Jelena Luetić

Personal

Address	Supilova 7, 10000 Zagreb, Croatia
Date of Birth	April 5, 1987
Citizenship	Croatian
Phone	+385 91 1480103
Email	jelena.luetic@cern.ch
Languages	English, basic Italian and French, Croatian - native

Education

2011 -	**PhD**, Faculty of Science, Physics department *Title*: Measurement of the cross section for associated production of a W boson and two b quarks with the CMS detector at the Large Hadron Collider *Advisor:* Prof. Vuko Brigljević, thesis defence is scheduled for July, 15th 2015.
2005 - 2010	**MSc**, Faculty of Science, Physics department *Title*: Measurement of Z boson cross section in proton-proton collisions with CMS detector at Large Hadron Collider *Advisor:* Prof. Ivica Puljak, thesis defended on November, 30th 2010.

Professional experience

CMS Experiment - Since 2010 I've been a part of the CMS group at Ruđer Bošković Institute, working on gauge boson produced in association with jets measurements and on technical aspects of CMS detector:

- One of the main contributors to Wbb cross section measurement at $\sqrt{s} = 8$ TeV. Collaboration with University of Wisconsin-Madison, University of Trieste and CERN.
- Responsible for Lorentz angle monitoring and calibration for CMS Pixel detector.
- Responsible for development and maintenance of technical tools used in the offline analysis shared with other members of CMS Pixel group.

- Participated in pixel detector recommissioning during the long shutdown.
- Paricipated in CMS Pixel Operations

Particle Detectors Project - RBI, Croatia Particle Detectors Project was a big FP7 project at Ruđer Bošković Institute, aimed at development of our local experimental facilities. The part of the project in which I was one of the main contributors was to asses the possibility of using Van de Graaff facility to measure the radiation damage to CMS Pixel Detector read-out chips (ROC). The goal was to measure the detector response before and after the irradiation using a very focused beam ($\sim 10\mu$m). I participated in all the steps of the experiment which can be summarized as follows:

- Design of the translator stage used to precisely position the detector
- Detector control and development of the software for data analysis

ACE - Antimatter Cell Experiment - during the CERN Summer student programme, I was a part of ACE experiment, which explores the potential of using antiprotons for cancer therapies. The antiproton beam was aimed at a tissue sample. A pixel detector was placed near the sample to measure the outgoing particles. This is an interdisciplinary project, which brings together experts from biology, physics and medicine from more than 10 countries. My contribution to the experiment was:

- Development of the interface for the remote control of the power supplies for the detector used in the experiment. This was done in LabView, through the GPIB interface.
- Development of the data quality monitoring system. The system is incorporated into the existing detector control and data acquisition software using LabView. The main part of software was a simple and fast track finding algorithm that I developed, which reported the track multiplicity, and the track length distribution.

Teaching

2011 - 2015	Faculty of Science, Zagreb, Croatia Teaching assistant in 2 courses - *Introductory laboratory exercises* (2011.- 2012.) and *Programming in C* (2011.-2015.)
2010 - 2011	Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture in Split, Croatia Teaching assistant - *Laboratory exercises in Modern physics*

Schools and Conferences

2009	CERN Summer Student Programme, Geneva, Switzerland
2010	CERN School of Computing, London, UK
2011	CMSDAS - Data analysis school, Pisa, Italy
2012	Silicon Detector Workshop, Split, Croatia *Talk:* Lorentz angle measurement in CMS Pixel detector
2013	EDIT - Excellence in Detectors, Tsukuba, Japan *Poster*: CMS Pixel detector and Lorentz angle determination
2014	Fermilab - CERN Hadron Collider School, Fermilab, USA

Computer skills

- Computer languages: C, C++, Fortran, Python
- Software: ROOT, Mathematica, LabView

Other

Participation in various physics and science outreach programs:

- Organization of International Masterclasses: lectures and laboratory exercises for high school students covering various topics in high energy physics.
- Participated in several science fairs for general public demonstrating experiments.

Publications