Emidio Capriotti PhD

CURRICULUM VITÆ

Name: Emidio Capriotti
Nationality: Italian
Date of birth: February, 1973
Place of birth: Roma, Italy
Languages: Italian, English, Spanish

Positions

Jan 2018	Senior Assistant Professor (RTD type B): Department of Pharmacy and Biotechnology (FaBiT). University of Bologna, Bologna, Italy
2016-2017	Senior Assistant Professor (RTD type B): Department of Biological, Geological, and Environmental Sciences (BiGeA). University of Bologna, Bologna, Italy.
2015-2016	Junior Group Leader: Institute of Mathematical Modeling of Biological Systems, University of Düsseldorf, Düsseldorf, Germany
2012-2015	Assistant Professor: Division of Informatics, Department of Pathology, University of Alabama at Birmingham (UAB), Birmingham (AL), USA.
2011-2012	Marie-Curie IOF: Contracted Researcher at the Department of Mathematics and Computer Science, University of Balearic Islands (UIB), Palma de Mallorca, Spain.
2009-2011	Marie-Curie IOF: Postdoctoral Researcher at the Helix Group, Department of Bioengineering, Stanford University, Stanford (CA), USA.
2006-2009	Postdoctoral Researcher in the Structural Genomics Group at Department of Bioinformatics and Genetics, Prince Felipe Research Center (CIPF) Valencia, Spain.
2004-2006	Contract researcher at Department of Biology, University of Bologna, Bologna, Italy.
2001-2003	Ph.D student in Physical Sciences at University of Bologna, Bologna, Italy.

Education

Sep 2004	Master in Bioinformatics (first level) University of Bologna, Bologna (Italy).
Jun 2004	Ph.D. in Physical Sciences University of Bologna, Bologna (Italy).
Jul 1999	*Laurea* (B.S.) Degree in Physical Sciences, score 106/110 University of Bologna, Bologna (Italy).

Visiting

Jun 2012 – Jul 2012	Prof. Frederic Rousseau and Prof. Joost Schymkowitz, VIB Switch Laboratory, KU Leuven, Leuven (Belgium)
May 2009	Prof. Francisco Melo group. Department of Molecular Genetics and Microbiology. Pontificia Universidad Catolica de Chile, Santiago de Chile (Chile).
Jul 2008 – Aug 2008	Prof. Andrej Sali group, Departments of Biopharmaceutical Sciences and Pharmaceutical Chemistry, University of California at San Francisco (UCSF), San Francisco (CA).
Aug 2005 – Nov 2005	Prof. Jeffrey Skolnick group. Center of Excellence in Bioinformatics University of New York at Buffalo, Buffalo (NY)

Awards

Sep 2017 – Sep 2018	University of Bologna Cooperation Grant: International Cooperation Project UNIBO-UCSD. Study and development of computational methods for cancer genome interpretation.

Sep 2018	National Scientific Habilitation: Prima Fascia 05/E1 (Biochimica Generale)
Dec 2017	Ministry of Education, Universities and Research: Fondo per il finanziamento delle attività base di ricerca 2017.
Mar 2017	National Scientific Habilitation: Seconda Fascia 05/E1 (Biochimica Generale) e Seconda Fascia 05/E2 (Biologia Molecolare)
Oct 2006 – Aug 2009	Postdoc Research Fellowship. in the Structural Genomics Group at Department of Bioinformatics and Genetics, Prince Felipe Research Center (CIPF) Valencia, Spain
Sep 2001 – Sep 2002	SPINNER Consortium (Regione Emilia-Romagna) Research Fellowship for Technology Transfer through a grant to the BioDec project.

