



## **Annalisa Barla**

Associate professor

✉ [annalisa.barla@unige.it](mailto:annalisa.barla@unige.it)

☎ +39 010 353 6602

### ***Education and training***

**2005**

#### **PhD in Computer Science**

A general framework for Image Kernel Engineering  
Università di Genova - Genova - IT

**2001**

#### **MSc in Physics**

Rappresentazione dati nella teoria statistica dell'apprendimento (Data representation in statistical learning theory)  
Università di Genova - Genova - IT

### ***Academic experience***

**2017 - ONGOING**

#### **Associate Professor in Computer Science**

Università di Genova - Genova - IT

**2012 - 2017**

#### **Assistant Professor in Computer Science**

Università di Genova - Genova - IT

**2008 - 2011**

#### **Research Fellow (Assegnista di Ricerca)**

Università di Genova - Genova - IT

**2006 - 2007**

#### **Research Fellow**

ITC-IRST (now Fondazione Bruno Kessler) - Trento - IT

**2005**

#### **Intern**

Siemens Corporate Research - Princeton NJ - US

### ***Teaching activity***

My teaching activity revolves mainly about the topics of my research:

- *digital signal and image processing* for computer scientists
- *bioinformatics and computational biology* for computer scientists

- *introduction to machine learning* for medical students
- *introduction to data science and visualization* for designers

## ***Postgraduate research and teaching activity***

### **Supervision of PhD students, residents and post-doctoral fellows**

As a PhD supervisor, I worked with:

- Margherita Squillario
- Samuele Fiorini
- Chiara Martini
- Federico Tomasi
- Vanessa D'Amario
- Veronica Tozzo
- Davide Garbarino

### **PhD committees membership**

- Medicina Translazionale in Oncologia ed Ematologia (2013-2016, ongoing)
- Computer Science and Systems Engineering (2017-2018)

## ***Research interests***

My main areas of interest are in the field of data science. I have been working in the past decade on machine learning methods for variable selection with sparse regularization and reproducible and robust methods in the small  $n$  large  $p$  setting. Currently I am expanding my scientific interest towards the understanding and visualization of complex structured data.

I am author and co-author of more than 50 peer reviewed journal and conference papers. Visit my Google Scholar profile to access a list of my publications at <https://bit.ly/2TIEhQc>

## ***Grants***

**2018 - ONGOING**

### **Advancing non-invasive procedures for the support of early diagnosis of partial epilepsies**

Compagnia di Sanpaolo - IT  
170Keur - Pricipal investigator

**2016 - ONGOING**

### **Early DETECTION of Multiple Sclerosis progression driven**

## **by clinical scales and Patient Reported Outcome (DETECT-MS PRO)**

FISM - Fondazione Italiana Sclerosi Multipla - IT  
110Keur - Pricipal investigator

2015

## **Detection of High Frequency Oscillations in Stereo-Electroencephalography with Sparse and Adaptive Dictionary Learning**

Universita' di Genova - Fondi di ricerca di ateneo - IT  
15keur - Pricipal investigator

2012 - 2013

## **Applicazioni di tecniche avanzate di sequenziamento del genoma (Next Generation Sequencing NGS) dalla ricerca alla pratica clinica**

CARIGE - IT  
100Keur - Pricipal investigator

2012

## **Modelli e metodi computazionali per grandi quantità di dati**

Universita' di Genova - Fondi di ricerca di ateneo - IT  
14keur - Pricipal investigator

## ***Editorial activity***

- Expert project reviewer  
Research Executive Agency - EU H2020-MSCA-ITN-2017 (H2020 Marie Sklodowska-Curie Actions)
- Scientific Advisory Board  
EU H2020 - Personalised Medicine Trials (PERMIT)
- Program Committee Member  
SCIPY 2017 - Scientific Computing with Python, AISTATS 2017 - The 20th International Conference on Artificial Intelligence and Statistics, ICHI 2014 - IEEE International Conference on Healthcare Informatics 2014 (ICHI 2014) – Verona, Italy, IJCAI-13 - 23rd International Joint Conference on Artificial Intelligence - Beijing, China, IDAMAP 2012 - Intelligent Data Analysis in bioMedicine and Pharmacology - Pavia, Italy
- Reviewer  
- Conferences  
AISTATS 2018 (20th International Conference on Artificial Intelligence, NIPS - 2017 (Neural Information Processing Systems), CIBB - 2017 (Computational Intelligence methods for Bioinformatics and Biostatistics), AAAI-17 (Thirty-First AAAI Conference on Artificial Intelligence), AISTATS 2017 (20th International

Conference on Artificial Intelligence and Statistics), NIPS - 2016 (Neural Information Processing Systems), ESANN - 2014 (European Symposium on Artificial Neural Networks), SciPy 2017 (Scientific Computing with Python)

- Journals

Bioinformatics, Plos One, BMC Genomics, Briefings in Bioinformatics, Pattern Recognition, Machine Learning, Neural Computation, Pattern Recognition, Neural Computation, Neurobiology of Aging, 'Bringing Maths to Life' (Springer Ed.), Inverse Problems in Science and Engineering, Statistical Applications in Genetics and Molecular Biology.

### ***Other professional activities***

Since May 2018, I am the Data Protection Officer for Università di Genova.