# Valentina Pasquale

Since leaving Neuroscience research in 2019, Valentina has been overseeing the development of Open Science and Research Data services at the Istituto Italiano di Tecnologia (IIT), acting as "Research Data Management Specialist". Valentina is a recognized expert in data analysis, data management, and open science, as witnessed by the intense training and seminar activity of the last years. By chairing the GO FAIR Data Stewardship Competence Centers' Implementation Network she also acquired competences in community building and event organization. She also contributed to introduce to Italy the professional figure of the *data steward*, giving talks in several national events. Valentina usually represents IIT in all contexts where open science and research data management competences are involved, both national and international. Valentina has strong communication and organizational skills, as well as project management knowledge and experience. She also has more technical skills, including extensive experience in research data repository management (IIT Dataverse) and data curation.

## Personal Data


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| Place and Date of Birth: | th June 1982 |
| Address: | |
| Phone: | |
| email: | ; |
| LinkedIn: | |
| Scopus: | |
| Orcid: | |


## Research & Work Experience

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| *Current*<br>Mar 2019 | Research Data Management Specialist at Istituto Italiano di Tecnologia<br>*Research Organization Directorate*<br>Set-up and coordination of Research Data Management services at IIT to support scientists in Open Science and data management. |
| Mar 2019<br>May 2017 | Post-doc at Istituto Italiano di Tecnologia<br>*Optical Approaches to Brain Function Research Line*<br>Analysis of in vivo electrophysiology data; software programming for instrumentation control; research data management. |
| Apr 2017<br>Jun 2012 | Post-doc at Istituto Italiano di Tecnologia<br>*Neural Interfaces and Neurorehabilitation lab*<br>Signal processing and statistical analysis of in vitro and in vivo electrophysiology data; research data management; project management; co-supervision of graduate students. |
| Jun 2012<br>Jan 2011 | Integration Specialist at Carestream Health<br>*Carestream Technology & Innovation center*<br>Delivery of Integration Services to European customers in order to link Carestream Health technology systems (RIS, PACS) with other leading vendors common systems; data migration; design and development of on-demand reports of RIS/PACS database content. |
| Dec 2010<br>Jan 2010 | Research Fellow at Istituto Italiano di Tecnologia<br>*Neuroscience and Brain Technologies Department* |
| Dec 2009<br>Jan 2007 | PhD candidate at University of Genova and Istituto Italiano di Tecnologia<br>*Neuroscience and Brain Technologies Department* |

## Education

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| Apr 2010 | PhD in Humanoid Technologies, **University of Genova**<br>Thesis: "Analysis of the network dynamics of cultured neurons coupled to microelectrode arrays: from spontaneous to evoked activity patterns" \| Advisors: Prof. Sergio Martinoia, Dr. Michela Chiappalone |
| Nov 2006 | Master of Bioengineering, **University of Genova**<br>110/110 *summa cum laude* \| Major: Neuroengineering<br>Thesis: "Self-organized critical states and population dynamics in networks of in vitro cortical neurons" \| Advisor: Prof. Sergio Martinoia |
| Sep 2004 | Bachelor of Biomedical Engineering, **University of Genova**<br>110/110 *summa cum laude*<br>Thesis: "Models and simulations of networks of cortical neurons in vitro" \| Advisor: Prof. Vittorio Sanguineti |
| Jul 2001 | **Liceo Scientifico Statale "L. Lanfranconi"**, Genova \| Final Grade: 100/100 |

## Selected Certificates and Trainings

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| Dec 2021 | FAIRsFAIR & EOSC Synergy Data Steward Instructor Training Workshop, November 29th-December 3rd, 2021. |
| Oct 2021 | FAIRsFAIR Practical implementation of FAIR-related content in university curricula and teaching training workshop, October 12th, 2021. |
| Oct 2020 | Data Carpentry with R online course by e-Science Center & The Carpentries, October 19th-22nd, 2020. |
| May 2019 | Helis FAIR Data Stewardship course by Helis Academy. Certificate earned on May 29th, 2019, Niel (Belgium). |
| Nov 2018 | Open Science: Sharing Your Research with the World by TU Delft on edX.<br>Certificate earned on November 29th, 2018.<br>*Valid certificate id: 38d48ba6e6bc43759d11a07da619e66e.* |
| Nov 2018 | Research data management and sharing by The University of North Carolina at Chapel Hill & The University of Edinburgh on Coursera.<br>Certificate earned on Wednesday, November 7th, 2018.<br>*License: 3JP9XU2HNE6C.* |
| Sep 2012 | Public speaking course by. J. Pasotti, Istituto Italiano di Tecnologia. |
| Jan 2008 | Professional Qualification Exam, Ordine degli Ingegneri della Provincia di Genova. |
| Jun 2003 | First Certificate in English, University of Cambridge, ESOL Examinations<br>Grade: *A, Certificate number: 0010209674.* |

