C U R R I C U L U M V I T A E

PERSONAL INFORMATION

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CURRENT UNIVERSITY EDUCATION AND TRAINING

Dates (from – to)	01/01/2013 – 31/12/2015 University of Ferrara, Physics dept., INFN **Ph.D. in Physics**
Name and type of organization	
Title of qualification sought for	

PREVIOUS UNIVERSITY EDUCATION AND TRAINING

Dates (from – to)	11/02/2009 – 07/12/2012 University of Ferrara, Physics dept. **Master Degree, curriculum**
Name and type of organization	**Particle Physics Final degree mark: 110/110**
Title of qualification awarded	

PREVIOUS UNIVERSITY EDUCATION AND TRAINING

Dates (from – to)	09/19/05 - 03/26/09 Class of first level degree in Physics, University of Ferrara, Physics dept., Physics and Astrophysics **Bachelor degree in Physics Final degree mark: 108 /110**
Name and type of organization	
Title of qualification awarded	

UNIVERSITY COURSES AND SCORES

COURSE	SCORE
Algebra Lineare Calcolo Differenziale Calcolo	30/30
Integrale Chimica Elementi di	30/30
Geometria Laboratorio di dinamica Meccanica dei	30/30 e Lode
sistemi e termodinamica Meccanica del punto	28/30
materiale Programmazione per le misure	30/30 e Lode
fisiche Lingua Inglese Sicurezza e tutela	28/30
ambientale Elettricità e magnetismo Equazioni	26/30
differenziali e integrali Laboratorio di elettronica	26/30
analogica Laboratorio di elettronica	30/30
digitale Laboratorio di ottica Meccanica	30/30
analitica Meccanica superiore e relatività Misure	27/30
astronomiche Onde elettromagnetiche e	26/30
ottiche Studio di funzioni di interesse fisico Elementi	30/30
di astrofisica Elementi di fisica statistica e materia	30/30
condensata Elementi di fisica subatomica Elementi	30/30
di meccanica quantistica Introduzione alla fisica	28/30
atomica e molecolare Laboratorio di interazioni	24/30
radiazione-materia Misure	25/30
astrofisiche Mathematical Methods for	25/30
Physics Quantum Mechanics Scattering	27/30
Theory Nuclear and subnuclear	27/30
astrophysics Introduction to elementary	28/30
particles Critical Phenomena Physics Strong	28/30
Interactions Phenomenology Weak Interactions	28/30
Phenomenology High Energy Physics	21/30
Laboratory Nuclear Physics Advanced	25/30
Electromagnetism	28/30
	24/30
	27/30
	26/30
	29/30
	30/30
	27/30
	30/30 cum laude
	30/30
	27/30 30/30 26/30 28/30

COMPUTING EXPERIENCE

During my thesis I've been using the RooFit program, the C++ computing language and LaTex. I'm familiar with the Windows operative system and the usual Microsoft Office, with the Linux and Mac operative system.

RESEARCH EXPERIENCE

A relevant work during my studies was my graduation thesis. It was about the Bs-Bsbar oscillations in the LHCb experiment and it included the development of a program with the RooFit software in order to determine the sensitivity for the oscillation frequency and the tagging efficiency of the experiment using a Monte Carlo simulation. How this accuracy changes with the events yield, the background to signal ratio and the proper time resolution was also a target of both the program and the thesis.

Another relevant work was my master thesis. It contained studies of CP Violation with semileptonic decays of the B0 meson in the LHCb experiment. Studies on real LHCb data were performed to measure the oscillation frequency, as a check for the further studies performed later in the thesis. A sensitivity to the flavour specific asymmetry afs was given with Monte Carlo simulations including effects due to statistics, flavour tagging, time resolution model and pollutants asymmetries such as production and detection asymmetries. As in the graduation thesis, all the studies were performed with a program developed with the RooFit software giving me the opportunity to learn it to a better level than the previous thesis. I consider my master thesis as a chance to keep my work in this particular field of Particle Physics; starting from this thesis, further studies can be performed and the sensitivity can increase with more data and other improvements.

In January 2013 I started to work as a Ph.D. student at the Physics Department in Ferrara, remaining in the LHCb group. Since then I am keeping on my work with semileptonic B decays, focusing on an important problem such as the k-factor computing. Plus, I am working on the data acquisition system for a prototype that the Ferrara INFN wants to propose for the LHCb upgrade; I am working on the acquisition software, I am writing a program for data analysis and performing the very first tests for the data acquisition system.

ADDITIONAL INFORMATION

Foreign language command
English: Good
Written: Good
Oral: Good

Foreign language command
Spanish: Fair
Written: Fair
Oral: Fair

Language certificates obtained: PET