Curriculum vitae

PERSONAL INFORMATIONS

Gallozzi Stefano

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Sesso Maschile | Data di nascita 30 Gen. 1976 | Nazionalità Italiana

CURRENT POSITION

1st Researcher/Technologist (II-level)

WORKING EXPERIENCE

Jul. 02 – today

Researcher and Technologist Activity
INAF – Astronomical Observatory of Rome
v. Frascati n. 33 - Monte Porzio Catone (RM), 00078 Roma (Italy)
www.oa-roma.inaf.it

- **2002** – Collaboration contract with the Rome Astronomical Observatory (INAF-OAR)
  - Development of software for data reduction and analysis for the LBT Wide Field Imager project and for storing and managing images and catalogs of sources in optical, infrared and X bands.
- **2003** – Collaboration contract with INAF-OAR:
  - Development of a LBC User Interface LBC (LBC-GUI) compliant with the project and the specifications of the LBT-corporation and the software for the Mautomatic Telescope Focus process, Tracking, Guiding and Active Optics for the LBT Telescope.
- **2004** – Won Research Grant pubblished by INAF-OAR (grant D.D. 96/2003):
  - LBC Control Software and Interfaces for Astronomical Instrumentation.
- **2005-2008**– Project collaboration grant-agreement for the LBC @ LBT camera with INAF-OAR:
  - Data reduction software for the LBC cameras placed at the LBT telescope's first foci.
  - Development of the Public Science DataBase named "**LBC Survey Center**" for the reduced data access by the italian collaboration and P.Is.
  - 2007 – Collaboration with the On-Line scientific divulgation magazine LE SCIENZE WEB NEWS (http://www.lswn.it), as head of the «Astronomy» section and a member of the Editorial Board in the same magazine.
  - 2008 – Collaboration with the monthly magazine of Astronomical Science and Culture COELUM (http://www.coelum.com), as head of a rubric on the developments and trends of modern astronomy.
- **2008 – 2011**– – Won a Competition by titles and exams for a Technologist - III level position with fixed-term employment contract, for the needs of INAF-OAR – D.D . n . 29/2008 of the 29th april 2008:
  - 2009-2012 – Official Webmaster of the institutional web site of the INAF-OAR (http://www.oa-roma.inaf.it).
  - 2009-2012 – Elected to the INAF Equal Opportunities Committee (CPO) (alternate member).
- **2011-2012**– Won a Research Grant at the INAF-OAR:
  - Softwares and Database for the LBT data center in the **Italian Coordination Center program for the LBT astronomical observations** - **Centro Italiano di Coordinamento alle Osservazioni di LBT**.

- □ EsUpgrade of the **LSC Data Centre (LBT Survey Center)** services to all imaging and spectroscopic instruments placed at the LBT foci.
- □ Development and deployment of the LBT Proposal Handling System , organizations and scheduling of the data taking services, including an Observation Scheduler and a Target Observability Tool customized to the LBT geo-location.

