

Lorenzo Pasotti



[Lorenzo Pasotti, PhD](#)

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Born in Voghera (PV), on May 18th, 1984

Main affiliation

[Department of Electrical, Computer and Biomedical Engineering](#)

[Università degli Studi di Pavia](#)

Via Ferrata 5, I-27100 Pavia, Italy

Other affiliations

Centre for Health Technologies (CHT)

[Università degli Studi di Pavia](#)

Via Ferrata 5, I-27100 Pavia, Italy

Current Position

Researcher, University of Pavia, Italy

Academic Degree

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| 2012 | Ph.D. in Bioengineering and Bioinformatics at the University of Pavia, Italy
Thesis: Quantitative characterization of biological parts and devices for the bottom-up engineering of living systems in synthetic biology. |
| | Laurea Specialistica (MS degree) in Biomedical Engineering at the University of Pavia, Italy |
| 2008 | Thesis: Progetto e implementazione di circuiti genetici standardizzati per la realizzazione di funzioni logiche nel batterio <i>E. coli</i> . Score: 110 out of 110 cum laude. |

2006 Laurea (BS thesis) in Biomedical Engineering at the University of Pavia, Italy
Thesis: Un approccio per la modellizzazione e l'analisi di dati provenienti da sensori cinestetici indossabili. Score: 110 out of 110.

Appointments

2015-today Researcher, Department Computer, Electrical and Biomedical Engineering, University of Pavia, Italy
2012-2015 Post-doc Researcher, Centre for Tissue Engineering, University of Pavia, Italy
2008-2012 PhD Student in Bioengineering and Bioinformatics, Laboratory for Biomedical Informatics and Centre for Tissue Engineering, University of Pavia, Italy

Honorary Appointments

Feb-Sep 2011 Visiting researcher, Institute of Structural and Molecular Biology, School of Biological Sciences, University of Edinburgh, Scotland

Research Interests

Synthetic Biology, Bioinformatics and Data Mining, Biomedical Signal Processing, Models of Biological Systems.

Academic Activities

Courses

2016 - today Bioinformatics (Medical Biotechnology Master's Degree)
2011 - today [Bioinformatics and Synthetic Biology \(lessons on Synthetic Biology\) - Bioengineering Master's Degree](#)

Other Academic Activities

2016 Organization of the 3rd DDMoRe course: Model-informed Drug Development in Oncology (advanced) International School, July 4-8, University of Pavia, Italy.
2015 - 2016 Reviewer for the Plasmid (Elsevier) and Life (MDPI) journals
2016 Reviewer for the Italian National Bioengineering Group (GNB) PhD and Master thesis prizes
2016 Co-supervisor of the thesis: " Uso di modelli PKPD all'interno del DDMoRe Interoperability Framework: aggiornamento della sintassi, stima parametrica e produzione di grafici diagnostici" ("Use of PKPD models in the DDMoRe Interoperability Framework: syntax update, parameter estimation and