Personal research projects

2019-2021	PRIN 2017 - Local Coordinator. Integrative tools for defining the molecular basis of the diseases: computational and experimental methods for protein variant interpretation. University of Bologna (Italy)
2009-2012	Marie Curie International Outgoing Fellowships for Career Development. New methods to evaluate the impact of single point protein mutation on human health. Helix Group, Department of Bioengineering, Stanford University (2009-2011). Department of Mathematics and Computer Sciences, University of Balearic Islands (2012).
2012	EMBO Short Term Fellowship, Computational methods to predict the functional impact of protein variations on alpha-galactosidase and the efficacy of pharmacological chaperone therapy.
2008	Short-term research fellowship from the Valencian Government (Spain) for the development of a method for RNA structure prediction using MODELLER program. Departments of Biopharmaceutical Sciences and Pharmaceutical Chemistry, University of California, San Francisco (UCSF).
2005	Marco Polo Research Fellowship for “Implementation of new software for protein structure prediction” developed in the Center of Excellence in Bioinformatics University at Buffalo.

Participation in research projects

2018-2020	Role of VpreB in immunoglobulin antigen binding site selection (NIH 1R21AI134027-01A1) PI: Harry Schroeder. Role: Investigator.
2016-2018	Bioinformatics applications in phylogenetics, metagenomics, systems biology and cancer genomics. (MEC: DPI2015-67082-P) PI: Francesc Andreu Rossello’. Role: Investigator.
2015-2017	The pre-BCR CDR-H3 sensing site and H chain selection (NIH: 1R21AI117703-01A1). PI: Harry Schroeder. Role: Investigator.
2006-2008	Marie Curie Reintegration Grant - European Union. RNA Comparative Modeling. PI: Marc A. Marti-Renom. Role: Postdoc
2004-2006	BioSapiens Network of Excellence, funded by the European Union's VI Framework Programme. PI: Janet Thornton. Role: Postdoc
2003-2004	National Institute for Biophysics and Biomaterials (INBB) Research Fellowship. Partially supported by MURST (FISR 2002) project *Hydrolases from Thermophiles: Structure, Function and Homologous and Heterologous Expression*. PI: Neri Niccolai. Role: Research Assistant

Teaching activity

At the University of Bologna, I am member of the committee of the PhD program in Cellular and Molecular Biology.
I was member of the committee of the PhD program in Earth, Life and Environmental Sciences. I am contributing to the training activity in the International Master in Bioinformatics as instructor for the second module of Laboratory of Bioinformatics 1.

From 2015 to 2016, at the University of Düsseldorf I gave 2 one-week modules as part of the master courses “Introduction to Systems Biotechnology” and "Biological Networks".
From 2014 to 2015 at the University of Alabama at Birmingham, in collaboration with Dr. Malay Basu, I was course master in two courses in the Graduate Biomedical Science program at UAB and organizer of the CB2 (Computational Biology and Bioinformatics) Journal Club at UAB. The list of courses given during past years is reported below.

2018-2019	Module 2: Laboratory of Bioinformatics 1 (66563), International Master in Bioinformatics (60 hours). University of Bologna.
2017-2018	Module 2: Laboratory of Bioinformatics 1 (66563), International Master in Bioinformatics (60 hours). University of Bologna.
2016-2017	Module 2: Laboratory of Bioinformatics 1 (66563), International Master in Bioinformatics (60 hours).

University of Bologna.

2015-2016	Module: Introduction to Computational Biology and Bioinformatics. Introduction to Molecular Systems Biotechnology course (M4453). Molecular Systems Biotechnology Master (20 hours). University of Düsseldorf. Module: Introduction to Protein-Protein Interaction Network. Biological Networks course (M4424). Molecular Systems Biotechnology Master (20 hours). University of Düsseldorf
2015-2016	GBSC 703-01A **-** Introduction to Scientific Computing, Graduate Biomedical Science Program (48 hours). University of Alabama at Birmingham (USA).
2014-2015	GBSC 703-01E Computational Biology and Bioinformatics, Graduate Biomedical Science Program (40 hours). University of Alabama at Birmingham (USA).
2014-2015	GBSC 703-01A **-** Introduction to Scientific Computing, Graduate Biomedical Science Program (48 hours). University of Alabama at Birmingham (USA).
2013-2014	GBSC 703-01A **-** Introduction to Scientific Computing, Graduate Biomedical Science Program (30 hours). University of Alabama at Birmingham (USA).

