

# Curriculum Vitae

## INFORMAZIONI PERSONALI

**Nome** GIOSUE'  
**Cognome** LO BOSCO  
**Recapiti** Dipartimento di Matematica ed Informatica  
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## FORMAZIONE TITOLI

### EDUCATION

- Degree in Mathematics at Palermo University, April 2000.
- Phd in Mathematics and Computer Science at Palermo University, January 2005.
- Postdoc position from June 2005 until March 2008.

### INTERNATIONAL EXPERIENCES

- February 6 – July 30 1996: Erasmus scholarship - Laboratoire de l'Informatique du Parallélisme - Ecole Normale supérieure de Lyon, France.
- June 1996: Erasmus scholarship – Dep. of Mathematics and Natural Sciences, University of Leiden (The Netherlands).
- July – October 2002: Visiting student at California Institute of Technology, Pasadena, USA.

### ATTIVITA' DIDATTICA

#### TEACHING ACTIVITY

- Data structures and Algorithms: 2004, 2005, 2006, 2007, 2008: Corso di laurea in Informatica, Facoltà di Scienze, Università di Palermo.
- Statistical Learning: 2008, 2009, 2010, Corso di laurea specialistica in scienze dell'informazione, Facoltà di Scienze, Università di Palermo.
- Operating Systems: 2008, 2009, Corso di laurea in Informatica, Università di Palermo.
- Data Processing Systems: 2011, 2012, Corso di laurea in Informatica, Università di Palermo.
- Statistics: from 2004 to 2009, Scuola di Specializzazione in Anatomia Patologica, Università di Palermo. In 2011, 2012, Master di II livello in Biotecnologie applicate e bioinformatica nello studio e la diagnosi di malattie genetiche, Università di Palermo.

•Algorithms for Microarray Data Analysis: In 2011, 2012, Master di II livello in Biotecnologie applicate e bioinformatica nello studio e la diagnosi di malattie genetiche, Università di Palermo.

•Methodologies for Data Analysis: from 2012 to 2014, Corso di Laurea in Informatica, Università di Palermo.

•Algorithms for Data Analysis: 2015, 2016 Corso di Laurea in Informatica, Università di Palermo.

Biomedical Data Analysis: 2015, 2016, 2017, 2018 corso di laurea magistrale in Informatica dell'università di Palermo, Università di Palermo.

Artificial Intelligence and Deep Learning, 2019, 2020 corso di laurea magistrale in Informatica dell'università di Palermo, Università di Palermo.

Computer Programming, 2019,2020,2021 corso di laurea in Informatica, Università di Palermo.

### **INVITED TALKS**

- Tutorial Speaker at the Lipari School on Bioinformatics and Computational Biology "Statistical and Machine Learning Methods in Computational Biology", 2010.
- Tutorial Speaker at the Lipari School on Bioinformatics and Computational Biology, "Sequence Analysis and High Throughput Technologies", 2011.
- Tutorial Speaker at the Lipari School on Bioinformatics and Computational Biology, "Pharmacogenomics", 2012.
- Tutorial Speaker at the Lipari School on Bioinformatics and Computational Biology, "Computational Genomics and Personalized Medicine", 2014.

### **RICERCHE FINANZIATE**

#### Research Projects

- 2003-2007 FIRB 2001 dal titolo Bioinformatica per la Genomica e la Proteomica. Research group member.
- 2003-2005 PRIN 2003 "Sistema automatico di acquisizione e modellazione 3D a basso costo (LIMA3D). Research group member.
- 2004-2006 PRIN 2004 "Metodologie di data mining per le applicazioni di ebusiness". Research group member.
- 2006-2008 PI2S2 PON "Ricerca" 2000-2006 "Progetto per l'Implementazione e lo Sviluppo di una e-Infrastruttura in Sicilia basata sul paradigma della GRID. Research group member.
- 2006-2008 PNR 2005-2007 "ASIC-Applicazioni e Servizi Innovativi di Comunicazione Voce/Video/Dati". Research group member.
- 2013-2015 PON 2007-2013 PON04A2c "SMART HEALTH - CLUSTER OSDH - SMART FSE - STAYWELL". Head of Research Unit.
- 2014-2016 PON Smart Cities and Communities SCN00447 "ADAPT: Accessible Data for Accessible Prototypes in Social Sector". Head of Research Unit.
- 2013-2016 PRIN 2010-2011 "Automati e Linguaggi Formali: aspetti matematici e applicativi". Research group member.
- 2016-current PON 2007-2013 "Studio di Strategie Terapeutiche Mediche Innovative guidate da Imaging Molecolare e Proteogenomica: applicazione in Oncologia e Neurologia". Head of Research Unit.
- 2019-current Prin 2017 "Multicriteria Data Structures and Algorithms: from compressed to learned indexes, and Beyond". Research group member.

