

Curriculum Vitæ

First name and family name: **Aurelio BAY**

Date of birth: 18 April 1955, nationality: Swiss

Marital status: married (1988) with Anne-Claude, pharmacist

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Summary:

1974 University entrance examination (scientific), Varese, Italy
1980 Physicist diploma, University of Lausanne (UNIL), Switzerland
1980-1986 PhD at University of Lausanne, Switzerland
1986-1988 Post doctoral studies at the Lawrence Berkeley Laboratories (LBL), USA
1988-1994 *Maître Assistant* at University of Geneva (UNIGE), Switzerland
1994-1998 Assistant professor at University of Lausanne, Switzerland
1998-2003 Full professor at UNIL, and director of the Institute of High Energy Physics (IPHE)
1999-2000 Deputy director of the Physics Department UNIL
2000-2003 Deputy dean of the Faculty of science of UNIL
2003- Full professor at Ecole Polytechnique Fédérale de Lausanne (EPFL), and director
of the Laboratory of High Energy Physics (LPHE) <http://lphe.epfl.ch>
2015- Titular (adjunct) professor at UNIL, director of the "Collège des sciences"
www.unil.ch/collsciences

Scientific Experience

1980-1986: PhD studies at University of Lausanne, Switzerland

• Contribution to muon capture experiments at SIN (now PSI) (Zürich-Lausanne and Tokyo-Louvain-Zürich-Lausanne collaborations)

• **PhD thesis** : Measurement of the pion radiative decay (Lausanne-Louvain-Zürich collaboration at PSI),

1986-1988 Post doctoral studies at the Lawrence Berkeley Laboratories, USA

• Study of the TPC/2 γ Electromagnetic Calorimeter; simulation of the readout electronics; calibration of the system

• Contribution to the analysis of TPC/2 γ data obtained at PEP e⁺e⁻ collider; spectroscopy of charmed mesons

• Contribution to the study of a SSC/LHC detector

1988-1994 *Maître-assistant* at the Department of Nuclear Physics, UNIGE, Switzerland : L3 experiment at LEP at CERN

• Contribution to the construction of the L3 e.m. calorimeter and of the Silicon Microvertex Detector

• Study of "prompt photon" emission in hadronic events. Measurement of the electro-weak coupling values independently for up- and down-type quarks

• Tests of perturbative and non perturbative QCD ("string effect")

• **1992** member of the organising committee of the LAPP Prompt Photon Workshop (LAPP, Annecy, France).

1994-1998 Assistant Professor at University of Lausanne

1998-2003 Full Professor at University of Lausanne, Director of the HEP Institute

- Contribution to the software for the L3 slow control
 - Search of Flavour Changing Neutral Current events at the Z pole and with single top events at LEP2
 - Participation in the RD46 collaboration for the study of a new tracking detector (Projet ESPRIT 23548)
 - Responsible for the activities of the Lausanne group in LHCb (<http://lhcb.web.cern.ch/lhcb/>), member of the LHCb board
 - Coordinator of the Off Detector Electronics group in LHCb
 - Participation in the R&D for a new gas detector, Micromegas
 - Physics performance studies at LHCb: jet studies, jet charge tagging, intermediate mass Higgs search and SUSY processes
- 1999** Organization of the III Micromegas workshop, Lausanne
- 2001** Begin participation to BELLE experiment at KEK, Tsukuba (Japan) (<http://belle.kek.jp>)
- Studies of EPR correlation in Y(4S) decay
- 2002** Organization of the Nanobeam 2002 workshop, Lausanne
- 2003-** Full Professor at EPFL, Director of the LPHE
- 2003-** Responsible of the TELL1 project for LHCb (<http://lphe.epfl.ch/tell1>)
- 2005** Organization of a National Astroparticle workshop, ISDC, Geneva
- 2006** Organization of a National workshop on Space Time and Gravitation, EPFL, Lausanne
- 2006-2009** Creation of the Jet/Exotica Working Group in LHCb
- 2008-** Participation in the Positron Electron Balloon Spectrometer (PEBS) experiment
- 2012-** Participation in the fiber tracker project for the LHCb upgrade (SiPM R&D, purchase, QA; fibre mats production)

Teaching Experience

1980-1986: Assistant for practical training and exercise sessions for physics students. Follow-up of physics diplomas

1988-1994: *Maître-assistant* at the Department of Nuclear Physics, Geneva University, Switzerland

Organisation of seminars and follow-up of PhD students, teaching of "Particle detection"

1994-1998: Assistant Professor: Courses on "Particle physics" and "Nuclear reactions"

1998-: Full Professor: Teaching of "Atomic physics", "Particle physics", "Nuclear reactions", "Relativistic ion collisions, quark-gluon plasma", "Introduction to astroparticles". Organisation of seminars and practical training for students.

Organisation of PhD lectures

2002-: Teaching of "General physics" for first year students.

Administrative Responsibilities

1994-1998: Assistant Professor at University of Lausanne

Member of the Board for computing of UNIL

Member of the "*commission de branche*" for Physics UNIGE, UNIL.

Member of several working groups for the "triangular project" EPFL, UNIGE, UNIL

1998-2000 Counsellor for physics students

1998-2003 Full Professor UNIL, Director of the IPHE

Member of the *Commission scientifique du troisième cycle de la physique en Suisse romande*.

Member of the Board of the Cyclotron - Positron Emission Tomography Center of the Geneva Hospital

1999-2000 Deputy director of the Physics department, UNIL

2000-2003 Deputy-dean of the Faculty of science, UNIL

2003- Full Professor EPFL, Director of the LPHE <http://lphe.epfl.ch>

2003- Responsible of electronic and mechanic workshops

2003 Member of the working group for the creation of the Swiss Particle Physics Institute (CHIPP) (<http://www.chipp.ch/>).

2004-2006 Member of the Faculty Council of the Faculté de Sciences de base, EPFL

2004- Member of the Board of the Swiss Particle Physics Institute, CHIPP

2008- President of the jury for maturity examinations at the *Gymnase intercantonal de la Broye*

2012-2014 President of the committee *Cours de base du programme doctoral CUSO (ex Troisième cycle)*.

2012-2014 Member of the LHCb Membership Committee

2013-2016 President of the *Doctoral program in physics CUSO*

2015- Titular professor UNIL, director of the “Collège des Sciences” (EPFL teaching of basic sciences at UNIL)