- ■ **03 sett 2012**– Won National competition for qualifications and exams for 13 technologist III level permenent position, determination n. 420/11 of 29/11/2011 at the INAF-OAR (DAA_Concorso13tecSet2012):
    - □ Design, development and testing of computer systems for telescopes and satellites.
    - □ Centralized and distributed systems for archiving and managing data on missions, observatories and astronomical projects.
    - □ Databases studies and softwares for research and handling of astronomical metadata.
    - □ Design and development of a prototype of Distributed Archive for the **Cherenkov Telesope Array (CTA) project**.
    - □ Participation in the **European Horizon 2020 "Indigo-DataCloud" project** (for an interoperable cloud platform dedicated to scientific communities based on hardware and software solutions developed for public or private computing infrastructures) with the Distributed Archive of the CTA as an Indigo-Data Cloud Infrastructure Use Case. INDIGO Champion (spoke & contact person reference) for INAF and the High Energy Astronomical italian Community (link).
        - ■ **Responsible for the Indigo-DataCloud project funds** for the hiring of n.1 FTE via research grant (scientific manager and supervisor of this staff unit) for the creation of a technological demonstrator for the use-case of the CTA Distributed Archive as an Indigo-DataCloud infrastructure use case.
    - □ Participation in the **European Horizon2020 project** "ASTERICS "Astronomy ESFRI & Research Infrastructure Cluster"** (link) with the software development activities for the ASTRI project and of the CTA as a use case and its continuation identified by the **OBELICS project (OBservatory E-environments LInked by common ChallengeS)** (link), which aimed to promote the interoperability and re-use of the software solutions identified in ASTERICS and the pathfinder infrastructures.
    - □ Participation in the **PRIN INAF ASTRI & CTA Data Challenge (AC-DC)**. Implementation of access protocol and data storage for the upper levels on the model of the ASTRI archive.
    - □ Responsible of the Off-Site ICT infrastructure for the MiniArray Project and the distributed Archive Solution as first seed of the Cherenkov Telescope Array Archive System.
    - □ Responsible of the Bulk Archive Activity of the Cherenkov Telescope Array Data Preservation and Processing System CTA-DPPS Working Group.
- ■ **2014 - Responsible for the AAS Archive Infrastructure – ASTRI Archive System of the Astry-Horn Prototype Project** and of the IT solutions compatible with the Data Management system of the Cherenkov Telescope Array Archive.
    Design and Development of the Proposal Handling System, the OB Execution and Observing Scheduler and Target Observability tool for ASTRI-Mini-Array observations.
- ■ From **2014** to **2019 – Collaboration with MAGIC, Major Atmospheric Gamma-ray Imaging Cherenkov Telescopes** covering the role of manager of the website and off-site services of the Cherenkov telescope.
- ■ **2018 - Responsible for the Off-Site ICT Infrastructure of the MiniArray Project, the AMAS Archive Infrastructure – ASTRI & Miniarray Archive System** (extension of AAS) and the distributed archive solution as the first seed of the Cherenkov Telescope Array archive system Archive System.
- ■ From **2019** – – Held the **Role and Responsibility and Coordinator of the activities of the Data Processing Center and Information Systems and Digital Services (CED / SID)** of the Astronomy Observatory of Rome:
    - □ APM – GARR, Admin of several services: Firewall & secure access VPN, DNS, GIT, EPAS, EduRoam, Ticketing, Purchase Workflow, Print Servers and Services, VoIP contact center, Back-up Storage and Research CED.
    - □ Responsible for safety in the workplace pursuant to art.2 paragraph 1 of Legislative Decree n.81 of 9 April 2008.
- ■ From **2019**– holds the role of **DPLU Member - Data Protection Local Unit** for the protection of personal data in the Privacy group of the Astronomical Observatory of Rome personal data on the CED/SID side of the Astronomical Observatory of Rome.

- Since **2019** – He holds the role of **RUP - Sole Procedure Manager** for all purchases of materials and IT devices for the INAF-Observatory of Rome and external RUP for INAF-Brera Astronomical Observatory.
  - □ Executed and assigned countless tenders, competitions and direct purchases below the threshold
  - □ Main races and competitions above the threshold:
    - – IBISCO European PON tender for INAF-OAR: On-site supply of equipment for the upgrading of the data centers of the INFN Frascati National Laboratories and the INAF Rome Astronomical Observatory for the IBISCO project, in 3 lots – code CUP: I66C18000100006 – Lot 1 CIG code: 838673697B – Lot 2 CIG code: 8386744018 – Lot 3 CIG code: 838675050A (completed).
    - - ASTRI/Miniarray tender for INAF-OABr: Acquisition of the Information and Communication Technology System - ICT onsite for the ASTRI MINI-ARRAY project prot. 0001891 of 18/10/2022 CIG: 9497236713, CPV Code: 48800000-Information systems and servers, U-BUY TENDER n. G00612 (under completion today).
- **2019 – 2023 -** Member of the editorial team of the **Memoirs of the Italian Astronomical Society** and of the technical team for the organization of the site and the database of the memories.
- dal **2019** – Since 2019 he also deals with **Environmental Astronomy**:
  - □ Promoter and first signatory of the international petition of astronomers, which opposes the wild proliferation of telecommunications satellites in Low Earth Orbit; the appeal, called Appeal by Astronomers, reached> 2000 signatories from the international scientific community (link).
  - □ President and Legal Representative of the Safeguarding the Astronomical Sky Foundation (SAS Foundation), which in the course of its activities has brought forward the voice of astronomers against light pollution generated by satellites and telecommunications satellite megacostellations (link).
  - □ Participation in countless meetings, public debates, conferences and television documentaries on light pollution caused by Satellite Constellations ("The New Constellations in the Sky", public debate organized by the Italian Astronomical Society; "Loosing the Sky", public debate on Satellite Constellation organized by Astronomical Society of Edinburg; "the Privatization of the Sky" – report by A.Bettini, Focus24 column of RAINews 24, 12-03-2020 (link).
- From **2020 - Responsible and leader of the Cherenkov Telescope Array Bulk Archive activities (Bulk Data Management System, BDMS)** within the DPPS - Data Preservation and Processing System Working Group.
- From **2022 – Member of the Data Center Coordination Committee for the Italian Data Center of the distributed data center of the CTA Cherenkov Telescope Array located at the Frascati National Laboratories, LNF (of the INFN)** - Hardware and Software Technical Management Group: Hardware Procurement, Hardware and Software Installation as well as Deployment, Maintenance and Operation.
- Participation as **manager of the ICT package** in the Working Package WP1250 - LST-S AUXILIARIES for the CTA+ project connected to the construction of 3 Large Size Cherenkov telescopes (LST) at the southern site of the CTA in Chile with PNRR funds, ref. WP1250 - LST-S AUXILIARIES.
- From Jan **2023 – Elected Representative of the INAF-Astronomical Observatory of Rome for the National Scientific Group n.5 in the technological and IT sector (formerly MacroArea 5)**
- From **2023 – Appointed as Internal Member of the Structure Council of INAF - Astronomical Observatory of Rome as representative of the RSN5 on behalf of the OAR.**
- From Jan **2023 – Appointed Contact Person and Head of the CTA-Italy Data Center for the Cherenkov Telescope Array project.**
- From **01 Jan 2024 – He holds the role of First Technologist (second level) following a career progression competition** (by qualifications) for the transition from level III technologist with a permanent contract to level II technologist with a permanent contract.

