

PERSONAL INFORMATION

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WORK EXPERIENCE

Sep 21, 2021 – ongoing	Full professor of Biochemistry (SSD: BIO/10) University of Bologna – Dept of Pharmacy and Biotechnology
May 24, 2016 - May 22, 2022	Director of the International 2-year Master's programme in Bioinformatics University of Bologna
Feb 2, 2015 - Sep 20, 2021	Associate professor of Biochemistry (SSD: BIO/10) University of Bologna – Dept of Biological, Geological and Environmental Science; Dept of Pharmacy and Biotechnology (since 2018)
Oct 1, 2006 - Feb 1, 2015	Assistant professor of Biochemistry (SSD: BIO/10) University of Bologna – Dept of Biological, Geological and Environmental Science

EDUCATION AND TRAINING

1998 - 2001	PhD in Physics EQF level 8 University of Bologna: Hybrid systems of Hidden Markov Models and Neural Networks for protein structure prediction
1991 - 1997	Degree in Physics University of Bologna

RESEARCH ACTIVITY

- Computational study of the relation between sequence, structure, and function in proteins, in particular through the application of Machine Learning tools, including neural networks, (also deep), hidden Markov models, support vector machines, random forests.
- Release of computational tools freely available to the scientific community. (www.biocomp.unibo.it/predictors) and integrated with the tool ecosystem of ELIXIR.
- Special interest in membrane protein structure, protein subcellular localization, effect of single residue variations on protein structure, function and stability, relation between variations and diseases.
- Analysis and interpretation of omic data (genomics, transcriptomics, metagenomics).

RESEARCH PROJECTS

2022 - ongoing	Local coordinator of the University of Bologna Unit for the ELIXIRxNextGenIT - PNRR Infrastructures.
2022 - ongoing	Local coordinator of the University of Bologna Unit for the spoke "In silico Medicine and Omics data" of the National Centre for HPC, Big Data and Quantum computing – PNRR.
Nov 1, 2018 – Oct 30, 2024	Leader of the computational work package for the H2020 project CIRCLES "Controlling mlcRobiomes CircuLations for bETter food Systems".
Feb 1, 2013 – Jan 31, 2016	Local coordinator of the University of Bologna Unit of the PRIN Project "Approccio integrato computazionale e sperimentale per lo studio di patologie umane" (Coordinator: Anna Tramontano).

TEACHING ACTIVITY

2007 - ongoing	Teaching activity at the International Master Degree in Bioinformatics of the University of Bologna (courses: Bio-medical databases, Elements of Computational Biology, Models of Biological Systems, Systems and In Silico Biology, Laboratory of Bioinformatics 1, Programming for Bioinformatics).
2012	Special course in "Basic and Advanced Bioinformatics" at Sultan Qabus University (Muscat, Oman).
2004-2008	Special Courses on "Probabilistic models for biological sequences" at Complutense University in Madrid (Spain), Master in Bioinformatics.
2003	Special Course on "HMMs, Basics and applications to molecular biology" at Bioinformatics Group of Sanofi-Synthelabo (Labège, Toulouse, Francia).
2002-2006	Course on "Fisica Computazionale Applicata alle Macromolecole" at University of Trento, Degree in Biomedical Physics and Technology.
200-2001	Course module "Modellistica Molecolare" at University of Ferrara, Degree in Biology.

APPOINTMENTS

December 19, 2023 – ongoing	Member of the ASN (Abilitazione Scientifica Nazionale) committee for the SSD BIO/10
January 2023- ongoing	Member of the Board of Directors of the Italian Society of Biochemistry and Molecular Biology (SIB)
October 10, 2019 - ongoing	Delegate of the University of Bologna at the general assembly of ELIXIR-IT (Italian node of the ESFRI Infrastructure for Bioinformatics).
November 1, 2017 - ongoing	Reference contact for the Interoperability Platform of ELIXIR-IT.
July 1, 2020 - ongoing	Delegate of the University of Bologna at the general assembly of EPTRI-IT (Italian node of the European Initiative for Translational research in Paediatrics).
Nov 1, 2021 - ongoing	Member of the Board of Directors of EPTRI (European Initiative for Translational research in Paediatrics).
2016-2019	Coordinator of the group "Computational and Systems Biology" of the Italian Society of Biochemistry and Molecular Biology.
2020-ongoing	Member of the commission for the evaluation of the research activity at the University of Bologna.
2017-2019	Member of the commission for the evaluation of third mission activity at the University of Bologna.
May 2016 – May 2022	Coordinator of the International 2-year Master in Bioinformatics at the University of Bologna

EDITORIAL ACTIVITY

Dec 1, 2021 - ongoing	Associate editor Frontiers in Molecular Biosciences (Frontiers).
Aug 1, 2019 - ongoing	Associate editor of Bioinformatics (Oxford University Press).
May 5, 2019 - ongoing	Associate editor of BMC Bioinformatics (Springer-Nature).
Apr 27, 2017 - ongoing	Associate editor of Computation (MDPI).

BIBLIOMETRIC INDEXES

Scopus, Jun 2025	H-index = 39; Citations = 7080; Publications: 190
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AWARDS

2002	Best paper award at Intelligent Systems for Molecular Biology 2002 - Edmonton (Canada), 03-07/08/2002 for the paper Martelli PL, Fariselli P, Krogh A and Casadio R - A sequence-profile-based HMM for predicting and discriminating beta barrel membrane proteins- Bioinformatics 18: S46-S53.
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