2016-.
- Member of the CMS Management Board 2012-2016.
- Programme director of the CMS Programme of Helsinki Institute of Physics (HIP) 2010-2015.
- Project leader of the HIP CMS Tracker project 2009, HIP CMS Experiment Project 2010.
- Member of the CMS Chair Advisory Group 2011-2012.
- Convener, CMS B Physics Analysis Group, and member of the CMS Physics Coordination 2009-2010.
- Member of the CMS Tracker Institute Board and Tracker Upgrade Management Board 2010-2016.
- Main coordinator of a NordForsk Joint Nordic Infrastructure Project 'LHC and Beyond' 2008-2012.
- Main coordinator of a NorFA-NordForsk Research and Training Network 'Discovery Physics at LHC' 2001-2007.
- Nordic Member of the Project Overview Board of the LHC Computing Grid project 2003-2012.
- Nordic Member of the LHC Computing Grid Memorandum-of-Understanding taskforce 2004-2005.
- Member of the NorduGRID Steering Group 2000-2008, 2010-2015.
- Member of the SWEGRID committee of the Swedish Natural Science Research Council 2000-2002.
- Member of the CERN-committee of the Swedish Natural Science Research Council 1999-2005.
- Member of the Board of the Swedish LHC-consortium 1998-2008.
- Member of the ATLAS TRT Steering Committee 1998-2005, and TRT Institute Board 2006-2008.
- Convener of the B-physics working group of ATLAS 1993-2005.

Research evaluation

- UK Research Excellence Framework REF2021, International Member of the Main Panel B: Physical sciences, engineering and mathematics, 2018-2021.
- Evaluation of Chalmers University of Technology, Sweden, 2018.
- Evaluation of NIKHEF, the Dutch National Institute for Subatomic Physics, the Netherlands, 2017.
- Scientific Advisory Board of Aalto University School of Science, 2016-2017.
- Millennium Technology Prize, member of the preselection steering group, 2017.
- Member of the selection board for CERN limited duration physics research staff, 2013-2017.
- Evaluation of applications for the Knut and Alice Wallenberg foundation, 2013, 2015-2018.

- Member of the MAT-PHY Panel, H2020, EC, Innovative training networks 2016.
- Member of the Physics Panel, EC Consultation on Integrating Activities for H2020, EC, 2013.
- Member of the Physics Panel, Capacities Programme, FP7, EC. Research Infrastructures 2008.
- Member of the Physics Panel, People Programme, FP7, EC. Marie Curie fellows 2007-2011. Also acting as a vice-chair. Initial training networks 2011, Innovative training networks 2014.
- Member of the Physics Panel, Human Potential Programme, FP6, EC. Research and Training Networks in 2003, Marie Curie fellows 2004-2006.
- Member of the Physics Panel, Human Potential Programme, FP5, EC. Research Networks in 1999.
- Member of the KFI/RFI (Research Infrastructure Committee) Evaluation group 1 of the Swedish Science Research Council 2005-2012.
- Member of the Evaluation group NT-M of the Swedish Science Research Council. Evaluation of applications to VR in 2001-2004.
- Member of the Evaluation group 1 under the Physics Committee of the Swedish Natural Science Research Council. Evaluation of applications to NFR and FRN in 1999-2000.

7. Academic and professional activities

- Experiments

- Member of the CMS experiment since 2008. Research: All aspects of B physics at LHC-CMS. Physics beyond the Standard Model at LHC-CMS. Application of Grid-technologies to LHC data processing. CMS Tracker. CMS upgrade.
- Member of the ATLAS experiment 1992-2008. Research: All aspects of B physics at LHC-ATLAS, and new physics searches – feasibility studies and detector performance optimization. Design and construction of the ATLAS Transition Radiation Tracker. B-physics triggers, track trigger using the ATLAS Transition Radiation Tracker.
- Member of the DELPHI experiment, as a PhD student and post-doc 1985-1994. Research: Soft gluon structure in hadronic final states. Heavy flavours in Z0 Decays. Neural Networks. Search for non-minimal Higgs bosons. DELPHI microvertex detector: Mechanics of the detector upgrade. Muon trigger and event tagging in the DELPHI Hadron Calorimeter.
- UA1 experiment, diploma work 1984-1985. Analysis of UA1 data: Measurement of the strong coupling constant from jet rates.
- UA2 experiment, summer student 1984. Development of an on-line filter for top-quark searches.

- Other research projects

- Application of particle physics detectors to radiation detection.
- Computing and data management for particle physics experiments: NorduGrid-ARC, KnowARC, and other projects.
- Linear colliders (1991-1992): Simulation of charged Higgs boson production.

- **Publications.** Over 700 peer-reviewed publications. See <http://www.helsinki.fi/~paerola/PE.html>

- Student supervision

- Main supervisor of 7 PhD theses, currently supervising 3 PhD students.
- Main supervisor of 11 MSc theses.

- Teaching experience

- Director of Doctoral School in Natural Sciences, University of Helsinki, 2014-2015.
- Director of studies (*Oppiainevastaava*) for physics, Dept. of Physics, University of Helsinki 2010-2013.
- Courses at University of Helsinki since 1997. Helsinki University of Technology 1991.

- Outreach

- Popular lectures: e.g. Studia Generalia, Helsinki Insight seminars (University of Helsinki), Lund Philosophy Circle, lectures to physics teachers, etc.
- TV-, radio- and newspaper interviews.
- Coordination of particle physics outreach activities at the Helsinki Institute of Physics and University of Helsinki.

8. Membership in scientific societies

- Member of the Finnish Academy of Engineering Sciences since 2016.
- Member of the Finnish Academy of Science and Letters since 2012.
- Member of the Finnish Society of Sciences and Letters since 2010.

- Member of the Royal Swedish Academy of Sciences since 2010.
- Member of the Board, High Energy Particle Physics division of the European Physical Society 2008-2015.
- Member of Kungliga Fysiografiska Sällskapet since 2007.
- Vice-chair of the Swedish Physical Society 2007-2009, member of the Board 2004-2009.
- Member of the Swedish National Committee for Pure and Applied Physics, The Royal Swedish Academy of Sciences, 2004-2009.

9. Prizes, acknowledgements

- Knight, First Class, of the Order of the White Rose of Finland, 2017.
- Honorary doctor in technology, Lappeenranta University of Technology, Finland 2017.
- E.J. Nyström prize awarded by the Finnish Society of Sciences and Letters 2016.