Attività o settore Attività professionali, scientifiche e tecniche

ISTRUZIONE E FORMAZIONE

2002 — Degree in Physics (old italian rules)

Terza Università di Roma, RomaTRE, Roma (Italy)

- Astrophysics and Space Physics address
  - □ Thesis in High Energy Astrophysics (2002-02-27) with tutors and supervisors prof. Fabrizio Fiore and Giorgio Matt; with thesis title: "Surveys nei raggi-X con i satelliti BeppoSAX e Chandra"

19 Jul 04–31 Jul 04 — 2nd International Summer School on Grid Computing in Vico Equense (Na)

- "Grid Computing " certification.

2005-2007

- 2nd DataGrid and IVOA Workshop in INAF MonteMario, demonstrator of the web portal prototype with Data Grid connectivity within the DRACO project.
- 50° Italian Astronomical Society (SAIt) at the Observatory of Turin with a dedicated poster on the Astronomical data reduction in Data Grid.
- participation to the "VO Publish, how to publish data in the Virtual Observatory".

From 2002 — Workshops and Congresses

- Participation to workshops and congresses each ~6 months for the following projects:
  - □ LBT, ASTRI & Mini-Array (ASTRI General Meetings e Workshops);
  - □ CTA (es . CTA General Meetings, f2f Meetings e Workshop di DataManagement, DPPS/ACTL/SUSS e DatsCenters periodici);
- Workshops and Activities of the 5th RSN (Informatic and Technological sectors) and related to the ICT activities on the Big-Data and Scientific Archives in Italy and abroad (not exhaustive list here):
  - □ 2019 - "INAF Science Archives and the Big Data Challenge Workshop", Rome;
  - □ 2022 - "From Science Gateways to Papers", Palerm;
- European workshops for H2020 projects (2018-2020):
  - □ ASTERICS-OBELICS kick-off, meetings and Workshops;
  - □ INDIGO-DataCloud kick-off, meetings and Workshops;
  - □ European Grid Infrastructure, EGI Conference 2015 "*Engaging the Research Community towards an Open Science Commons",* Lisbona
  - □ European Grid Infrastructure, EGI Conference 2017 & INDIGO Data Cloud summit, Catany
  - □ Research Data Alliance, RDA 9th Plenary Meeting, Barcelona

Jan 07–May 07 — "PM-CORE" training course, foundations of Project Management for high innovation projects

- Certificate of attendance at the ASI Science Data Center, Rome.

Aprile 2019 — Training Course "Il Responsabile del Procedimento e gli altri Attori del Processo Realizzativo dei Contratti Pubblici"

- Certificate of Attendance form "Scuola Superiore di Amministrazione Pubblica e degli Enti Locali".

Dicembre 2022 — Training Professional Course on Informatic Security "Firewall UPM/pfSense Supplementals"

- Certificate of Attendance from "**Dadonet Academy s.r.l.**".