I was also contracted professor for the following courses held by Prof. Rita Casadio at the University of Bologna (Italy):

2004-2005	Bioinformatics - Degree in Biotechnology (30 hours)
2003-2004	Laboratory of Biophysics II - Degree in Biotechnology Models for Biological Systems - Degree in Biotechnology (90 hours total)
2002-2003	Structural Biochemistry - Degree in Biotechnology (70 hours)
2001-2002	Laboratory of Biophysics II - Degree in Biotechnology (25 hours)

Mentoring activity

Currently, I am co-mentoring the research activity of Jaume Sastre Tomàs, PhD student at the Department of Mathematics and Informatics, University of Balearic Islands (Spain). I am also mentoring the master thesis of Alessandro Vinceti, student of the International Master in Bioinformatics at the University of Bologna (Italy). In the past, I directed the master thesis of:

Emina Merdan	Title: Characterizing the impact of mutations at functional and network levels in Lung Adenocarcinoma**.** International Master in Bioinformatics at the University of Bologna (Italy). Bologna, 26 September 2018.
Oronzo Tassiello	Title: Computational methods for scoring genomes of Lung Adenocarcinoma International Master in Bioinformatics at the University of Bologna (Italy). Bologna, 9 March 2018.
Luigi Chiricosta	Title: Detecting cancer causing genes and variants in Colon Adenocarcinoma. International Master in Bioinformatics at the University of Bologna (Italy). Bologna, 26 September 2017.

I was internal tutor for the Master Thesis of:

Patricia Mirela Bota	Role: co-tutor (Internal) Degree: Master in Bioinformatics - University of Bologna (Italy) Date: Jul 2018
Valentina Sora	Role: co-tutor (Internal) Degree: Master in Bioinformatics - University of Bologna (Italy) Date: Jul 2018
Massimo Amicone	Role: co-tutor (Internal) Degree: Master in Bioinformatics - University of Bologna (Italy) Date: Jul 2017

At the University of Alabama at Birmingham, I was supervising the research activity of one postdoc (Dr. Rui Tian) and one master student (Shivani Viradia).

Previously, I collaborated with Prof. Rita Casadio, Dr Mario Compiani and Dr Marc A. Marti-Renom to mentor the research activity of the following students:

Alberto Stizza	BS thesis in Physical Sciences, Catholic University of Brescia (Italy)
Daniela Danesi	BS thesis in Physical Sciences, Catholic University of Brescia (Italy)
Maria Procopio	BS thesis in Physical Sciences, University of Bologna (Italy)
Remo Calabrese	PhD thesis in Biotechnology, University of Bologna (Italy)
Giulia Gentile	MS thesis in Bioinformatics, CRS4 Bioinformatics Laboratory Cagliari (Italy)
Stefania Bosi	PhD student, University La Sapienza, Roma (Italy)

Miquel Oltra Sastre Master thesis, Open University of Catalonia (Spain)

Reviewer activity

I am faculty member of the F1000 Biology in the section of Bioinformatics. I am reviewer for the following journals: Nature Communications, Bioinformatics, Briefings in Bioinformatics, Nucleic Acids Research, The American Journal of Human Genetics, PLOS Computational Biology, Scientific Reports, Cancer Research, Oncotarget, BMC Bioinformatics, PLOS ONE, BMC Genomics, Proteins, Human Mutation, Human Genetics, Human Genomics, Amino Acids, BMC Structural Biology, Database, Current Bioinformatics, Current Protein and Peptide Science, Journal of Bioinformatics and Computational Biology, Neurocomputing, Information Fusion, IEEE/ACM Transactions on Computational Biology and Bioinformatics. I was reviewer of projects for the Medical Research Council of the United Kingdom and for the Austrian Academy of Sciences.

