



**Curriculum Vitae:** Benedetto Di Ruzza  
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**Benedetto Di Ruzza** Brookhaven National Laboratory  
Building 510 D P.O. Box 5000 Upton, NY 11973

**EDUCATION**

**Research Doctorate** (Ph.D.) in Experimental Particle Physics

**Ph.D. Thesis:**

*Measurement of the branching ratio of the charmless decay  $B_s$  to  $\phi, \phi'$  at CDFII*

Defended in the Physics Department of University of Trieste (Italy)

Research activity carried out in the Fermilab National Accelerator Laboratory (Batavia, Illinois, USA)

**Master degree in particle Physics:**

Università degli Studi 'La Sapienza' Roma, (Italy)

**Master degree Thesis Title:** *Upgrade of the online monitoring software in the second level S.V.T. trigger of the CDF experiment at Tevatron (Fermilab, Batavia)* Master degree thesis activity developed in the National Institute of Nuclear Physics of Rome (INFN) and in the FERMILAB laboratory (USA)

## **EMPLOYMENT AND RELATED EXPERIENCE**

May 2012 – present:

Associate Scientist at Brookhaven National Laboratory, Physics Department (Upton, NY)

Activities:

Develop and test of the silicon detector for the new eRHIC Detector.

Member of the STAR collaboration

April 2010 – April 2012:

Guest Scientist at Fermilab National Accelerator Laboratory (Batavia, IL)

Activities:

Co-SPL (Sub Project Leader) of the Silicon operation group of the CDFII detector

February 2012, Fermilab:

Teaching assistant in the EDIT 2012 Symposium for the silicon track

<http://detectors.fnal.gov/EDIT2012/participants.html#TA>

Member of the CDFII collaboration since June 2006

March 2011- April 2012:

Member of the Fermilab T1015 collaboration for R&D of dual readout calorimeter and characterization of silicon photomultipliers, I worked in the preparation of the “ADRIANO” prototype and in the test beam data taking. [http://www-ppd.fnal.gov/FTBF/MOU\\_PDF/T1015\\_mou.pdf](http://www-ppd.fnal.gov/FTBF/MOU_PDF/T1015_mou.pdf)

[April 1th 2009-March 31th 2010](#)

[National institute of Nuclear Physics Research Grant](#)

[Research activities:](#)

[Research on B physics at the Collider Detector at Fermilab \(CDFII\), responsibility of the power supply maintenance and improvement for the silicon detector in CDFII](#)

## **Schools and workshops attended**

**The 2006 European School of High-Energy Physics**

(formerly the CERN-JINR school of physics).

Aronsborg, near Stockholm, Sweden, June 18– July 1, 2006

3th National Course: ‘**Detectors and Electronics for High Energy Physics, Astrophysics, Space Applications and Medical Physics**’

INFN – Italian National Institute of Nuclear Physics, Legnaro laboratories.

Padua, April 20-24, 2009. INFN

**INFN School for Grid users** (experiments VIRGO, CDFII and ARGO)

Bologna (CNAF) October 6-9, 2008

**Sixth International Conference on Perspectives in Hadronic Physics**

International Center for Theoretical Physics ‘Abdus Salam’ , Trieste, May 12-16, 2008

**Workshop on the Origin of P, CP and T Violations**

International Center for Theoretical Physics ‘Abdus Salam’

Trieste, July 2-5, 2008

**ICTP/Democritos Joint Workshop on Tools for Computational Physics**

International Center for Theoretical Physics ‘Abdus Salam’

Trieste March 6-11, 2006

**XVIII GIORNATE DI STUDIO SUI RIVELATORI (School on high energy physics detectors),**

Turin, February 28-March 3, 2006.

## Publications and talks

For the work I done in the CDFII collaboration I'm in the author list since May 2006 and I'm co-author in more than 300 publications:  
<http://inspirehep.net/search?p=find+a+di+ruzza>

For my Ph.D. thesis work I'm one of the primary author of the following PRL:  
Measurement of Polarization and Search for CP violation in Bs to phi phi Decays  
Phys. Rev. Lett. 107, 261802(2011) Ph.D Thesis link:  
<http://www.openstarts.units.it/dspace/handle/10077/3059>

For my Master degree thesis I'm co-author of the following papers:  
"The Silicon Vertex Trigger upgrade at CDF" NIM A572 (2007) 361  
"Real Time Secondary Vertexing at CDF" NIM A 569 (2006) 111-114  
Master degree thesis link: (only in Italian)  
<http://www.infn.it/thesis/PDF/getfile.php?filename=2676-Di%20Ruzza-laurea.pdf>

### International Conferences:

On behalf of the CDF group I have presented a talk at the  
13 Lomonosov Conference (Moscow State University)  
Moscow, Aug 23-29,2007  
titled: "Tevatron results on B spectroscopy, lifetimes and rare decays"

July 28<sup>th</sup> 2009  
2009 Meeting of the Division of particles and Fields of American Physical Society  
24-31 July 2009 Wayne State University

Title:"Analysis of Bs->phi,phi decay mode"  
<http://indico.cern.ch/getFile.py/access?contribId=303&sessionId=9&resId=0&materialId=slides&confId=41044>  
April 13<sup>th</sup> 2011

4<sup>th</sup> National Course: "Detectors and Electronics for High Energy Physics, Astrophysics, Space Applications and Medical Physics", INFN – Italian National Institute of Nuclear Physics, Legnaro Laboratories  
Title: "Longevity Studies on the CDFII Silicon Detectors"  
<http://agenda.infn.it/contributionDisplay.py?contribId=12&confId=3245>

June 2011  
TIPP 2011: "2<sup>nd</sup> International Conference on Technology and Instrumentation in Particle Physics",  
Chicago 9-14 June 2011  
Title:" Operational experience and aging studies of the CDF Run II Silicon Vertex Detector"  
<http://indico.cern.ch/getFile.py/access?contribId=148&sessionId=22&resId=1&materialId=slides&confId=102998>

October 2012  
IEEE 2012: "2012 Nuclear Science Symposium, Medical Imaging Conference & Workshop on Room-Temperature Semiconductor X-Ray and Gamma-Ray Detectors" October 29 - November 3, 2012, Anaheim, California

NSS poster session:

"Monolithic Active Pixel Silicon Detectors for Future Electron Ion Colliders: Status and Plans"

<http://www.nss-mic.org/2012/Program/ListProgramDB.asp?session=N14>

November 2012

Brookhaven National Laboratory: Young Researcher Symposium 2012

"eRHIC: a new collider to explore the fempto-scale structure of protons and nuclei"

<http://www.bnl.gov/bnlyrs2012/files/pdf/agenda.pdf>