

MARIANNE BARGIOTTI



Personal Data

- Born: 19/07/1974 in Bologna (Italy)
- Citizenship: Italian.
- Gender: Female
- Address: Via Curiel 26, 40033 Casalecchio di Reno (BO), Italy
- Tel: + 39 051 56 38 09
- Mobile: + 39 347 76 97 187
- E-mail: marianne.bargiotti@orange.fr, marianne.bargiotti@gmail.com

Studies

- 1994–1999: Degree in physics obtained after one year thesis at Bologna University
- 1999 TOEFL obtained with 270/300
- 2004: Ph.D at Bologna University.
- 2004-2005: Post Doctoral activity at Bologna University
- 2005-2008: 3 years CERN fellowship for GRID computing.
- January 2021/January 2022 Professional Master Program 2nd level: SPICES Space Mission Science, Design and Application, Bologna University.

Work Experiences

- SAR Data Analyst at MEEO in Ferrara, since April 2022
- September 2021-December 2021: Research Fellow at SERCO Italia s.r.l. for the validation of AIRWAVE (Advanced InfraRed Water Vapour Estimator) project
- 2009-2011: Expert for IT services and web designing at Team Teach srl.
- 2005-2008: Main area of activity: CERN IT/PH group for GRID research and deployment on LHCb experiment.
- **Data Manager operational role on DIRAC** project (Distributed Infrastructure with Remote Agent Control) dealing with metadata catalogues interfacing ORACLE 10g backend and physical Storage Elements
 - **Development in the DIRAC framework of a specific python Client to interface the LCG File Catalogue (LFC)**, main catalogue for registering and retrieving the location of physical replicas in the grid infrastructure.
 - **Development of a complete python tool suite** for data integrity checking and data repairing, and for treating files defined as 'problematic' (malformed or out of defined conventions). This suite involves both catalogues and storages.
 - Development and testing of an **improved File Catalogue Client** within DIRAC: new python methods developed for a faster access to the LFC
 - **Development of Data Manager Console**, for Data Manager routine operations like preparation of FTS transfers, bulk replica operations on LFC

- (removal, adding, change of attributes, extraction of replica information).
- **FTS** transfers responsible. In charge for all major storage migrations.
- Service delivery function: 3 years experience in post implementation support for DIRAC project,
- main referee for all users for any data related issue (availability, access, integrity): strong interpersonal skills in the contact with users and good communication skills
- **Bookkeeping Metadata File Catalogue responsible** for any operational issues: maintenance and development of existing JAVA/Python/SQL scripts.
 - Experience in DataWarehouse Databases
 - Bookkeeping responsible for full redesign of the DB schema in order to accomplish actual request from physics groups.
 - Implementation of a full python suite for Integrity and Consistency between catalogues (LFC and BK) and storages
- **Monte Carlo** working expertise on PHYTHIA:
 - studies for the validation of MonteCarlo PYTHIA 6.324 with the COM contribution for heavy quarkonium.
 - Introduction of Color Octet Model matrix elements within PYTHIA 6.324. Use of LHCb Gauss framework.
 - Development and tuning of testing tools for the comparison of PYTHIA 6.324 behaviour with heavy quarks vs the available data.

Professional Master SPICES activity: 2021

- Professional Master Thesis “Validation of the AIRWAVE –TCWV product retrieved using the Sentinel 3 – A/B SLSTR TIR measurements”.
- Specific studies in Earth observation in TIR channels over sea surfaces using the SLSTR instrument and comparison of results against SSMI/S products.
- Use of different SLSTR Cloud Masks
- Python routines for products acquisition and comparison against independent SSMI/S products.

Ph.D thesis activity: 2000-2004

- Ph.D Thesis; “**Studies on χ_c states at the HERA-B experiment**” discussed on academic year 2003-04 at Bologna University.
- Development of a full C++ reconstruction suite for the detection and separation of χ_{c1} and χ_{c2} states through the decay $\chi_c \rightarrow J/\psi \gamma$.

Master Degree thesis activity: 1999

- 1 year graduation thesis in collaboration with the Hera-B experiment. Title: “**Misure preliminari con il calorimetro ECAL dell’esperimento HERA-B presso il laboratorio DESY di Amburgo** “. The thesis was focusing on the calibration of electromagnetic calorimeter (ECAL) and on the first physically relevant signals
- C++ programming language introduction.

Fellowship and Contracts

- 4 months fellowship with SERCO Italia s.p.a
- 2 years collaboration contract with Team Teach srl.
- 3 years fellowship at CERN for grid computing starting from Sept. 2005 to August 2008.

- Six months contract with INFN starting from September 2004
- Ph.D fellowship with University of Bologna from Jan 2000-Jan2004
- Contract professor (Sept 2001-Sept 2002) at the Bologna Engineering faculty for the courses: Physics I and Physics II.

Training

- Oracle – PL/SQL May 26-29, 2008, CERN
- Oracle - SQL April 16-18, 2008, CERN
- Oracle 10g OCP Certified Professional training, Geneva November 19-23, 2007
- Oracle 10g OCP Certified Professional training, Geneva November 6-10, 2006.
- Oracle Database Administrator course, CERN, August 28–September 1, 2006

Publications Conference and Workshops

- 35 publications on major scientific papers (Physics Review D, Physics Review Letters, European Journal of Physics, Physics Letters B, Computer Physics Communications)
- 9 organised events attended: 8 international workshops (with 2 contributions), 1 International conference (with contribution)
- CHEP '07, International Conference on Computing in High Energy Physics, September 2-7, 2007, Victoria BC Canada.
- International Workshop on Heavy Quarkonium, DESY, Hamburg, October 16-20, 2007
- MC Workshop, Frascati (Rome) , May 2006
- HERA – LHC Workshop, 6-9 June 2006, CERN, Geneva
- International Workshop on Heavy Quarkonium, Brookhaven Lab, Long Island (NY), USA, June 27-30, 2006.
- CCSG Open Symposium 2006, LAL – Orsay, France, January 30 – February 1, 2006.

Computer knowledge

- ORACLE 10G DBs Data base Administrator skills
 - ORACLE 10g OCP Certified Professional training for year 2006 and 2007.
 - Oracle Database Management System and related tools, including the Oracle RAC and Oracle Grid Control (formerly Enterprise Manager);
- Operating systems: UNIX, Linux, Windows.
- Program languages: Fortran, C++, Python, SQL, PL/SQL.
- Working knowledge: Perl, Bash.
- Applications: LaTeX, MS Word, MS Excel, MS PowerPoint, Acrobat, Photoshop.

Foreign languages

- English:
 - Understanding: C2
 - Written: C2
 - Spoken: C2
- French:
 - Understanding:
 - Listening: B1
 - Reading: B2
 - Speaking:
 - Spoken interaction: B1
 - Spoken production: B1
 - Written: A2
- Spanish:
 - Understanding:
 - Listening B1
 - Reading B2

- Speaking
 - Spoken interaction: B2
 - Spoken production B1
- Written: B1

Driving licence: • A and B

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