Other scientific activity

I am member of the International Society of Computational Biology (ISCB). I served as co-chair in the organization of the Personal Genomics session at the Pacific Symposium of Biocomputing (PSB) 2011. I was member of the Data Committee in the first edition of the Critical Assessment of Genome Interpretation (CAGI) 2010. From 2011, in collaboration with Yana Bromberg and Hannah Carter, I organized 6 editions of the VarI-SIG meeting (formerly SNP-SIG) in Vienna (Austria), Long Beach, (California), Berlin (Germany), Boston (Massachusetts), Dublin (Ireland) and Orlando (USA). With Yana Bromberg and Hannah Carter I am co-editor of 5 BMC Genomics special issues publishing selected works among those presented at the VarI-SIG meetings from 2011 to 2015. More information about the VarI-SIG meeting is available at http://varisig.biofold.org. In 2013, I was member of the Proceedings Papers Committee for the ISMB/ECCB Conference. In 2015 I was member of the Late Breaking Research Committee for the ISMB/ECCB Conference. In 2016 I was co-chair of the Disease track for the ISCB Latin American Conference in Buenos Aires (Argentina). I was co-chair of the VarI-COSI session at the ISMB/ECCB Conference in July 21-25, 2017 Prague (Czech Republic). In 2018 I was Area Chair and co-chair of the VarI-COSI session at the ISMB Conference held on July 6-10, Chicago (USA). The same year I was assessor for the frataxin challenge at the V edition of the Critical Assessment of Genome Interpretation (CAGI) meeting, July 5-7, Chicago (USA).

Research interests

- Analysis and interpretation of cancer genome.
- Genome interpretation and prediction of disease-related protein variants.
- Machine learning approaches in molecular biology.
- Protein-protein interactions.
- RNA structure comparison and prediction.
- Protein folding kinetics.
- Prediction of protein stability changes upon mutation.
- Protein structural prediction by threading methods and building by homology.
- Molecular dynamics of protein systems.

Developed web servers, tools and databases

- **ContrastRank:** probabilistic method for cancer gene prioritization and cancer sample classification.
  WEB: http://snps.biofold.org/contrastrank
- **DrCancer:** predictor of cancer causing non-synonymous single nucleotide polymorphisms.
  WEB: http://snps.biofold.org/drcancer
  Fido-SNP: Predicting the impact of genetic variants in the dog genome.
  WEB: http://snps.biofold.org/fido-snp
- **I-Mutant1.0:** Neural Network based method to predict the sign of free energy change of proteins upon single point mutation.
  WEB: http://gpcr2.biocomp.unibo.it/cgi/predictors/I-Mutant/I-Mutant.cgi
- **I-Mutant2.0:** Support Vector Machine based method to predict the sign and the value of free energy change of proteins upon single point mutation.
  WEB: http://folding.biofold.org/i-mutant
- **K-Fold:** Support Vector Machine based method to predict the mechanism and rate of protein folding kinetic.
  WEB: http://folding.biofold.org/k-fold
- **Meta-SNP:** Meta-predictor of disease causing variants that uses PANTHER, PhD-SNP, SIFT and SNAP.
  WEB: http://snps.biofold.org/meta-snp
- **Omidios:** Omidios, a database of pre-calculated likely impact of a Single Nucleotide Polymorphism in the human genome.

WEB: http://sgt.cnag.cat/services/Omidios/

- **PhD-SNP:** Support Vector Machine based Method to discriminate between disease-related and neutral mutations in proteins.
  WEB: http://snps.biofold.org/phd-snp
- **PhD-SNPg:** A gradient boosting-based method for predicting the impact of genetic variants in coding and non-coding regions.
  WEB: http://snps.biofold.org/phd-snpg
- **SARA:** a tool for Structural Alignment of Ribonucleic Acids.
  WEB: http://structure.biofold.org/sara
- **SARA-Coffee**: tool for RNA multiple structural alignments obtained merging SARA and T-Coffee.
  WEB: http://www.tcoffee.org/Projects/saracoffee/
- **WebRASP:** statistical potential for scoring the quality of RNA three-dimensional structure.
  WEB: http://melolab.org/webrasp
- **WS-SNPs&GO:** predictor of human disease related mutations in proteins with functional annotation.
  WEB: http://snps.biofold.org/snps-and-go

International conferences meetings and schools (50)

