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Curriculum vitae

PERSONAL INFORMATION

Doina Cristina Duma

⚲ INFN-CNAF, Viale Berti Pichat 6/2, 40126 Bologna

ORCID https://orcid.org/0000-0002-0124-4870

EPR 3rd level Technologist

WORK EXPERIENCE

2015 – present **Technologist - INFN CNAF (National Research Center for Data Processing and Computing Technologies)**

She is the leader of the Distributed Systems unit, part of the the Software Development and Distributed Systems department of INFN-CNAF, providing the core operational support for the INFN-wide Grid infrastructure and for the CNAF Cloud infrastructure. The task of her group is also to investigate how to evolve the existing infrastructures to pursue increased resource efficiency in view of the progress in the underlying technologies.

She was the leader of the "Software Maintenance and Release" WorkGroupof the INDIGO-DataCloud European project, addressing the challenge of developing open source software, deployable in the form of a data/computing platform, aimed to scientific communities and designed to be deployed on public or private Clouds, and integrated with existing resources or e-infrastructures.

At national level she worked for the Italian Grid Infrastructure (IGI) and for the Open City Platform (OCP) project, funded by the Italian Ministry of Education and Research in the "Cloud computing technologies" section, where she chaired the IaaS area.

As part of the national INFN Cloud project, she coordinates the training, documentation and user support activities and actively contributes to the "Architecture, Operations and Service Portfolio", "Monitoring and Accounting", "Security, Policies and Rules of Participation" and "Service Evolution and New Developments" working groups.

Coordinating various working groups in projects financed by the European Commission as:

– EGI-ACE "EGI Advanced Computing for EOSC",
– IoTwins "Distributed Digital Twins for industrial SMEs: a big-data platform",
– EOSC-Hub "Integrating and managing services for the European Open Science Cloud",
– DEEP-HybridDataCloud "Designing and Enabling E-infrastructures for intensive Processing in a Hybrid DataCloud",
– XDC "eXtreme DataCloud"
– EOSCpilot "European Open Science Cloud for Research Pilot Project"
– EGI-Engage "Engaging the EGI Community towards an Open Science Commons"

2004 – 2015 **Technologist - INFN, Padova Department**

She had the role of EGI.eu Operations Officer, responsible for the management of the services of the European Grid Infrastructure (EGI - http://egi.eu) and manager of the National Grid Initiatives (NGI), identifying critical issues and contributing to the definition of middleware development plans, following-up technical issues related to Unified Middleware Distribution (UMD - http://repository.egi.eu)

Other projects she was collaborating with:
– IGI (Italian Grid Initiative - coordinating the acrivities related to "Release, Testing, Certification" group
– EGI-InSPIRE
– EMI "European Middleware Initiative"
– EGEE-III, II, I "Enabling Grids for E-Science"
– ETICS II "European project eInfrastructure for Testing, Integration and Configuration of Software Phase 2"
– OMII Europe "Open Middleware Infrastructure Institute for Europe"
– BIOINFOGRID "Bio-informatics grid application for life science"

EDUCATION AND CERTIFICATIONS

1994–1995 | **Advanced Studies (M.Sc) - Master in Statistics/Probability**

Faculty of Mathematics, University of Bucharest, Romania

1989–1994 | **Master's Degree in Matemathics**

Faculty of Mathematics, University of Bucharest, Romania

June 2015 | **Advanced Level Certificate in Service Planning and Delivery according to FitSM No. 1502-312212134**

TUV SUD Akademie GmbH, Munich

Feb. 2015 | **Advanced Level Certificate in Service Operation and Control according to FitSM No. 1502-312128327**

TUV SUD Akademie GmbH, Munich

May 2014 | **Foundation Certificate in Service Management for federated IT infrastructures, No. 1402-311944244**

TUV SUD Akademie GmbH, Munich

PERSONAL SKILLS

Mother tongue | Romanian

Other languages

UNDERSTANDING		SPEAKING		WRITING
Listening	Reading	Spoken interaction	Spoken production	
C2	C2	C2	C2	C2
C2	C2	C2	C2	C2

Italian
English

Levels: A1 and A2: Basic user – B1 and B2: Independent user – C1 and C2: Proficient user
Common European Framework of Reference for Languages

Digital skills | – Open source cloud and distributed technologies (Grid, IaaS, PaaS, SaaS): Open- Stack, Kubernetes, Rancher, RedHAt Openshift, EGI; Data access and management systems:IBM Spectrum Protect (GPFS), CEPH, MinIO, Swift; Databases: MySQL, InfluxDB; Batch Systems: LSF, Torque; Configuration management and automation platforms: Ansible, Puppet;

Job-related skills | – Project Management of international, national and local R&D project; working groups coordination

Communication skills | – Experience in the organization and teaching of courses on various technologies within INFN and in the context of international research projects.
– Creation of teaching material, preparation of the IT infrastructure for student exercises and support for practical exercises