- generation of diagnostic plots") by Michele Zanoletti, Bioengineering Bachelor's Degree
- 2016 Co-supervisor of the thesis: "Modellizzazione matematica e studio degli effetti del carico metabolico in circuiti genetici interconnessi in *E. coli*" ("Mathematical modelling and study of the effects of metabolic burden in interconnected genetic circuits in *E. coli*") by Alberto Serra, Bioengineering Master's Degree
- 2016 Co-supervisor of the thesis: "Modelli meccanicistici per descrivere l'effetto della variazione del *copy number* di promotori e proteine regolatrici in circuiti sintetici" ("Mechanistic models to describe the effects of promoters and regulatory proteins copy number variation in synthetic circuits") by Matteo Arbuschi, Bioengineering Master's Degree
- 2015 Invited lecture: "Synthetic Biology". GRICU PhD National School, September 7th-11th, Padova, Italy. 2015 school name: "Biological and bioprocess engineering".
- 2015 Co-supervisor of the thesis: "Progettazione bottom-up di sistemi biologici: debug di circuiti sintetici interconnessi con comportamento non predicibile mediante approcci in-vivo ed in-silico" by Massimo Bellato, Bioengineering Master's Degree
- 2014 Co-supervisor of the thesis: "Studio del silenziamento di geni target mediante sRNA in circuiti sintetici e pathway metabolici" by Ilaria Massaiu, Bioengineering Master's Degree
- 2014 Co-supervisor of the thesis: "Modelli di Popolazione in ambito bayesiano: linee guida per l'implementazione dei principali casi di studio in Winbugs" by Lorenzo Chiudinelli and Nicola Melillo, Bioengineering Bachelor's Degree
- 2013 Co-supervisor of the thesis: "Fermentazione di uno scarto caseario per la produzione di bioetanolo: valutazione delle performance di diversi ceppi di *Escherichia coli* ingegnerizzati" by Edoardo Mazzocchi, Biological Sciences Bachelor's Degree
- 2013 Course 20.20 (Instructor: Natalie Kuldell), Introduction to Biological Engineering Design (MIT, Cambridge, USA): seminar on bacterial self-destruction devices
- 2011 iGEM Judge for the "Food or Energy" and "Manufacturing" area tracks at the European iGEM Jamboree, Amsterdam, The Netherlands
- 2011 Co-supervisor of the thesis: "Quantificazione in *E. coli* di un promotore artificiale coinvolto nel meccanismo di quorum sensing" by Morena Stuppia, Biomedical Engineering Bachelor's Degree
- 2010 Co-supervisor of the thesis: "Progetto di un sistema biologico ingegnerizzato per l'attivazione della vitamina D3 in sedute di emodialisi" by Matteo Meroso, Biomedical Engineering Master's Degree

- 2010 Invited lecture: "BioBrick, Standard Assembly and Registry of Standard Biological Parts". Italian National Group of Bioengineering XXIX annual school, September 13th-17th, Brixen (TN), Italy. 2010 school name: "Biologia Sintetica".
- 2010 and 2011 Course of Cellular and Molecular Bioengineering (Biomedical Engineering, Polo Scientifico-Didattico Cesena, University of Bologna): seminar on quantitative characterization of biological parts in synthetic biology
- 2010 Co-supervisor of the thesis: "Valorizzazione di uno scarto dell'industria casearia: studio della crescita di *E. coli* nel siero del latte" by Giacomo Zambianchi, Biomedical Engineering Master's Degree
- 2009 Co-supervisor of the thesis: "Progetto e realizzazione di un operone etanologeno per il batterio *E. coli*" by Susanna Zucca, Biomedical Engineering Master's Degree
- 2009 Co-supervisor of the thesis: "Sviluppo di applicativi Matlab e definizione di metodologie per l'analisi quantitativa di dati in biologia sintetica" by Elisa Del Fabbro, Biomedical Engineering Bachelor's Degree
- 2009 Course of Bioinformatics (Biomedical Engineering Master's Degree, University of Pavia): seminar on synthetic biology
- 2008 Dipartimento di Informatica e Sistemistica (University of Pavia): seminar on synthetic biology
- 2007 Course of Models of Biological Systems (Biomedical Engineering Bachelor's Degree, University of Pavia): seminar on Deconvolution Algorithms

Scientific Activities

International and National Organizations, Awards

- 2009 - today Member of the IEEE/EMBS
- 2006 - today Member of the [Bioengineering National Group](#) (GNB)
- 2012 "Gruppo Nazionale di Bioingegneria" award ("Alberto Mazzoldi" prize, 7th edition) for the PhD Thesis
- 2010 Winner of a gold medal at international Genetically Engineered Machine (iGEM) 2010 competition, MIT, Cambridge, MA
- 2009 "Best Food or Energy Project" award at international Genetically Engineered Machine (iGEM) 2009 competition, MIT, Cambridge, MA
- 2009 Winner of a gold medal at international Genetically Engineered Machine (iGEM) 2009 competition, MIT, Cambridge, MA
- 2009 "Gruppo Nazionale di Bioingegneria" (9th edition) award for the Master Thesis
- 2009 Best poster award at ESF European Conference of Synthetic Biology II, Sant Feliu de Guixols, Spain
- 2008 Fondazione Costa award for the Master Thesis

2008

Winner of a silver medal at international Genetically Engineered Machine (iGEM) 2008 competition, MIT, Cambridge, MA