

# 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 m<sup>2</sup> 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 security 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

29/09/2020

Michele Michelotto