

# CV Michele Grossi

## PERSONAL INFORMATION

NAME: Michele

SURNAME: Grossi

DATE OF BIRTH: 8, September, 1989

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Brescia (BS), Italy



## CONTACTS

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Occupational field: Computing, IT, Research & Development

## EDUCATION AND TRAINING

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- 2017 *PhD Executive (Industrial) Student @ IBM - University of Pavia*
- 2014 *Master's degree in Nuclear Physics at University of Pavia (110/110 cum Laude)*
- 2011 *Bachelors Physic Degree at University of Pavia*
- 2008 *High school degree ITIS "A. Maserati" of Voghera*

## PERSONAL SKILLS AND COMPETENCES

- **Quantum Computing** – Algorithm and application
  - **Advanced Mathematics** and application to quantum theories;
  - **Advanced applied statistics**, Multivariate Data Analysis, Functional Data Analysis, Machine Learning and DNN with R/Python
  - **IT Networking Architect/Specialist**
  - **Project Management** and IT Service management
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## COLLABORATION AND WORK EXPERIENCE

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*PhD Executive Student @ IBM - University of Pavia*

from Oct 2017 up to now

This **executive** (industrial) PhD is a combined high level education path in collaboration between industry and university.

It aims at acquiring a deep knowledge in **data science**, taking advantage of a physics use-case to learn how to use and develop cutting-edge **big data analytics** concepts, skills and tools. This use case is called Vector Boson Scattering: an extreme rare process that is the ideal process for a model-independent test-bench of new physics at energy scales never investigated before. It is at the heart of the SM where the breaking of the electro-weak symmetry (EWSB) plays a crucial role. The European Community has appointed the study of the VBS as one of the top priorities for the High energy physics scenario at CERN.

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My role is to develop the understanding of the **modelling** and **simulation** of real-life big datasets, of the data analysis and filtering, and of their statistical handling and interpretation to extract condensed meaningful information, to be used in predictive and prescriptive modelling. In addition I'll be the connection point between **academic** and **industrial environment**.

*IT Network Infrastructure Architect at IBM Italia S.P.A.*

from Oct 2016 up to now

In this new role as Network Infrastructure Architect I will expand my knowledge in network design concepts and principles required to develop multi-layer enterprise architectures and network components. Main goals are: using advanced IP addressing and routing in implementing scalable and highly secure routers that are connected to LANs, WANs, and IPv6. Planning, configuring, and verifying the implementation of development in network design and technologies, including L2 and L3 infrastructures for the enterprise, WAN technologies, data center integration, with focus on network security and network services.

*Network Account Manager at IBM Italia S.P.A.*

from May 2016 up to Sept 2017

After apprenticeship confirmation I keep my role as Network Account manager for IBM Italy. As a systems engineering regarding management of network infrastructure of large companies, I took Cisco Certification and I attended architectural lectures. I am **responsible** for important national and international customer with **decision-making role**. In this position I have the opportunity to widen my work initiative to improve customer experience. In particular focusing on new Internet connection, software defined network, cryptography and quantum computing. My current role is moving under **Industry 4.0** scenario in which I am involved in Internet of Things initiatives. This area requires analytics skills in manipulating **customer data** from several industrial devices. It is a wide area where network, cloud, big data and IT security is crucial. I am involved in developing innovative data manipulation **algorithm**, creating demo application as well as complex project.

*Apprenticeship at IBM Italia S.P.A.*

from Feb 2015 up to May 2017

The training is a 27-month project in IT area. Specifically, my role as a **network specialist** aim to deepen my knowledge about the network area, working to get various certifications and experience in the day by day activities. On one side the role is purely systems engineering regarding management of network structure of large companies, monitoring and managing related changes and incidents. On the other side, it includes developing managerial skills in the role of **networks account manager**, following various projects including relationships with business partners that provide network services to IBM outsourcing customer. I have to ensure network performance, security, compliance and cost management in various infrastructures.

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## *Internship at IBM Italy*

from Oct 2014 to Jan 2015

The 3-months internship gave me the opportunity to acquire knowledge in innovative technologies about the IT market. The areas addressed were: Cloud, Mobile, Virtualization and Security with specific insights on IBM solutions in different areas. In particular, I have deepened my knowledge in the area of **Cyber Security, Network Security, and Encryption**.

## *Scholarship at Istituto Nazionale di Fisica nucleare INFN ( Pavia)*

from July to Dec 2014

Goal of this scholarship was to **coordinate** INFN activities of a working group in Pavia having led to the construction of a Micromegas **detector**. The activity was about the **design** of the detector in its details, starting from its **mechanical construction**, to the implementation of its **electronic components** and their **validation tests**. Moreover I realized several applications in **LabVIEW** which handled the construction and the tests of the detector. All the process of construction has ensured uniformity and reproducibility necessary for mass-production needed for the whole ATLAS Experiment. The activity has included, as a natural evolution of the work done for the dissertation, participation in **international** and technical **meetings**. This experience has represented an opportunity of **management and technical skills development**, along with continuous personal growth.

## *Graduating student at the National Institute of Nuclear Physics*

from mid. 2013 to 2014

**ATLAS EXPERIMENT** - Development and construction of a **Micromegas detector** for the upgrade of the muon detector.

I performed my master's thesis at the National Institute of Nuclear Physics (sec. Pavia) where I have been involved in the development and construction of a MicroMegas mechanical prototype. In particular I have developed complete **software** in LabView to manage every stage of the **production chain**: from the handling of planarity checks of PCB layers up to the implementation of a complete control panel to execute an **automatic glueing procedure**.

## *Tutoring and lectures at University of Pavia:*

class: Physics Computer Methods, N.10 hours 2014

class: Experimentations of Physics II, N.5 hours 2014

## *Private lessons in Maths, Physics, Chemistry*

from 2011 up to now

Since the beginning of my academic career I have dedicated myself to teaching in private form scientific subjects such as Physics, Mathematics and Chemistry. To date I teach several guys both from high school students to who is going to graduate.

## *E.P.S. (European Physical Society) associated*

from 2012 up to now

## *S.I.F. ( Italian society of Physics) associated*

from 2011 up to now

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*Poste Italiane*

from July 2010 up to October 2010

In 2010 I was hired by Poste Italiane with a quarterly contract of postman. In this period I have developed important skills about working with people, learning how to relate with clients and colleagues.

## COMPUTER SKILLS

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|------------------------|---------------------------------------------------------------------|
| Network:               | <i>CISCO CCNA Routing &amp; Switching<br/>Cisco 648-244 DIUCUCS</i> |
| Operating system:      | <i>Windows, Ubuntu, RedHat Scientific Linux</i>                     |
| Programs:              | <i>Office package,</i>                                              |
| Graphics:              | <i>Photoshop</i>                                                    |
| Programming languages: | <i>C++, Python, R</i>                                               |
| Analysis framework:    | <i>Root, LabVIEW</i>                                                |

## LANGUAGES

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MOTHER TONGUE: Italian

OTHER LANGUAGES: English – **Speaking, writing and reading at a C1 level**

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|------|------------------------------------------------------------|
| 2014 | English Certificate: Cambridge: First (C1)                 |
| 2007 | English Certificate: Trinity grade 8 pass with distinction |

## Hobby and social skills

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Organization of scientific educational lectures, both in Italian and in English.  
Physical applications in the field of nuclear physics, and biomedical micro devices.  
Sport activities such as playing football, cycling, surfing and fishing.