2022-2023 — Training and Learning GARR courses about Informatic Security, APM and other GARR services

■ Certificates of attendance online-courses: "APM1 – La Rete GARR", "APM2 – Le Attività dei NOC", "APM3 – Le Policy della Rete GARR", "APM4 – L'Evoluzione della Rete nei Data Center", "APM5 – Configurazione di base dell'Accesso", "APM6 – LIR, NIC, DNS (Ipv4 ed Ipv6)", "APM7 – GARR-CERT Gestione della sicurezza della Rete", "APM8 – SCARR Più prevenzione per maggiore sicurezza", "APM9 – Il Monitoring della Rete GARR", "APM10 – Infrastrutture di Autenticazione ed Autorizzazione per la Ricerca e l'Istruzione: la Federazione IDEM", "APM11 – GARR Cloud, servizi di Calcolo e Storage", "APM12 – GARRLab: Infrastruttura, Tecnologie e Risultati", "APM13 – Sistemi di Videoconferenza", "APM14 – Eduroam: Installazione di base", "GDPR - Informativa: buone e Cattive Pratiche", "Privacy Risk Management: aspetti di metono e strumenti a supporto", "Avviare e gestire la DPIA: basi normative/procedurali".

LANGUAGE SKILLS

Mother tongue   italian

Foreign languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken Interaction	Spoken Production	
English	C2	C2	C2	C2	C2
Spanish	B2	B2	B1	B1	B2

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

WOKRS and PUBBLICATIONS

Total Works	of which:	
n. 128	Referred Aricles	n. 51
	non-Referred Articles / Proceedings	n. 39
	Technical Reports	n. 20
	Catalogs / DBs	n. 5
	Essays and Books	n. 9
	European Competitions	n. 4

Job-related skills

■ Documented experience in team leader management, coordination and management of the work team, responsible, supervisor and contact person for contracts and research grants for the completion of tasks relating to different research projects and specific tasks (such as those for the LBT telescope, the BDMS of the CTA, of the data archive of the ASTRI prototype and of the ASTRI-miniarray project).

The team leader activity is also carried out in more institutional tasks such as organizing the work of the CED/SID and planning the work of the fixed-term units dedicated to this office.

■ Professional management and use of Databases Relational Structured Query Languege (SQL) for standard scientific applications and Astronomical Archives.

■ Professional management and use of NotOnly-SQL (NO-SQL) Non-Relational Databases for DataMining of large amounts of data (BigData), both Document Oriented, both column-family / hash-base oriented, and Graph oriented. Rudiments of Array Query Language (AQL) and Functional Query Language (FQL).

■ Professional use of VOTools and the Astronomic Structured Query Language (ASQL) interface.

■ Manipulation and Reduction of Image Data fits crude multi-wavelenght for deep and / or extended fields (Chandra, XMM, BeppoSAX, NTT, VLT, TNG, LBT, HST-ACS, VLT-HAWK-I), using IRAF routines and scripts , PyRAF, MIDAS and some C and python applications developed ad hoc on CFITSIO libraries, Numerical Recipes, pyFITS, numarray, GSL and numPY; HEAsoft and LHEAsoft, FTOOLS, XANADU, ESO-Scisoft & CIAO tools, Xspec, Ximage and Sherpa.

■ Archive and storage federation systems and Distributed FileSystems: OneData, Rucio, Dynafed, ZFS, dCache, minIO, CephFS, Gluster, NFS-Ganesha.

■ PaaS (Platform as a Service), Iaas (Infrastructure as a Service), SaaS (Software as a Service) e

DIaaS (Data Lake as a Service) paradigms.

- DataLake _vs_ DataWarehouse DB problem solving & discovery technology assessment.
- The work skills acquired since the beginning of my work experience with INAF (in 2002) have led to the constant achievement of the objectives set by the project in compliance with deadlines, including all those circumstances with close deadlines.

Digital skills

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Security	Problem solving
Proficient user	Proficient user	Proficient user	Proficient user	Proficient user

