

Curriculum Vitae et Studiorum *Fabio Roberto Vitello*

Education:

- **Computer Science Degree (Master Level, 2 years)**, 107/110. University of Catania, 28 March 2013.
 - Title of the Master thesis: Analysis, design and development of a Science Gateway and a Mobile Application for complex scientific dataset exploration”. Advisor: Prof. ██████████.
- **Computer Science Degree (Bachelor Level, 3 years)**, 105/110. University of Catania, 12 November 2009.
 - Title of the Bachelor thesis: “Scientific large dataset exploration using GRID computing infrastructures”. Advisor: Prof. ██████████.
- Technical Institute Archimede, Catania (CT), Expert in electronics and telecommunications, School leaving certificate: 90/100 July 2004.

Work Experiences and Training:

- From July 2020 to present, **Permanent Staff Technologist** at INAF - Institute of Radioastronomy Bologna.
 - Main activities: Management of an HTP/HTC Cluster for INAF Community, User Support for HTP/HTC for INAF Community, implementation of a Virtual Reality tool for Geophysics community (Erasmus+ 3DTeLC project), optimization of pipeline for SKA precursors data analysis, Lofar Telescope Management System development in collaboration with Astron, Porting and optimization of an Astrophysics code to run on exascale prototype (H2020 EuroExa), development of services for European Open Science Cloud (EOSC) (H2020 Neanias project), Virtual Reality Tool for SKA precursors DataCube Analysis in collaboration with Inter-University Institute for Data Intensive Astronomy (South Africa).
- From January 2019 to June 2020, **Fixed term Staff Technologist** at INAF Astrophysical Observatory of Catania.
 - Main activities: Management of an HTP/HTC Clusters for INAF Community, User Support for HTP/HTC for INAF Community, implementation of a Virtual Reality tool for Geophysics community (Erasmus+ 3DTeLC project), Design of User Interfaces for data Processing (H2020 AENEAS Project), optimization of pipeline for SKA precursors data analysis, Lofar Telescope Management System development in collaboration with Astron, Porting and optimization of an Astrophysics code to run on exascale prototype (H2020 EuroExa), development of a distributed data analytic tool Jupyter Notebooks for Gamma Astronomy (J4G), Virtual Reality Tool for SKA precursors DataCube Analysis in collaboration with Inter-University Institute for Data Intensive Astronomy (South Africa).
- From October 2018 to October 2020, **Adjunct Professor** at University of Catania department of Biomedical sciences and biotechnology.
 - Main activities: teaching of “Information Processing Systems” for the Bachelor of Physiotherapy (Academy Year 2018/2019 – 2019/2020), teaching of “Information Processing Systems” for the Bachelor of Orthoptics (Academy Year 2018/2019 – 2019/2020).
- From August 2017 to January 2019, **Post-Doctoral Researcher** at INAF Astrophysical Observatory of Catania
 - Main activities: Management of an HTP/HTC Cluster for INAF Community, User Support for HTP/HTC for INAF Community, develop of an accounting system for PBS scheduler, Design and implementation of a Virtual Reality tool for Geophysics community (Erasmus+ 3DTeLC project), Design and implementation of VisIVO Pilot for EOSC Pilot Project, Design and Implementation of a prototype of Authentication & Authorization Infrastructure for the CTA project in AARC2 project.
- From August 2016 to July 2017, **Post-Doctoral Researcher** at INAF Astrophysical Observatory of Catania
 - Main activities: Development of a Visual Analytic application, Design and Implementation of a prototype of Authentication & Authorization Infrastructure for the CTA project in AARC2 project, Science Gateway application for Astrophysics community, Design and implementation of data analysis workflow, Support Astrophysics community on Data Mining Pipeline, Management of an HTP/HTC Cluster for INAF Community, User Support for HTP/HTC for INAF Community.
- From January 2015 to June 2016, **Term-contract** at INAF Astrophysical Observatory of Catania