- XXVI Intelligent Systems for Molecular Biology meeting (ISMB), Chicago, (USA), 6-10 July 2018.
- V Critical Assessment of Genome Interpretation (CAGI). Chicago, (USA), 5-7 July 2018.
- The molecular basis of diseases: Can we infer phenotypes from protein variant analysis? FEBS Advanced Course. 23-25 May 2018, Bologna, Italy
- Bologna Winter School 2018: *Big Data and Bioinformatics.* Bologna (Italy), 12-16 February 2018.
- XXV Intelligent Systems for Molecular Biology meeting (ISMB) and XVI European Conference on Computational Biology (ECCB), Prague, (Czech Republic), 21-25 July 2017
- Bologna Winter School 2017: *Revisiting Bioinformatics Foundations.* Bologna (Italy), 13-17 February 2017.
- XIV Intelligent Systems for Molecular Biology meeting (ISMB), Orlando, FL (USA), 8-12 July 2016
- Bologna Winter School 2016: *In Silico Markers for Precision Medicine.* Bologna (Italy) 22-26 February 2016.
- EMBL Conference on Cancer Genomics, Heidelberg (Germany), 1-4 November 2015.
- XXIII Intelligent Systems for Molecular Biology meeting (ISMB) and XIV European Conference on Computational Biology (ECCB), Dublin (Ireland), 12-14 July 2015
- UAB NHGRI IV Short Course on Next-Generation Sequencing; Technology and Statistical Methods. Birmingham (AL), 15-18 December 2014.
- XIII European Conference on Computational Biology (ECCB), Strasbourg (France), 7-10 September 2014.
- XXII Intelligent Systems for Molecular Biology meeting (ISMB), Boston, Massachusetts (USA), 13-15 July 2014.
- VarI-SIG meeting. Identification and annotation of genetic variants in the context of structure, function, and disease. Boston, Massachusetts (USA), 12 July 2014.
- XXI Intelligent Systems for Molecular Biology meeting (ISMB) and XII European Conference on Computational Biology (ECCB), Berlin (Germany), 21-23 July 2013
- SNP-SIG meeting. Identification and annotation of SNPs in the context of structure, function, and disease. Berlin (Germany), 19 July 2013
- Critical Assessment of Genome Interpretation (CAGI). Berlin (Germany), 17-18 July 2013.
- ESHG Course in Next Generation Sequencing, Bertinoro di Romagna (Italy), 17-20 May 2013
- Summit on Translational Bioinformatics (TBI), San Francisco, California (USA), 18-20 March 2013.
- XX Intelligent Systems for Molecular Biology meeting (ISMB), Long Beach, California (USA), 15-17 July 2012.
- SNP-SIG meeting. Identification and annotation of SNPs in the context of structure, function, and disease. Long Beach, California (USA), 14 July 2012.
- Bologna Winter School 2012 *Proteins and their variants: structure and function prediction.* Bologna (Italy) 13-17 February 2012.
- XIX Intelligent Systems for Molecular Biology meeting (ISMB) and X European Conference on Computational Biology (ECCB), Vienna (Austria), 17-19 July 2011.
- SNP-SIG meeting. Identification and annotation of SNPs in the context of structure, function, and disease. Vienna (Austria), 15 July 2011.
- EMBO Young Scientist Forum. International Institute of Molecular and Cell Biology (IIMCB), Warsaw (Poland), June 30th – July 1st 2011.
- Pacific Symposium on Biocomputing (PSB) 2011. Big Islands, Hawaii January 3-7 2011.
- Critical Assessment of Genome Interpretation (CAGI). University of California at Berkeley. Berkeley, California (USA), 10 December 2010.
- Biomedical Computation at Stanford (BCATS). Stanford University. Palo Alto, California (USA), 6 November 2010.
- Exploring the functional consequences of genomic variation (HGVS meeting), Washington DC (USA), 2 November 2010
- II Workshop on Annotation, Interpretation and Management of Mutations (AIMM) and IX European Conference on Computational Biology (ECCB), Ghent (Belgium), 26-29 September 2010.
- 4th Comprehensive Cancer Research Training Program (CCRTP) at Stanford University, Palo Alto California (USA), 13-17 September 2010.