Digital Skills – Self-assessment grid

- User and expert administrator of all Windows and Linux / Unix, VMS, Dos and MacOS operating systems (servers and workstations and clusters) and all the main applications.
- Hardware Controls and Monitoring with PANDORA, IPMI and iDRAC software services.
- Advanced use of BareOS back-up utility and interface with the SUN STK SL3000 Enterprise Tape Library.
- Use and creation of environments, clusters and virtual machines with oVirt, openStack, VirtualBox and Vmware.
- Containerization of applications with Docker and management of containerized services with Kubernetes including work queue management and workload optimization with OpenHPC and OpenSHIFT.
- Remote Control and Administration "help-desk" with Timbuktu (Windows), R-Desktop (Linux), RealVNC (Windows & Linux) and noMachine.
- Structured and Object Oriented Programming Languages: C, C ++, C #, use of Microsoft VisualC ++ and .Net; rudiments of MPI technology; Professional use of CFITS-I / O and surrogate libraries for other languages.
- Rudiments of CUDA, OpenCL and OpenACC for programming GP-GPUs, machine learnings and parallel computing. Advanced use for parallelization of already existing codes and routines with GNU-Parallel.
- Advanced programming and Documentation with Java, Applets, JSP, Javascript e JavaBean, Perl, Python, TCL-TK, programming in Shell scripting (tcsh, csh, bash & bash), Fortran77-90, IDL, SuperMongo, SciLab, LaTex and rudiments in R-statistical program language and R-commander suite.
- Web development with Bootstrap, HTML, XML, XSLT, CSS, UML, PHP ed ASP;
- Relational Databases: SQL, MySQL, Oracle9i ed interfaccia con PHP, perl-DBI and JavaDBC / JDBC-ODBC;
- non-Relational Databases: Mongo DB, SciDB, CouchBase, ReThinkDB;
- Professional ingegnerization, programming, development and deployment of Enterprise Java applications with Borland JBuilder Enterprise Edition, Embarcadero, NetBeans and WebObjects, Web-Services and EJB applications (WebSphere).
- Professional engineering and development of WEB portals with LAMP (Linux, Apache, Mysql and PHP) technology + Phyton variants of LAMPy:
  - Professional and advanced use of DJANGO web toolkit for creating portals and content managers in a Python environment; Rudiments Distributed Development Platform / Framework LifeRay and Hadoop!
- Advanced and professional use of Web content managers like WordPress, Typo3 and Plone.
- Advanced use of Microsoft Office (+ 365 ®) Package and its clones (StarOffice, OpenOffice, LibreOffice).
- Professional manipulation of images and animations with AdobePhotoshop, PaintShopPro and Gimp; advanced Web Design with Flash, DreamWeaver, XaraWebstyle, QuantaPlus, Scream and FrontPage.

- <u>Grid Computing</u>: experience in the creation, start-up and maintainance of Data Grid nodes:
  - ☐ Development and porting of pre-existing applications on the GILDA-EGEE testbed; Batch application design experience (job-oriented) and web-services for Grid (WSRF).
  - ☐ Advanced use of the SLURM queue, Grid GENIUS, CONDOR / CONDORG & DAGman portals for submission and monitoring of resources in Grid (GridICE).
  - ☐ Use of DIRAC & PANDA Workload Management Systems and VO/VOMS.
  - ☐ Rudiments of workflows with PEGASUS and data manipulation with OGSA-DAI.
  - ☐ Use of the GridSphere @ GridLab and GridPort Framework to create Grid Portals.

Commitment to the 3ʳᵈ Sector

Dissemination experience, seminars, conferences and events since 2002

- <u>Periodic introductory and informative seminars and scientific lessons/in-depth studies</u> for schools of all levels throughout Rome and its province, as an expert at the Astronomical Observatory of Rome.
- Speaker and organizer of public events <u>"Science Network - Researchers' Night"</u>, <u>"Night under the Stars"</u>, <u>"Scientific Aperitif"</u>, <u>"Frascati in Science"</u>, <u>"European Researchers' Night"</u>, at the Astronomical Observatory of Rome , and other public and private research bodies.
- Co-organizer, researcher and teacher at the <u>Cosmo-School</u> and <u>Astro-Kids</u> events at the Astronomical Observatory of Rome.
- Collaboration in the <u>"How starry is the night"</u> competition 2021 edition in the national Astronomy week organized by the Pythagoras Planetarium of Reggio Calabria on a project by the M.I.

Other skills

Professional refresher courses

- Periodically carries out training/professional refresher courses on the following topics:
  - ☐ Safety at Work, Responsible for Safety in the Workplace and Workplace Wellbeing
  - ☐ First Aid and clearing of the airways
  - ☐ Fire emergency response

Member and President of Commissions for Competitions for Fixed Periods, Research Grants and Scholarships

- Since 2013, he has regularly carried out, on specific instructions from the management, various roles as member (and president) of the <u>examining commission in competitions</u> for research grants, scholarships and fixed-term contracts for the recruitment of personnel on behalf of the Astronomical Observatory of Rome.

Driving licence

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ADDITIONAL INFORMATIONS

Processing of personal data

I authorize the processing of my personal data pursuant to Legislative Decree 30 June 2003, n. 196 "Code regarding the protection of personal data".

Dichiarazioni finali

Le informazioni contenute nel presente "curriculum vitae et studiorum" sono rese sotto la personale responsabilità del sottoscritto, ai sensi degli articoli 46 e 47 del Decreto del Presidente della Repubblica 28 dicembre 2000, numero 445, e successive modifiche ed integrazioni, consapevole della responsabilità penale prevista dall'articolo 76 del medesimo Decreto per le ipotesi di falsità in atti e dichiarazioni mendaci.

MONTE PORZIO CATONE, 29/02/2024

Signature

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