## Invited talks in the Research Data Management (RDM) field

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| Jan 2022 | "Il data steward: chi è, cosa fa e perché è fondamentale", Open Science Café webinar series (in Italian), January 13th, 2022. Video recording: webpage. Slides (registration required): webpage. |
| Dec 2021 | Panelist at the "Role models for parents in Science" round table discussion, IEEE Women in Engineering Leadership Summit - phygital event, December 15th, 2021. |
| Dec 2021 | "The transformative potential of Open Science", Promoting Open Research for the Future of Education webinar, December 14th, 2021, Istituto Affari Internazionali, Online presentation. Slides: doi. |

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| Oct 2021 | "Il ruolo e le competenze del *data steward*: una nuova figura professionale a supporto dei dati FAIR per la ricerca", GenOA Week 2021, October 29th, 2021. Slides: webpage. |
| Oct 2021 | Chair of the DSCC-IN National Chapters meeting, October 4th-5th, 2021. Slides: doi. |
| Sep 2021 | "Chasing convergence by respecting diversity - Lessons from chairing DSCC-IN", FORGE21, September 10th, 2021, Online presentation. Slides: doi. |
| Jun 2021 | Organizer of "Sharing FAIR Data Stewardship knowledge across borders" session at the FAIR Festival 2021, June 21st-23rd, 2021. Slides: doi. |
| Jun 2021 | "Data Steward per i dati FAIR", Conferenza GARR 2021, June 15th, 2021, Online presentation (in Italian). Slides and video recording: webpage. Short abstract: doi. Extended abstract: doi. |
| Dec 2020 | "My journey from research to data stewardship: a new career pathway for parents in science", IEEE Women in Engineering Leadership Summit - virtual event, December 15th, 2020, Online presentation. Slides: doi. |
| Dec 2020 | "DSCC-IN contribution to the dissemination of FAIR data stewardship knowledge across countries", GO FAIR/CODATA International FAIR Convergence Symposium 2020, Data Stewardship panel, December 2nd, 2020, Online presentation. Pre-recorded video: Vimeo. Slides: Google Drive. |
| Sep 2020 | "Open Science and Data Stewardship in Italy: an overview", 1st Polish Data Stewardship School, September 15th, 2020, Online presentation. Slides: doi. |

## Trainer experience (only RDM)

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| Feb 2022 | "Open Science and Research Data Management", University of Genova & Istituto Italiano di Tecnologia, training course for PhD students, academic year 2021-2022. AulaWeb course page. |
| Feb 2021 | "An Introduction to Open Science and Research Data Management", University of Genova & Istituto Italiano di Tecnologia, training course for PhD students, academic year 2020-2021. Slides: doi. AulaWeb course page. |
| Jul 2020 | "An Introduction to Open Science and Research Data Management", Fondazione Mondino & Bibliosan, July 10th, 2020. Slides: doi. |

## Memberships & appointments (only RDM)

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| 2021-current | Member of the ICDI Executive Board, on behalf of IIT. |
| 2020-current | Member of the Data Stewardship Wizard (DSW) Advisory Board. Twitter announcement. |
| 2019-current | Member of the Research Data Alliance. |
| 2019-2021 | **Chair of the GO FAIR Data Stewardship Competence Centers Implementation Network (DSCC-IN).** |

## Projects' participation

- **Skills for the European Open Science commons: creating a training ecosystem for Open and FAIR science (Skills4EOSC)**, Coordinated Support Action funded in the HORIZON-INFRA-2021-EOSC-01-01 call, starting date 1st Sep, 2022. Total budget: about 7 M€. IIT is involved as affiliated entity of the coordinator Consortium GARR.

## Highlight of past scientific achievements

- Co-author of

  - **15 scientific journal papers**
  - 2 editorials
  - 28 peer-reviewed conference proceedings (9 indexed in Scopus, Sep 2022),
  - more than 20 abstract reports to national/international conferences,
  - 3 book chapters.
- Co-editor of
  - "In vitro neuronal networks: from culturing methods to neuro-technological applications", Springer, 2019, e-book ISBN: 978-3-030-11135-9, doi.org/10.1007/978-3-030-11135-9.
  - "Criticality as a signature of healthy neural systems", Frontiers in Systems Neuroscience, ISBN: 978-2-88919-503-9, doi.org/10.3389/978-2-88919-503-9
- H-index: **13** (source: Scopus, Sep 2022)
- Number of citations: **859** (source: Scopus, Sep 2022)
- Co-advisor of several Master and Bachelor degree theses in Bioengineering at the University of Genova & Istituto Italiano di Tecnologia (since 2007 to 2019).
- Teacher of PhD courses of *Advanced signal processing tools for multi - electrode data* in 2010 and of *Signal Processing in Neuroscience* in 2014, for the PhD program in Neuroscience, University of Genova and Istituto Italiano di Tecnologia.