According to law 679/2016 of the Regulation of the European Parliament of 27th April 2016, I hereby express my consent to process and use my data provided in this CV

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ADDITIONAL INFORMATION

Publications   https://orcid.org/0000-0002-0124-4870, www.scopus.com

Evaluation metrics   58 pubblications (Orcid), H-Index (Scopus) 9, Citations (Scopus) 1038

Selected publications
- The novel Mechanical Ventilator Milano for the COVID-19 pandemic, Phys. Fluids 33, 037122 (2021); https://doi.org/10.1063/5.0044445doi: 10.1063/5.0044445. Epub 2021 Mar 23
- A Cloud-Edge Orchestration Platform for the Innovative Industrial Scenarios of the IoTwins Project, International Conference on Computational Science and Its Applications, 533-543 (2021)
- Software Quality Assurance in INDIGO- DataCloud Project: a Converging Evolution of Software Engineering Practices to Support European Research e-Infrastructures. J Grid Computing, https://doi.org/10.1007/s10723-020-09509-z (2020)
- A Cloud-Based Framework for Machine Learning Workloads and Applications, IEEE Access (Volume: 8), Page(s): 18681 − 18692 (2020)
- INDIGO-DataCloud: a data and computing platform to facilitate seamless access to e- infrastructures, Journal of Grid Computing 16(3), pp. 381–408 (2018)
- DODAS: How to effectively exploit heterogeneous clouds for scientific computations, International Symposium on Grids and Clouds 2018 in conjunction with Frontiers in Computational Drug Discovery (ISGC 2018 and FCDD) - Virtual Research Environment (VRE) (2018)
- Elastic extension of a local analysis facility on external Clouds for the LHC experiment, Journal of Physics: Conference Series, Volume 898, Track 3: Distributed Computing (2017)

CURRICULUM VITAE

INFORMAZIONI PERSONALI

Nome	**MENGUZZATO, Matteo**
Indirizzo	
Telefono	
Qualifica	**D5 Area Tecnica ed Elaborazioni Dati**
Sede	**Dipartimento di Fisica e Astronomia (DFA)**
Incarico attuale	**Responsabile servizi informatici DFA**
E-mail	**matteo.menguzzato@unipd.it**
Nazionalità	Italiana
Data di nascita	

TITOLI DI STUDIO E CARRIERA

• Titolo di studio

Laurea in Fisica (vecchio ordinamento)

• Carriera

Dal 2020 qualifica D5 presso DFA
Dal 2016 qualifica D4 presso DFA
Dal 2009 qualifica D3 presso DFA
Dal 2006 qualifica D2 presso DFA
Dal 15/12/2005 qualifica D1 presso DFA
Dal 15/07/2003 al 14/12/2005 qualifica D1 a tempo determinato presso DFA
Dal 09/08/2000 al 31/05/2003 qualifica D1 a tempo determinato presso DFA
Dal 01/06/1999 al 08/08/2000 qualifica funzionale VII a tempo determinato presso DFA

• Incarichi istituzionali

- Titolarita' di incarico di "Responsabilita' Servizi Informatici" presso il DFA dal 16/02/2022 al 31/12/2022
- Titolarita' di incarico di specialita' tecnica per DFA-Fisica dei "Servizi Informatici" dal 2020 al 2021
- Titolarita' di incarico di "Responsabile Servizi Informatici" presso il DFA-Fisica dal 2002 al 2019

• Altri incarichi

- Incarico di responsabile per la sicurezza dal 01/09/2019 al 31/12/2020 per il DFA-Fisica
- Incarico di responsabile informatico server Data Base portale ArtIn per il CAM dal 2013
- Addetto alle squadre di emergenza (primo soccorso e antincendio) dal 2003
- Nomina commissione selezione 2011S11
- Nomina commissione selezione 2009S42

• Altro

- Progetto nuova aula informatica del DFA e scrittura capitolato tecnico per gara d'acquisto di nr. 110 personal computer
- Progetto (in collaborazione con il CCA) cablatura strutturata impianto dati-fonia ed. Paolotti ala est
- Progetto (in collaborazione con l'INFN) nuova sala calcolo Dipartimento di Fisica per nuove infrastrutture di calcolo dedicate ad alte prestazioni
- Progetto (in collaboazione con il CCA) cablatura strutturata impianto dati-fonia Polo Didattico – Dipartimento di Fisica

Curriculum Vitae of Dr. Michele Michelotto

I graduated in physics in 1989 at the Padova University with a thesis on Distributed Computing in the analysis of Nuclear events data.

I worked since 1989 with INFN (Istituto Nazionale di Fisica Nucleare) in the field of Distributed Computing, and High Performance Networking. The main topic was the porting of the analysis of High Energy Physics events of the Delphi experiment at LEP (CERN, Geneva) from mainframe to a cluster of low cost Unix Workstation.

