
Education

PhD Thesis: "*Studies of Resonant and Non-Resonant Weak Boson Pair Production at LHC*", accepted on the recommendation of Prof. Dr. F. Pauss (examiner), Prof. Dr. Z. Kunszt (co-examiner) and Dr. D. Renker (co-examiner). Swiss Federal Institute of Technology, Zurich (ETHZ) / Paul Scherrer Institute (PSI), Villigen, September 24, 2001.

Diploma Thesis: "*A Method to Measure Parton Luminosities at the LHC: a Tool to determine Higgs Backgrounds accurately*", performed at CERN under the supervision of Prof. Dr. Felicitas Pauss and Dr. Michael Dittmar, Swiss Federal Institute of Technology, Zurich (ETHZ), March 17, 1997.

Main Teaching Experience

"Éléments de physique": lectures (56 hours) given at the Swiss Federal Institute of Technology to HEP (*Haute Ecole Pédagogique*) students during summer semesters.

"Cours de Physique Générale": first assistant for the lectures given by Prof. O. Schneider to EPFL students in electrical and mechanical engineering. Assisting Prof. Schneider in the preparation of the lectures, exercises and examination and acting as substitute lecturer.

"Apprendre et enseigner la physique en explorant le corps humain": lectures (36 hours) given at the University of Lausanne to middle school teachers (spring 2004).

"Vector analysis": lectures (8 hours) given at the University of Lausanne and at the Swiss Federal Institute of Technology to fourth-year students during winter-semester.

"Higgs search at LHC", part of the "Teilchenphysik IV" lecture given by Prof. Felicitas Pauss, Zurich (Switzerland), December 2000.

Additional Teaching Experience

- "**Il risparmio energetico nell'utilizzo di sistemi di trasporto industriali: l'esempio di un sistema intelligente a monorotaia**", part of the Certificate of Advanced Studies (CAS) "*Management integrato della Qualità e della Sicurezza*", Scuola Universitaria professionale della Svizzera Italiana (SUPSI), Manno (Switzerland), April 2008.
 - User report: the Montech cleanroom transportation system, IMHOF-Forum 2007.
 - Assistant by Dr. J.-P. Perroud for the exercises and the practical works of the lecture "**Physique**" for HEP students (University of Lausanne, 2002-2003).
 - Assistant by Prof. F. Pauss for the exercises of the lecture "**Kern und Teilchenphysik für physiker**" (ETH Zurich, 2001).
 - Assistant by Prof. F. Pauss for the exercises of the lecture "**Teilchenphysik IV für physiker**" (ETH Zurich, 2000-2001).
 - Assistant by Prof. F. Pauss for the exercises of the lecture "**Physik für Informatiker**" (ETH Zurich, 1999-2000).
 - Assistant by Prof. F. Pauss for the exercises of the lecture "**Kern und Teilchenphysik I für physiker**" (ETH Zurich, 1999).
 - Assistant by Prof. R. Eichler for the exercises of the lecture "**Physik für Informatiker**" (ETH Zurich, 1997-1998).
 - Guided tours for physics students and other visitors at CERN in test beam areas, L3 and DELPHI experiments as well as at the LHCb construction site (1999-2005).
-

Additional Education

- "**Generation Asset Analytics and Risk Management**", London, November 2008
- "**Einführung in die Energiewirtschaft**" (EUROFORUM), Zürich, May 2008
- "**Fertigen unter reinen Bedingungen**", Workshop, Fraunhofer Inst., May 2007.
- Sales Training, Gustav Käser Training International, Zurich, August 2006-February 2007.
- "**La masse des neutrinos**", J.-L. Vuilleumier, Troisième cycle de la physique en Suisse romande (EPFL Lausanne, Switzerland, October-November 2005).
- "**Le modèle standard**", G. Bélanger, Troisième cycle de la physique en Suisse romande (EPFL Lausanne, Switzerland, October 2004-February 2005).
- "**Physics of Hadron Colliders**", J. Kroll, Troisième cycle de la physique en Suisse romande (EPFL/CERN, Switzerland, May-June 2004).
- The 2000 European School of High-Energy Physics (Caramulo, Portugal, August-September 2000).
- XXVII SLAC Summer Institute on Particle Physics: "**CP Violation in and beyond the Standard Model**" (Stanford Linear Accelerator Center, U.S.A., July 1999).
- CERN Workshop: "**Standard Model Physics (and more) at the LHC**" (CERN, Switzerland, May-October 1999).
- PSI Zuoz Summer School on Particle Physics: "**Hidden Symmetries and Higgs Phenomena**" (Zuoz, Switzerland, August 1998).