## Selected Scientific Publications

- Averna A., Pasquale V., Murphy M.D., Rogantin M.P., Van Acker G.M., Nudo R.J., Chiappalone M., Guggenmos, D.J. (2020) *Differential Effects of Open- and Closed-Loop Intracortical Microstimulation on Firing Patterns of Neurons in Distant Cortical Areas.* **Cerebral Cortex** 30(5), pp. 2879-2896 DOI: 10.1093/cercor/bhz281
- Zucca S.*, Pasquale V.*, Lagomarsino de Leon Roig P., Panzeri S., Fellin T. (2019) *Thalamic Drive of Cortical Parvalbumin-Positive Interneurons during Down States in Anesthetized Mice.* **Current Biology** 29 (9), pp. 1481-1490.e6. DOI: 10.1016/j.cub.2019.04.007 * Equal contribution
- Buccelli S., Bornat Y., Colombi I., Ambroise M., Martines L., Pasquale V., Bisio M., Tessadori J., Nowak P., Grassia F., Averna A., Tedesco M., Bonifazi P., Difato F., Massobrio P., Levi T., Chiappalone M. (2019) *A Neuromorphic Prosthesis to Restore Communication in Neuronal Networks.* **iScience** 19, pp. 402-414 DOI: 10.1016/j.isci.2019.07.046
- Pasquale V., Martinoia S., Chiappalone M. (2017) *Stimulation triggers endogenous activity patterns in cultured cortical networks.* **Scientific Reports** 7(1):9080 DOI: 10.1038/s41598-017-08369-0
- Scarsi F., Tessadori J., Chiappalone M.*, Pasquale V.* (2017) *Investigating the impact of electrical stimulation temporal distribution on cortical network responses.* **BMC Neuroscience** 18(1):49 DOI: 10.1186/s12868-017-0366-z. *Equal senior contribution
- Zucca S.*, D'Urso G.*, Pasquale V., Vecchia D., Pica G., Bovetti S., Moretti C., Varani S., Molano-Mazón M., Chiappalone M., Panzeri S., Fellin T. (2017) *An inhibitory gate for state transition in cortex.* **eLife** 2017(6):e26177 DOI: 10.7554/eLife.26177. * Equal contribution
- Frega M.*, Pasquale V.*, Tedesco M., Marcoli M., Contestabile A., Nanni M., Bonzano L., Maura G., Chiappalone M. (2012) *Cortical cultures coupled to Micro-Electrode Arrays: a novel approach to perform in vitro excitotoxicity testing.* **Neurotoxicology and Teratology** 34(1):116-27 DOI: 10.1016/j.ntt.2011.08.001 *Equal contribution

- Pasquale V., Martinoia S., Chiappalone M. (2010) *A self-adapting approach for the detection of bursts and network bursts in neuronal cultures.* **Journal of Computational Neuroscience** 29(1-2):213-229 DOI: 10.1007/s10827-009-0175-1
- Pasquale V., Massobrio P., Bologna L.L., Chiappalone M., Martinoia S. (2008) *Self - organization and neuronal avalanches in networks of dissociated cortical neurons.* **Neuroscience** 153(4):1354-1369 DOI: 10.1016/j.neuroscience.2008.03.050

## Open data & code

- Zucca S.*, Pasquale V.*, Lagomarsino de Leon Roig P., Panzeri S., & Fellin T. (2019). *Data of "Thalamic drive of cortical parvalbumin-positive interneurons during down-states in anesthetized mice"* [Data set]. **Zenodo**. DOI: 10.5281/zenodo.2609157 *Equal contribution
- Pasquale, V. (2021). *Code for: A self-adapting approach for the detection of bursts and network bursts in neuronal cultures*, DOI: 10.48557/JIJEXY, **IIT Dataverse**, V1.

## Outreach

- Pasquale V. (2020). *Non c'è scienza senza dati.* **IIT Open Talk magazine**. Link.

## Highlighted Skills

**Research Data Management, FAIR data stewardship, Open Science**, Data Curation, Statistical Analysis, Software programming, R&D, Neuroscience, **Teaching and Training**, Communication, **Project Management**.

## Computer Skills

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| Expert: | Dataverse, Matlab, MS Office Suite, Corel Draw, Origin, Windows OS. |
| Intermediate: | R, C, C++, C#, pl/sql, LaTeX, MS Office Access, health IT standards (HL7, DICOM). |
| Basic: | Linux/Unix OS, R, Python, html, xml/xsl, Windows PowerShell. |

## Languages

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| Italian: | Mothertongue |
| English: | Full professional knowledge, European Level B2. |
| French: | Basic Knowledge |

In compliance with the GDPR and the Italian Legislative Decree no. 196/2003, I hereby authorize you to use and process my personal details contained in this document.

Genova, January 13th 2023

Signature

**Valentina Pasquale**