Annalisa Barla

Associate Professor

annalisa.barla@unige.it

https://personal.annalisabarla.it

Education

2005

PhD in Computer Science

Università di Genova - Genova, Italy

A general framework for Image Kernel Engineering

machine learning, SVM, kernel methods, kernel engineering, image understanding

2001

Master's degree in Physics

Università di Genova - Genova, Italy

Rappresentazione dati nella teoria statistica dellapprendimento (Data representation in statistical learning theory)

machine learning, SVM, kernel methods, kernel engineering, image understanding

LANGUAGE SKILLS

Italian - Native or bilingual

English - Expert or full professional

French - Elementary or limited professional

Institutional roles

2018 - 2021

Data Protection Officer in GDPR and data

Università di Genova - Genova, Italy

Academic and research experience

2017 - Ongoing
Associate Professor in Computer Science
Università di Genova - Genova, Italy

2012 - 2017
Assistant Professor in Computer Science
Università di Genova - Genova, Italy

2008 - 2011
Research Fellow (assegnista di ricerca) in Regularization methods for molecular data analysis
Università di Genova - Genova, Italy

2006 - 2007
Research Fellow in Machine learning for molecular data analysis
ITC-IRST (now Fondazione Bruno Kessler) - Trento, Italy

2005
Internship in Medical Image analysis
Siemens Corporate Research - Princeton, NJ, USA

Work experience

2017 - Ongoing
Expert project reviewer for EU grants
European Commission - ,

Teaching activity

2021/22 I semester
Analisi e visualizzazione dei dati
Master course - ITA
https://unige.it/off.f/2021/ins/49377

2021/22 I semester
Data Visualization
Master course - ENG
UniGe
Instructor: Annalisa Barla
https://unige.it/off.f/2021/ins/49507

2021/22 I semester
Advanced Machine Learning
Master course - ENG
UniGe
Instructor: Annalisa Barla, Lorenzo Rosasco, Nicoletta Noceti, Alessandro Verri
https://unige.it/en/off.f/2021/ins/49518

2022/23 I semester
Analisi e visualizzazione dei dati
Master course - ITA
UniGe
Instructor: Annalisa Barla

2022/23 I semester
Data Visualization
Master course - ENG
UniGe
Instructor: Annalisa Barla

2022/23 I semester
AI for medicine
Master course - ENG
UniGe
Instructor: Annalisa Barla

2022/23 I semester
Analisi automatica di immagini e video
Master course - ITA
UniGe
Instructor: Annalisa Barla

2024/25
BIP @TUKE
Single class in Workshop - ENG
TUKE, Slovakia (Ulysseus programme)
Instructor: Annalisa Barla

2024/25

Cognition School - Data Visualization

Single class in Workshop - ENG

Max Planck

Research projects

2019 - 2021

Deconstruct and rebuild phenotypes: a multimodal approach toward personalized medicine in ALS DECIPHER-ALS

Role within the project: Head of unit
Sponsors: MUR | PRIN
Total funding: 85 k€

2017 - 2020

UniGe Web - Data driven web redesign UniGeWeb

Theme: Data-driven methods for large-scale web redesign

Leading scientist: Annalisa Barla
Role within the project: co-Principal Investigator
Sponsors: UniGe
Total funding: 550 k€

2018 - 2020

Advancing non-invasive procedures for the support of early diagnosis of partial epilepsies Epilepsy-SANPAOLO

Theme: Machine learning methods for the analysis of time-dependent signals from EEG, Stereo-EEG

Leading scientist: Annalisa Barla
Role within the project: Principal Investigator
Sponsors: Compagnia di Sanpaolo
Total funding: 167 k€

2017 - 2019

Early DETECTion of Multiple Sclerosis progression driven by clinical scales and Patient Reported Outcome (DETECT-MS PRO) DETECT-MS_Pro

Theme: Prediction of disease progress in people with Multiple Sclerosis from clinical scales and questionnaires

Leading scientist: Annalisa Barla
Role within the project: Principal Investigator
Sponsors: FISM - Fondazione Italiana Sclerosi Multipla
Total funding: 110 k€

2017 - 2019

ML & Neuroscience MLNeuro-DIBRIS

Leading scientist: Annalisa Barla
Role within the project: Principal Investigator
Sponsors: UniGe ¦ DIBRIS SEED
Total funding: 15 k€

2017 - 2017

Assegni CARIGE: Frailty in elderly Elderly-CARIGE

Theme: Machine learning methods for the detection of risk events in ambient assisted living

Leading scientist: Annalisa Barla
Role within the project: Principal Investigator
Sponsors: Fondazione CARIGE - Fondazione Cassa di Risparmio di Genova e Imperia
Total funding: 25 k€

2012 - 2013

Applicazioni di tecniche avanzate di sequenziamento del genoma (Next Generation Sequencing – NGS): dalla ricerca alla pratica clinica NGS-CARIGE

Theme: Variable selection methods for the identification of genomic signatures

Leading scientist: Annalisa Barla
Role within the project: Principal Investigator
Sponsors: Fondazione CARIGE - Fondazione Cassa di Risparmio di Genova e Imperia
Total funding: 100 k€

Publications

A list of publications is available at:
https://personal.annalisabarla.it/research/publications

Activities in higher education

PHD BOARD MEMBERSHIP

2019 - Ongoing
Member of the PhD board for the Medicina Translazionale in Oncologia ed Ematologia degree
Università di Genova - Genova, Italy

2017 - 2018
Member of the PhD board for the Computer Science and Systems Engineering degree
Università di Genova - Genova, Italy

2013 - 2016
Member of the PhD board for the Medicina Translazionale in Oncologia ed Ematologia degree
Università di Genova - Genova, Italy

MENTORSHIPS

Ilaria Stanzani - PhD student

PAST MENTORSHIPS

Ilaria Stanzani - Research fellow

Rosanna Turrisi - Post-doc
Machine learning for neuroscience

Davide Garbarino - PhD student
Geometric deep learning and graphs for complex data

Alexandra Gronholz - Post-doc
Machine learning for life sciences

Vanessa D'Amario - PhD student
Machine learning for neuroscience

Veronica Tozzo - PhD student
Graphical methods for complex data

Daniele Pretolesi - Research Scholar
Textual data analysis

Simone Grossi - Research Scholar
Data manipulation and processing

Samuele Fiorini - PhD student
Biomedical machine learning

Chiara Martini - PhD student
Machine learning for bioengineering

Federico Tomasi - PhD student
Graphical methods for complex data

Margherita Squillario - PhD student
Machine learning for bioinformatics

Editorial activities

2012 - Ongoing

Program committee member

Reviewing activity as a PC 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

2015 - Ongoing

Reviewer

Reviewing activity for 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)

2011 - Ongoing

Reviewer

Reviewing activity for journal

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

2019 - 2022

Scientific advisory board member

Member of the SAB for the EU H2020 PERMIT project

EU H2020 - Personalised Medicine Trials (PERMIT)
personalized medicine, machine learning

Skills

EXPERTISE

Artificial intelligence

Expert knowledge of machine and deep learning methods, from design and conceptualization of original methods to the implementation and experimental setup

Scientific writing and dissemination

Skills and tools for scientific writing

Programming

Working knowlegde of Python, R, C++

Programming for web applications

Woring knowledge of HTML, CSS, PHP and related frameworks. Experience in CMS cusomization (Wordpress, Joomla, Drupal)