- 9th International Conference on Computational Systems Bioinformatics (CSB). Stanford, Palo Alto, California (USA), 16-18 August 2010.
- XVIII Intelligent Systems for Molecular Biology meeting (ISMB), Boston (USA), 11-13 July 2010.
- Biomedical Computation at Stanford (BCATS). Stanford University. Palo Alto, California (USA), 7 November, 2009.
- Lipari International Summer School on BioInformatics and Computational Biology. RNAs: structure, function and therapy. Lipari (ME) 13-20 June, 2009.
- VII European Conference on Computational Biology (ECCB), Cagliari (Italy), 22-26 September 2008.
- Workshop on Applications of Protein Models in Biomedical Research, University of California San Francisco (UCSF), San Francisco (CA) 11-12 July, 2008
- III Course on Molecular Evolution, Phylogenetics and Phylogenomics, Valencia (Spain) 12-16 May 2008.
- Non-Coding RNAs: Computational Challenges and Applications. Antalya (Turkey) 28-30 April 2008.
- XV Intelligent Systems for Molecular Biology meeting (ISMB) and VI European Conference on Computational Biology (ECCB), Vienna (Austria), 21-25 July 2007.
- ISMB 3DSig Satellite Meeting - Structural Bioinformatics and Computational Biophysics, Vienna (Austria), 19-20 July 2007.
- EMBO Workshop: Viral RNA: Structure Function and Targeting. EMBL Heidelberg (Germany) 5-7 March 2007.
- Bologna Winter School 2006. Applied Bioinformatics: The test case of Human Genome. Bologna (Italy), 13-17 February, 2006.
- Bologna Winter School 2005: *How Complex is Functional Genomics?* Bologna (Italy), 13-19 February 2005. XII Intelligent Systems for Molecular Biology (ISMB) and III European Conference on Computational Biology meeting (ECCB), Glasgow (Scotland) 31 July – 4 August 2004.
- Bologna Winter School 2004: *The State of the Art of Protein-Protein Interaction Networks. The role of the "in silico" approach*, Bologna (Italy) 8-14 February 2004.
- Meeting Galileo Project. Marseille (France) 27-28 June 2003.
- Bologna Winter School 2003: *Hot Topics in Structural Genomics* Bologna (Italy) 9-15 February 2003.
- Bologna Winter School 2002: *Predicting 3D Structure of Difficult Proteins*. Bologna (Italy) 3-9 February 2002.
- Bologna Winter School 2001: *In Silico Biomolecular Recognition.* Bologna (Italy) 4-10 February 2001.
- Bologna Summer School: *Biotechnology Protein Sequence Analysis in the Genomic Era.* Bologna (Italy) 10-16 October 1999.

National conferences meetings and schools (12)

- Computational and Translational Methods for Cancer Genomics, Bologna 29 May, 2018.
- German Conference on Bioinformatics (GCB) 2015, Dortmund (Germany), 27-30 September 2015.
- UAB Comprehensive Cancer Center, 15th Annual Research Retreat and Research Competition, Birmingham, Alabama (USA), October 29 2012.
- VIII Jornadas de Bioinformatica. Valencia (Spain), 13-15 February 2008.
- VI Meeting on Nucleic Acids and Nucleotides (RANN07), Valencia (Spain), 22-23 November 2007.
- VII Jornadas de Bioinformatica. Zaragoza (Spain), 20-22 November 2006.
- Bioinformatics Italian Society (BITS) Annual Meeting 2006. Bologna (Italy), 28-29 April 2006.
- Bioinformatics Italian Society (BITS) Annual Meeting 2004 Padova (Italy), 26-27 March 2004.
- Workshop Staminal Cells: *Properties and Perspectives*. Bressanone (Italy), 11-13 September 2003.
- XI National School of Biophysics: Biophysics of the Cell. Bressanone (Italy), 8-10 September 2003.
- IX National School of Biophysics: *Biophysics and Biomaterials*. Bressanone (Italy), 3-5 September 2001.
- XXXI National Congress of Physical Chemistry, Padova (Italy), 19-23 June 2001.

