

Prof. Dr. Ulrich Straumann
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Curriculum vitae

- 22.Juni 1953 born in Zürich
- 1972 Matura Typus B, Kantonsschule Wetzikon
- 1972 - 1979 Study of experimental physics at Universität Zürich
- 1980 - 1983 Teaching assistant and PhD student at Universität Zürich,
- experiments at SIN on radiative pion capture on nuclei
- 1981 Visiting scientist at LBL in Berkeley, Ca., USA,
- working on an experiment to measure the η parameter of the μ decay
- 15.Dez.1983 Ph.D. of the philosophische Fakultät II of the Universität Zürich
- 1984 - 1985 PostDoc Position at the Universität Mainz, working at CERN
- on $p\bar{p}$ annihilation at rest with the experiment Asterix
- 1986 - 1995 Senior assistant at the Physik-Institut, Universität Zürich,
- responsible for the implementation of computing facilities
- building up a new lab course about computing in experiments
- preparing the first level trigger of the H1 experiment
- 1989 - 1992 - Trigger coordinator and operation manager of H1 at DESY
- 1994 - 1995 - Technical coordinator of H1 at DESY
- 1996 - 1999 Professor (C3) of experimental physics at the Universität Heidelberg,
- working on development of micropattern gas detectors (MSGC, GEM)
- 1996 - 1997 - Trigger coordinator for the project LHCb
- 1997 - 2001 - Member of the LHC Electronics Board
- 1998 - 2004 - Project leader silicon tracking for LHCb
- member of the LHCb technical board
- Project coordinator for the central MWPC and trigger upgrade of H1
- since 1999 Full professor for experimental physics at Universität Zürich
- Committees and Institutional Responsibilities:
- 2000-2003 - Member of the Electronic Services Advisory Committee at CERN
- 2003-2007 - Swiss representative in the restricted European Committee for Future Accelerators (R-ECFA)
- 2005-2007 - Scientific secretary of ECFA
- 2005-2007 - President of the "Zürcher physikalische Gesellschaft"
- 2007-2012 - Swiss scientific delegate to the CERN council
- 2008-2009 - Chair of the Swiss Institute for Particle Physics (CHIPP)
- 2008-2012 - Chair of the Collaboration Board of LHCb
- 2009-2010 - Vice president of the Swiss physical society
- 2013-2016 - Dean of Studies, Science Faculty (MNF) University of Zurich
- 2010-2016 - Member of the BVR program committee of Paul-Scherrer-Institut
- since 2010 - Member of the scientific advisory board to HEPHY Vienna
- 2011-2016 - Director of Physik-Institut Universität Zürich
- since 2016 - Managing director of the CTAO GmbH, Heidelberg.

Major scientific achievements

After my PhD on radiative pion capture on ^{15}N and ^{13}C nuclei at the former SIN I moved to Cern and worked on the ASTERIX experiment, in which annihilation of anti-protons stopped in a gaseous Hydrogen target were studied. Initial X ray observation allowed to determine the initial angular momentum in the production process of mesons. I was initiating, planning and implementing a major refurbishing of the experiment, which resulted in a significantly improved availability and measuring accuracy.

In 1985 I joined the H1 collaboration at DESY. As a first step I designed and operated calorimeter test and calibration beam experiments at Cern. I became then the trigger coordinator of the H1 experiment and was responsible for implementing and operating for what was at that time one of the most complex trigger system in particle physics. Later I became the technical coordinator of this experiment and was responsible for all experimental activities, including operation management.

In the data analysis of H1 my PhD students worked on the F_2 structure function analysis and on the first determination of the strong coupling constant α_s at HERA, based on deep inelastic scattering data fits.

I am a founding member of the LHCb experiment at CERN, which was basically designed in the years 1995 - 2000. In the beginning I started as a trigger coordinator. As a professor of the PI University of Heidelberg, I lead the design of the first level trigger system and co-supervised 3 PhD students in designing, implementing and testing the necessary electronic circuits.

From 1999 I became a professor at University of Zurich and took over the project lead for designing and implementing the inner tracking system of LHCb. Different technologies were compared, ending up in a decision to choose silicon microstrip detectors. Sensors were designed, tested, analysed and evaluated. For the actual detector construction support of other institutions was necessary and I could convince our colleagues at EPFL, Heidelberg MPI, Santiago de Compostela and Kiev to take over part of the project. In time with LHC the detectors became operational and survived the LHC beams unexpectedly well.

An immense amount of data has been taken since then. I am co-author of the 334 papers mainly on B physics published so far. My PhD students and PostDocs worked on rare B meson decays, especially $B_s \rightarrow \mu\mu$, various combinations of $B \rightarrow K^{(*)}\mu\mu$ decays and others. A large fraction of the LHCb analyses on electroweak production measurements were done in my group. About four years ago a significant deviation between data and theory of the quantity P'_5 in the angular analysis of the process $B \rightarrow K^*\mu\mu$ has been first observed by members of my group under the leadership of Dr. Nicola Serra, who is now an SNF professor at our department in Zurich. In the meanwhile with much more data becoming available, the effect has been analysed more carefully by our groups and gets world-wide attention as a possible sign of new physics.

I was lucky to have so many good PhD students and PostDocs, without them nothing of all these would have been possible. I am most grateful to my two senior collaborators, PD Dr. Olaf Steinkamp and Dr. Katharina Müller who played a crucial role in determining the research strategies and did most of the daily supervision of the people involved. I am very much obliged to the members of the infrastructure groups of our department for their excellent quality of their mechanics and electronics engineering work, and for the very reliable support of the computing systems.

Publications of research group of U. Straumann

A structured list of all publications and conference contributions of my research group can be found on http://www.physik.uzh.ch/~strauman/all_pub.pdf