### **INCARICHI / CONSULENZE**

Membro della commissione scientifica di Ateneo dell'area 01, Università di Palermo, per il triennio 2010-2013.

### **ATTIVITA' SCIENTIFICHE**

### **PROGRAM COMMITTEE PARTICIPATIONS**

IbPRIA 2011; CPM 2011; PPSN2012; IbPRIA 2013; PPSN2014; VISAPP 2014; VISAPP 2015; KES-InMed-15; CIBB 2015; ICIAP 2015; VISAPP 2016; PPSN2016; KES-InMed-16; CIBB2016; MOD 2016; BITS 2016; VISAPP 2017; CIBB2017; KES-InMed-17; BIOKDD'17; ICIAP 2017; MOD 2017; NETTAB 2017; VISAPP 2018; PDP2018; GECCO 2018; PPSN 2018; LOD 2018; BIOKDD'18; BITS 2018; PPSN 2018; LOD 2018; BITS 2018; VISAPP 2019; CIBB 2018; GECCO 2019; CIBB 2019; KES-InMed-19; LOD 2019; ICIAP 2019; ICANN 2019; PPSN 2020; KES-InMed-20; VISAPP 2020; FAPER 2020; MAES 2020; GECCO 2020; iABC'20; IEEE EASIS 2020; SCSN 2020; LOD 2020; SCSN2021; KES-InMed-21; VISAPP 2021; WILF 2021; CIBB 2021; IEEE EASIS 2022;

## EVENTS ORGANIZATION

- General Chair of BITS 2019, Bioinformatics Italian Society Annual Meeting 2019, June 26-28, Palermo, Italy.
- Local Chair of the following events: CIBB 2010, Seventh International meeting on Computational Intelligence Methods for Bioinformatics and Biostatistics; CPM 2011, 22nd Annual Symposium on Combinatorial Pattern Matching; WILF2016: The Eleventh International Workshop on Fuzzy Logic and Applications; 6th Workshop on Data Analysis in Astronomy: Modelling and Simulation in Science, Wilf 2009, International Workshop on Fuzzy Logic and Applications, 7th Workshop on Data Analysis in Astronomy: Science: IMAGe IN AcTION.
- Tutorial Co-Chair International Conference on Image Analysis and Processing (ICIAP) 2013;
- Special Session Co-Chair: "Bio-curation and integration of biomedical databases" at 13th international conference on Computational Intelligence methods for Bioinformatics and Biostatistics CIBB2016; "Neural Networks meet Natural and Environmental Sciences" at 26th International Conference on Artificial Neural Networks ICANN 2017; "Soft Computing Methods For Characterizing Diseases From Omics Data" at 15th international conference on Computational Intelligence methods for Bioinformatics and Biostatistics CIBB2018.
- Workshop Co-Chair: BITS2019-Algorithms and Tools for the Analysis of Big Omics Data;

## EDITORIAL ACTIVITIES

### Books:

1. V. Di Gesù, G. Lo Bosco, M.C. Maccarone (Eds.) , "Modelling and Simulation in Science", Proceedings of the 6th International Workshop on Data Analysis in Astronomy <<Livio Scarsi>>, Erice (Italy), April 2007, World Scientific Publishing, Singapore, ISBN: 13-978-981-277-944-1
2. B. Zavidovique, G. Lo Bosco (Eds.) , "SCIENCE: IMAGe IN AcTION", Proceedings of the 7th International Workshop on Data Analysis in Astronomy "Livio Scarsi and Vito Di Gesù", Erice (Italy), April 2011, World Scientific Publishing, Singapore, ISBN: 13-978-981-4383-28-8.

### Special issues:

1. A. Urso, A. Fiannaca, M. La Rosa, L. La Paglia, G. Lo Bosco, R. Rizzo, BITS2019: The sixteenth annual meeting of the Italian society of bioinformatics, BMC Bioinformatics 2020, Vol 21, N. 363.

### Journals:

1. Academic Editor di Computational Intelligence and Neuroscience, ISSN: 1687-5265, Indawi.
2. Associate Editor di Information Sciences, ISSN: 0020-0255, Elsevier

## AMBITI DI RICERCA

- Machine Learning: Supervised and unsupervised classification of multidimensional data, deep learning models for classification.
- Bioinformatics: Gene expression data clustering, pattern identification in bio signals, DNA sequence analysis and classification
- Natural Language Processing: Sentiment classification, sarcasm detection, automatic evaluation of text complexity.
- Heuristics for optimization: Evolutionary Algorithms, simulated Annealing.
- Image analysis: Segmentation of digital images, biomedical image classification.
- Virtual/augmented/mixed reality.