Invited talks (30)

07 Aug 2006	Centro de Investigacion Principe Felipe (CIPF), Valencia (Spain)
23 Oct 2007	Centro Nacional de Investigaciones Oncológicas (CNIO), Madrid (Spain)
06 May 2008	Département d'Informatique, Université Libre de Bruxelles (ULB), Bruxelles (Belgium)
23 Apr 2009	Departament de Ciències Matemàtiques i Informàtica, Universitat de les Illes Balears (UIB), Palma de Mallorca (Spain)
27 May 2010	Buck Institute, Novato (California, USA**)**
02 Jul 2010	Luxembourg Centre for System Biomedicine, Luxemburg University, Luxembourg
20 Sep 2010	Department of Genetics and Bioengineering, Yeditepe University, Istanbul (Turkey)
25 Jan 2011	Department of Medicinal Chemistry and Molecular Pharmacology, Purdue University, Lafayette (Indiana, USA).
18 Feb 2011	Lawrence Berkeley National Laboratory, Berkeley (California, USA).

21 Mar 2011	Department of Computer Sciences, Wayne State University, Detroit (Michigan, USA).
06 Apr 2011	J. Craig Venter Institute, San Diego (California, USA)
22 Apr 2011	Department of Bioengineering, University of Texas at Dallas (Texas, USA)
17 May 2011	Department of Pathology, University of Alabama at Birmingham (Alabama, USA)
26 May 2011	Department of Computer Science, Université Pierre et Marie Curie, Paris (France)
16 Jun 2011	Instituto Gulbenkian de Ciencia, Oeiras (Portugal)
29 Jun 2011	International Institute of Molecular and Cell Biology, Warsaw (Poland)
04 Oct 2011	Institut de Cancerologie Gustave Roussy, Villejuif (France)
06 Oct 2011	Karlsruhe Institute of Technology, Karlsruhe (Germany)
12 Jun 2012	Switch Lab, KU Leuven, Leuven (Belgium)
30 Apr 2013	Biomedical Informatics Day, Adelaide (SA, Australia)
16 Jul 2013	Institute for Medical and Human Genetics, Charité University, Berlin (Germany)
07 Oct 2013	CCNR, Northeastern University, Boston (Massachusetts, USA)
10 Dec 2013	Macromolecular Biochemistry Research Center (CRBM), CNRS, Montpellier (France)
14 Dec 2013	Computational Biology Institute (IBC), CNRS, Montpellier (France)
12 Feb 2014	Institute of Genetics and Molecular and Cell Biology (IGBMC), Strasbourg (France)
22 May 2014	Montpellier Cancer Research Institute, University of Montpellier, Montpellier (France)
06 Aug 2014	Izmir Biomedicine and Genome Center (IBG), Izmir (Turkey)
18 Sep 2014	Technical University of Munich (TUM), Munich (Germany)
26 Sep 2014	Pontificia Universidad Catolica de Chile, Santiago de Chile (Chile)
12 Sep 2016	Adam Mickiewicz University (AMU), Poznan (Poland)

Invited lectures (18)

01 Sep 2011	Statistics and Genomics Seminar, University of California, Berkeley (California, USA)
17 Feb 2012	Bologna Winter School 2012, Bologna (Italy)
08 Feb 2013	Anatomic Pathology Didactic Conference. University of Alabama at Birmingham (Alabama, USA)
15 Feb 2013	Genetics and Genomics Seminar Series. University of Alabama at Birmingham (Alabama, USA)
04 Mar 2013	GBM-722 Bioinformatics Course. University of Alabama at Birmingham (Alabama, USA)
07 Mar 2013	Biotechnology Professional Master. University of Alabama at Birmingham (Alabama, USA)
22 Apr 2013	GBS Structural Biology Course. University of Alabama at Birmingham (Alabama, USA)
14 May 2013	Laboratory Medicine Seminar. University of Alabama at Birmingham (Alabama, USA)
17 May 2013	European School of Genetic Medicine. European School of Genetic Medicine, Bertinoro (Forli', Italy)
02 Feb 2014	GBM-722 Bioinformatics Course. University of Alabama at Birmingham (Alabama, USA)
06 Mar 2014	Biotechnology Professional Master. University of Alabama at Birmingham (Alabama, USA)
03 Jul 2014	GBS-758 New Perspectives in Cardiovascular Biology. University of Alabama at Birmingham (Alabama, USA)
08 Oct 2014	Biotechnology Professional Master. University of Alabama at Birmingham (Alabama, USA)
18 Dec 2014	UAB NHGRI IV Short Course on Next-Generation Sequencing; Technology and Statistical Methods. University of Alabama at Birmingham (Alabama, USA)
25/26 Feb 2016	Bologna Winter School 2016, University of Bologna (Italy).
09 Jun 2017	PhD Program in Biochemistry, "La Sapienza" University, Roma (Italy)
06 Sep 2017	Special course on NGS data analysis. CRO National Cancer Institute, Aviano (Italy)
17 Jan 2019	Winter School University of Verona, Canazei (Italy)