- Main activities: Development of a Visual Analytic application (FP7 SCI-BUS Project), Science Gateway application for Astrophysics community, Design and implementation of data analysis workflow, Support Astrophysics community on Data Mining Pipeline, Management of an HTP/HTC Cluster for INAF Community, User Support for HTP/HTC for INAF Community.
- From January 2015 to June 2016, **Term-contract** at Consorzio Cometa (Catania).
 - Main activities: System manager, GRID computing infrastructure administration, HPC cluster administration, GPU cluster Administration.
- From January 2014 to December 2014, **Term-contract** at INAF Astrophysical Observatory of Catania.
 - Main activities: Development of a Visual Analytic application (FP7 Vialactea Project), Science Gateway application for Astrophysics community (FP7 SCI-BUS Project), Design and implementation of data analysis workflow, Design and management of an HTP/HTC Cluster for INAF Community.
- From November 2012 to December 2014, **Term-contract** at Consorzio Cometa (Catania).
 - Main activities: Deputy System manager, GRID computing infrastructure administration; HPC cluster administration.
- From September 2011 to February 2013, **Open-ended contract** at Apple Retail Store Centro Sicilia
 - Main activities: Workshops, Technical support on Apple mobile devices.
- From March 2013 to November 2013, **Term-contract** at INAF Astrophysical Observatory of Catania.
 - Main activities: Development of a GRID enabled analysis software module, Design and implementation of data analysis workflow (FP7 SCI-BUS Project), development of a mobile application for workflow execution on DCI(s), development of an application for scientific visualization.
- From May 2012 to October 2013, **Term-contract** at INAF Astrophysical Observatory of Catania.
 - Main activities: Development of a GRID enabled analysis software module, Design and implementation of data analysis workflow for FP7 ER-flow and SCI-BUS Project, development of a mobile application for workflow execution on DCI(s), development of an application for scientific visualization.
- From January 2012 to March 2012, **Term-contract** at Consorzio Cometa (Catania).
 - Main activities: Support on system management for HPC-GRID computing infrastructures, Porting of application on GRID Infrastructure, Science Gateway developer (FP7 SCI-BUS Project), Astrophysics community support for FP7 EGI-InSPIRE project.
- From July 2011 to December 2011, **Term-contract** at Consorzio Cometa (Catania).
 - Main activities: Support on system management for HPC-GRID computing infrastructures, Porting of application on GRID Infrastructure, Science Gateway developer (FP7 SCI-BUS Project), Astronomy & Astrophysics community support for FP7 EGI-InSPIRE project.
- From April 2008 to October 2008, **Term-contract** at Consorzio Cometa (Catania).
 - Main activities: Support on system management for HPC-GRID computing infrastructures (PI2S2), web developer, Astrophysics community support.
- From September 2007 to December 2007, **Tutor** at University of Catania Department of Computer Science.
 - Main activities: Assistance on laboratory for JAVA programming, development of Joomla template for faculty website.

Publications:

Author and/or co-author of several publications on refereed journals:

- <https://scholar.google.it/citations?user=fp5U5MEAAAAJ&hl=it>
- <https://www.scopus.com/authid/detail.uri?authorId=35173983800>

Software and Tools:

Author and/or co-author of several software publicly available, some are shown below:

- CAESAR (Compact And Extended Source Automated Reconstructor), <https://github.com/SKA-INAF/caesar>
- Jupyter Notebooks for GammaAstronomy (J4G), <https://repository.asterics2020.eu/content/jupyter-gamma-j4g-0>
- GeaVR: Erasmus+ 3DTeLC Virtual Reality Tool, <https://www.geavr.eu/>
- VisIVO Science Demonstrator for EOSCpilot, <https://eoscpilot.eu/astro-sciences-visivo-data-knowledge-visual-analytics-framework-astrophysics>
- CTA AAI Pilot for AARC2, <https://wiki.geant.org/display/AARC/CTA+Cherenkov+Telescope+Array>
- PBSAccounting <https://www.ict.inaf.it/gitlab/fabio.vitello/pbsAccounting>
- Vialactea VisualAnalytictool, <https://github.com/NEANIAS-Space/ViaLacteaVisualAnalytics>
- LOFAR TMSS, <https://git.astron.nl/ro/lofar>
- VisIVOMobile, <https://doi.org/10.1002/cpe.3538>
- VisIVOserver, <https://www.ict.inaf.it/gitlab/VisIVO/VisIVOserver>

Skills:

- Programming languages: Java, C and C++, C#, Python, R,
- Knowledge of distributed data management and analysis tool: Jupyter notebook
- Knowledge of Operative Systems (including administration): Windows, Linux and Unix, Mac OSX
- Knowledge of Distributed Computing Infrastructures: HPC, Cluster, GRID, Cloud
- Knowledge of Authentication and Authorization Infrastructures
- Knowledge of Workflow Management Systems and Science Gateway technologies
- Knowledge of algorithms and methodologies for numerical optimization, and scientific visualization/visual analytics, machine learning.
- Used Scrum Agile Methodology in my work (Daily Scrum Meeting, Planning Poker, Sprint Backlog)
- Experience with distributed version control: SVN, GitLab (including CI/CD Pipeline) and GitHub;

Language Skills:

- *English*
 - Excellent skills in reading, writing and oral expression