From February 1995 to May 1995 I worked with Laboratori Nazionali di Legnaro (INFN) for the design and implementation of the new web site of the laboratories.

From June 1995 to February 1996 I worked as System and Network Engineer in a small WebService Provider (Communication Service International). The firm aimed to offer Internet Service to Small and Medium enterprises in the Veneto area.

From February 1996 to February 1998 I worked as a Fellow at CERN (Geneva) in the design and analysis of the Data Acquisition System for the Atlas experiment in LHC accelerator at CERN.

From March 1998 I'm working as "Tecnologo" at INFN in Padova as head of Computing and Network for the local unit of INFN and the Physics Department of the Padova University. Since 1998 I've been designated as the Padova member in the INFN Computing Board.

I'm active in several INFN activities within the Computing Board: Antivirus, Antispam, Security, Networking and I'm involved in the CMS experiment at CERN Large Hadron Collider.

In the year 2000 I was in the organizing committee of the CHEP 2000 conference in Padova with Dr. Mirco Mazzucato. The conference ended with a workshop dedicated to the new grid technologies with the presence of Prof. Ian Foster and Carl Kesselman (authors of "the GRID"). The proceeding edited by myself and Dr. Mazzucato have been published in "Computer Physics Communication" Vol 140 (Oct, 15th 2001).

The workshop was very successful and gave birth to a series of collaboration between INFN, CERN and other Academic entities and to a certain number of project financed by the European Community. I worked mainly in the WP4 of the FP5 "European Datagrid" project and I have been the Work-Package Manager of an Italian project called INFNGRID

In October 2001 I was in the organizing committee of the Globus workshop in Frascati (Rome, Italy) dedicated to Globus, the most popular middleware for Grid Technologies.

In 2001 I proposed together with several other INFN colleagues a 3 years project called GRID-IT to promote the Grid Technologies in other fields of science (Biology, Earth Observation, Vulcanology, Astronomy). I worked in this project in WP3 and WP5.

In 2001 I designed and realized the upgrade of the INFN Padova and Physics Departments New Computing Center in order to accommodate all the computing resources scattered around and to host the Simulation and Processing farm for the Babar experiments. The new computing center has about 50 rack spaces in about 100 m2 with a UPS protected load of 250 KVA and 160 KW of air forced precision cooling. The computing center is hosting about 4000 computing cores and 400 TB of raw disk storage and is a part of the Padova-Legnaro Tier2 for LHC experiments

Since 2004 I worked also in the FP6 "EGEE" project (Enabling Grid for E-science) where I was involved mainly in NA5 (Policy and International Cooperation) and later in the EGEE-II project mainly in dissemination

Since 2005 to about 2009 I worked in a group with other colleagues from GARR (), the Italian NREN, dedicated to Mail securiry in particular the study, detect and flag the SPAM mail at server level and Mail Sender Authentication.

Since 2006 I participate in a working group of HEPIX (coordination of Computing Center in HEP community) in the evaluation of the performances of worker node in the High Throughput computing farm and in the determination of the best benchmark to rate those performances. The group proposed the new reference benchmark for HEP called HEP-SPEC06 (HS06) that became a standard also outside the HEP community and is used in several High Throughput Computing "Virtual Organization". Since 2012 I'm one of the coordinator of this group that is developing the new HEP benchmark for the next decade, based on dockerization of HEP experiments workload

In 2008 I proposed to the CSN5 of INFN the experiments HEPMARK to study the performances of processor for HEP, with a particular focus on performances per watt and performances on Low Power processor. The works continued in 2010 with the experiment HEPMARK2.

In 2015 these activities were united with similar activities in INFN under the experiments COSA (Computing on SOC Architecture).

Since 2018 I participated to a working group in HEPIX on Technology Tracking to follow the technology necessary to build the computing for the High Luminosity LHC and I am coordinating the sub WG on Server Technology

Since Academic Year 2005/2006 to 2016/2017 I had been teaching a course of "Telecommunications Networks" in the Computing Science Course at the Ferrara University tutoring about one student per year.

In year 2016 I started to work in a project called "Art and Science across Italy" to disseminate the Sciences and in particular HEP to the students of selected secondary schools in Italy, through the

creations of artistic works. The works of the students were exposed in a temporary exhibition in several cities in Italy and the best were selected for a national exhibition.

In 2015 I started to work in the Organizing Committee of the 2017 EPS-HEP conference in Venice where I was in charge of the WAN and Wireless connectivity. This is one of the most important conference in HEP with several hundred participants. The following year I participated to the organizing committee of QarkMatter 2018 conference. A conference of the same size and in the same location of the previous one, exploiting the infrastructure designed for previous year

In compliance with the GDPR n. 2016/679 and the D.Lgs nr. 196 of the 30th June 2003, I hereby authorize INFN to use and process my personal details contained in this document

April 4th, 2021

Michele Michelotto