Publications

I published 38 research articles and 9 reviews in international peer-reviewed journals with impact factor. I also published 14 between book chapters (9) and congress acta (5). Using **Google Scholar** my papers received more than 4,000 citations corresponding to an h-index of 26. According to **Scopus**, my papers received more than 2,800 citations corresponding to an h-index of 24. Using **Web of Science** my articles received more than 2,500 citations corresponding to h-index of 22. The total Impact Factor of the publications calculated in 2017 is about 238.

Google Scholar: http://scholar.google.es/citations?user=qAa7Et0AAAAJ
Scopus: https://www.scopus.com/authid/detail.uri?authorId=8851983500
ORCID: http://orcid.org/0000-0002-2323-0963
ResearcherID: http://www.researcherid.com/rid/D-9318-2011
ResearchGate: https://www.researchgate.net/profile/Emidio_Capriotti

Papers on international journals with impact factor (39)

***Capriotti E**, Fariselli P, Rossi I, Casadio R* (2004). A Shannon entropy-based filter detects high-quality profile-profile alignments in searches for remote homologues. **Proteins** 54:351-360.

Compiani M, ***Capriotti E****, Casadio R* (2004). The dynamics of the minimally frustrated helices determine the hierarchical folding of small helical proteins. **Phys Rev E**. 65:051905-8.

Capriotti E*, Fariselli P, Casadio R* (2004). A neural network-based method for predicting protein stability changes upon single point mutations. **Bioinformatics.** 20 (Suppl 1):I63-I68.

Stizza A, ***Capriotti E****, Compiani M* (2005). A minimal model of three-state folding dynamics of helical proteins. **Journal of Physical Chemistry B,** 109: 4215-4226. (IF: 3.302, Google Citations: 2)

Capriotti E*, Fariselli P, Casadio R* (2005). I-Mutant2.0: predicting stability changes upon mutation from the protein sequence or structure. **Nucleic Acids Research**, 33 Web Server Issue: W306-W310.

Capriotti E*, Fariselli P, Calabrese R, Casadio R* (2005). Predicting protein stability changes from sequences using support vector machines. **Bioinformatics,** 21 Suppl 2:ii54-ii58**.**

Capriotti E*, Compiani M* (2006). Diffusion-Collision of Foldons Elucidates the Kinetic Effects of Point Mutations and Suggests Control Strategies of the Folding Process of Helical Proteins. **Proteins**, 64: 198-209.

Grandi F, Sandal M, Guarguaglini G, ***Capriotti E****, Casadio R, Samorì B* (2006). Hierarchical mechanochemical switches in Angiostatin. **ChemBiochem,** 7; 1774-1782.

Capriotti E*, Calabrese R, Casadio R.* (2006). Predicting the insurgence of human genetic diseases associated to single point protein mutations with Support Vector Machines and evolutionary information. **Bioinformatics,** 22; 2729-2734.

Capriotti E**, Casadio R* (2007). K-Fold: a tool for the prediction of the protein folding kinetic order and rate. **Bioinformatics,** 23; 385-386.

Capriotti E*, Arbiza L, Casadio R, Dopazo J, Dopazo H, Marti-Renom MA* (2008). The use of estimated evolutionary strength at the codon level improves the prediction of disease related protein mutations in human. **Human Mutation**, 29; 198-204.

Capriotti E*, Marti-Renom M.* (2008). RNA structure alignment by a unit-vector approach. **Bioinformatics**, 24; i112-i116.

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