Publications

- "Towards a precise Parton Luminosity determination at the CERN LHC", M. Dittmar, F. Pauss and D. Zürcher, Phys. Rev. **D 56** (1997) 11 ("top cited High Energy Physics article", i.e., cited at least 100 times).
- "Nuclear Counter Effect and Pion-Electron misidentification", D. Zürcher, Nuclear Instruments and Methods in Physics Research Sect. **A**, Elsevier Science, 442 (1-3) (2000), pp. 433-437.
- "Proceedings of the Workshop on Standard Model Physics (and more) at the LHC, section 2: Electroweak Physics", G. Azuelos et al., CERN 2000-004, Editors: G. Altarelli, M.L. Mangano.
- "Nuclear Counter Effect and Pion-Electron misidentification. Simulations and 1998 test beam results", M. Dittmar and D. Zürcher, CMS Note 1999/040.
- "A precise Parton Luminosity Monitor at LHC and applications for the $H \rightarrow WW \rightarrow l\nu l\nu$ search", D. Zürcher, Acta Physica Polonica **B** (1998) 29.

2002-2007 Co-author of more than 100 publications in international journals (as one of over 300 authors in the BELLE international High Energy Physics collaboration).

The updated list of publications is available in the "Spires HEP Literature Database":

<http://www.slac.stanford.edu/spires/find/hep/www?rawcmd=a+Zurcher,+D>

Contributions at International Physics Conferences and Workshops

- "Nuclear Counter Effect and pion-electron misidentification", Poster presented at the 2000 European School of High Energy Physics, Caramulo, Portugal, August 20.-September 2. 2000.
- "Vector Boson pair production: PYTHIA vs. NLO", 1999 Workshop on SM Physics (and more) at the LHC, Plenary meeting, CERN, October 14. 1999.
- "Nuclear Counter Effect and pion-electron misidentification", Poster presented at the Second Conference on New developments in Photodetection, Beaune, France, June 21.-25. 1999.
- "A Precise Parton Luminosity Monitor at LHC and Applications for the $H \rightarrow WW \rightarrow l\nu l\nu$ Search", Summer School on Hidden Symmetries and Higgs Phenomena, Zuoz (Switzerland), August 8. 1998.
- "Parton Luminosity Monitor at LHC", Krakow Epiphany Conference on Spin Effects in Particle Physics, Krakow (Poland), November 1. 1998.

A full list of publications, conference contributions and given lectures is available at:

<http://www.cridario.ch/dario/research/fulllist.php>

Personal Interests

- Photography.
- Science, socioeconomics and geopolitics.
- Outdoor activities.
- Travel to discover new places and cultures.
- Spending time with family and friends.

References

Alessandro Sibilia	Managing Board delegate for strategic projects and partnerships, Montech AG, Derendingen. Alessandro.Sibilia@montech.com , +41(0)32 681 55 75
Prof. Aurelio Bay	Professor at the Laboratory for Particle Physics (LPHE) of the EPFL Lausanne, aurelio.bay@epfl.ch , +41(0)21 693 04 74
Prof. Olivier Schneider	Professor at the Laboratory for Particle Physics (LPHE) of the EPFL Lausanne, olivier.schneider@epfl.ch , +41(0)21 693 05 07
Prof. Felicitas Pauss	Professor at the Institute for Particle Physics of the ETH-Zurich, felicitas.pauss@cern.ch , +41(0)22 767 31 29, http://wwweth.cern.ch/pauss/
Dr. Michael Dittmar	CMS physics coordinator (CERN), ETH-Zurich, michael.dittmar@cern.ch , +41(0)22 767 35 85

Reference letters are available upon request.

Following this link, you can download my CV, as well as copies of my degrees, notes, PhD Abstract and other documents:

<http://www.cridario.ch/dario/attachments/attachments.php>