



PERSONAL INFORMATION

Silvia Gioiosa, PhD

BRIEF PRESENTATION

I am a bioinformatician and data analyst for biological projects, currently working in the Data Value Group in CINECA focusing on EU and PNRR projects which focus on Next Generation Sequencing data management and analytics.

I am the Local Technical coordinator of ELIXIR-Ita Node for CINECA, a key infrastructural partner in the Elixir node, focusing on the efficient implementation and distribution of HPC bioinformatics resources for the Biological Scientific Community.

Furthermore, I am involved in the delivery of training courses focused on High Performance Computing applied to Bioinformatics.

My main research interests cover different aspects of High Throughput Sequencing technology data analysis and computational biology, mainly applied to the development of data analysis pipelines optimized for High Performance Computing (HPC), such as genome-wide analysis covering genomic variants, differential gene and isoform expression and non-coding RNAs.

WORKING EXPERIENCE

November 5th, 2018 – Present

CINECA - Interuniversity Consortium

SCAI (SuperComputing Applications and Innovations) Department - Data Value group
CINECA sede di Roma - Via Dei Tizii, 6, Rome

June 1st, 2016 – October 31st, 2018

Post-doctoral Fellowship

(1) National Council of Research (CNR) in collaboration with (2) CINECA.
(1) Institute of biomembrane and bioenergetics, Via Giovanni Amendola 165/A - 70126, Bari, Italy. (2) Via Dei Tizii, 6, Rome

"Efficient implementation and distribution of High Performance Computing bioinformatics resources for Elixir scientific community; Development of automated Bioinformatics Pipelines; RNA-Seq, Exome-seq and Whole Genome data analysis"

April 1st, 2014 – March 31st, 2016

Post-doctoral Fellowship

Laboratorio Prof. Giuseppe Macino, Università degli Studi di Roma "La Sapienza" - P.zza Aldo Moro, 5 - Rome
Dip. L.240/2010 Biotecnologie cellulari ed ematologia.

EDUCATION

2021 – 2022

Master in "qOmics - Quantitative Methods for Omics Data" - Thesis Title: "ANITA - valutazione della composizione del microbiota intestinale in pazienti affetti da Tiroidite di hAshimoto"

Università Bicocca, Milano

- 2011 – 2014 **PhD in "Human Biology and Genetics" - Thesis Title: "RNAi machinery cooperates with SWI/SNF complexes in nucleosome positioning at Transcriptional Start Sites."**
Laboratorio Prof. Giuseppe Macino, Università degli Studi di Roma "La Sapienza" - Dip. L.240/2010 Biotecnologie cellulari ed ematologia.
- January 27th, 2010 **Master's Degree in Genomics and Biotechnology**
Università degli Studi di Roma "La Sapienza" - P.zza Aldo Moro, 5 - Rome.
Final Mark: 110/110 e lode (magna cum laude)
- October 25th, 2006 **Bachelor's Degree in Biotechnology**
Università degli Studi della Basilicata, Potenza (PZ), Italy
Final Mark: 110/110 e lode (magna cum laude)

DIGITAL SKILLS

- Bioinformatics skills** NGS data analysis; R statistical environment; Data integration and visualization; CRAN and Bioconductor packages; Database; Data mining; Development of automated, scalable and optimized pipelines;
- Computer skills** Workflow Management Systems (Snakemake); Python programming language; High Performance Computing; Cloud computing; Jupyter Notebooks; Github; Command line and UNIX shell scripting; Vi text editor; LaTeX; Full Office package.
- Operative Systems** Linux (Ubuntu), Microsoft Windows.

TEACHING EXPERIENCES

- From December 2017 to 2023 Course leader and teacher at "High Performance Bioinformatics", EU PRACE Course in English, CINECA, Rome, Italy.
- October 2023 Teacher at the course "ReTrainMe"; Linux and shell scripting
- February, 2022 and 2023 Teacher at "Corso Alta Formazione in Bioinformatica", Università La Sapienza, Roma, Italy.
- 2018, 16-17 Jan Teacher at the course "Linux shell scripting for high-throughput biological data processing on supercomputers", Elixir IIB Training activity in collaboration with CINECA, Rome, Italy.
- 2016 March 31st Speaker at the training course "Biotecnologie, Sicurezza e Cross-medialità", Rome, organized by INAIL.

ADDITIONAL INFORMATION

Publications H-index:11; no. of citations: 329; no. of publications: 22. For a full detailed list of scientific publications, please refer to Scopus ID: 56530825900.

or to ORCID profile: [0000-0003-1302-8320](https://orcid.org/0000-0003-1302-8320).

Place and date Rome, 04/02/2024