

CURRICULUM VITAE

Mattia Prosperi, MEng, PhD

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PERSONAL INFORMATION

Office Address & Contact Information:

2004 Mowry Road
Gainesville 32610-0231, Florida, USA
phone: +1-352-273-5860
e-mail: m.prosperi@ufl.edu

EDUCATION, QUALIFICATIONS AND TRAINING

	<i>Institution and location</i>	<i>Year(s)</i>	<i>Degree/Role</i>	<i>Mark/Merits</i>	<i>Major</i>
Education (Graduate Degrees)	University of Milan, Milan, Italy	2009	Spec. Course	Merit Scholar.	Bioinformatics
	Roma Tre University, Rome, Italy	2004-2008	Ph.D.	Merit Scholar.	Computer Science & Automation
	Roma Tre University, Rome, Italy	1997-2003	M.Eng.	109/110	Computer Science Engineering
Qualifications	French Ministry of Superior Education and Research, France	2010	Maître de Conférences	N/A	Computer Science
	Italian Ministry of Education, University and Research, Italy	2018	Habilitation to University Professorship (Level II)	N/A	Computer Science Engineering, Molecular Biology
Training	University College London, London, United Kingdom	2007-2008	Visiting Scholar	N/A	Biostatistics, Epidemiology
	Parc de Recerca Biomèdica de Barcelona, Barcelona, Spain	2007	Visiting Scholar	N/A	Bioinformatics
	Max Planck Institute, Saarbrücken, Germany	2006	Visiting Scholar	N/A	Bioinformatics
	University of Bergen, Bergen, Norway	1999-2000	Visiting Scholar	N/A	Computer Science Engineering

POSITIONS AND EMPLOYMENT

Academic Positions

2015-current	Associate Professor (Preeminence), tenured in 2019, Department of Epidemiology, College of Public Health and Health Professions & College of Medicine, University of Florida, Gainesville, FL, USA.
2012-2015	Assistant Professor [Lecturer as per the British academic nomenclature] in Biomedical Modelling, Centre for Health Informatics, Division of Informatics, Imaging & Data Sciences, University of Manchester, Manchester, UK. Honorary Lecturer, Education and Research Centre, University Hospital of South Manchester, Manchester, UK.
2010-2012	Post-doctoral associate, Emerging Pathogens Institute, University of Florida, Gainesville, FL, USA.

2009-2010	Post-doctoral associate and adjunct professor, Catholic University of the Sacred Heart, Rome, ITA.
2008-2009	Post-doctoral associate, National Institute of Infectious Diseases, Rome, ITA.

Professional Consultancies

2010-2012	Malattie Infettive e Salute Internazionale (MISI) foundation, Brescia, ITA.
2010-2012	Catholic University of the Sacred Heart, Rome, ITA.
2003-2011	Informa Pro, LLC, Rome, ITA.
2007-2009	Italian cohort of naïve to antiretrovirals (Icona) foundation, Milan, ITA.

PERSONAL STATEMENT

My research interests are in the areas of *data science* and *biomedical modelling*. I lead my research group towards the development of original algorithms and applications, exploiting machine learning with a critical eye on causality, and designing usable tools.

My **theoretical research** is focused on development of new computational intelligence approaches tailored to the analysis of high-dimensional and heterogeneous data, e.g. unstructured social and behavioral data, electronic medical records, multi-omics sequencing data.

My **applied research** foresees the development of prediction and intervention (i.e. counterfactual) models of future life statuses, with focus on precision medicine and public health. I capitalize on my engineering background together with epidemiology experience to exploit successfully a layered big data analytics paradigm, which integrates multiple domains, such as socio-demographic, ecological, clinical, -omics, and sensor technology. In such multi-level integration of individual and social-ecological determinants, I hybridize traditional theory-based models with bottom-up data mining.

I lead the *Data Intelligence Systems Lab (DISL)*, (<https://epidemiology.phhp.ufl.edu/people/faculty-staff/faculty/core-faculty/mattia-prosperi/data-intelligence-systems-lab-disl/>) at University of Florida, promoting interdisciplinary team science, education, and scholarly activities.

I foster Master's and PhD students to create a specialized workforce that will enable the University to excel in the next-generation data science. I am organizer of the "*International Bioinformatics Workshop on Virus Evolution and Molecular Epidemiology*", editor of "*BMC Medical Informatics and Decision Making*" and "*Global Health Research and Policy*". I am also member of the *Association for Computing Machinery (ACM)*, the *American Medical Informatics Association (AMIA)* and program member of several international conferences, including ACM's Conference on Bioinformatics, Computational Biology, and Health Informatics.

PUBLICATIONS

My publication record includes over 140 works in peer-reviewed international journals/books (**h-index 31**, i10-index 70), of which about half authored as first/senior author, including pieces with the *Nature* and *PNAS* publishers. My publications cover multiple areas of basic and applied research, including biomedical and health informatics, machine learning, biomathematics, computational biology, computational epidemiology, and bio-inspired robotics.

A comprehensive list can be found via my Google scholar profile and via my NCBI for PubMed-indexed papers

- <https://scholar.google.com/citations?user=lymUyDkAAAA&hl=en>
- <https://www.ncbi.nlm.nih.gov/myncbi/tNQd-7sVrcEk-/bibliography/public/>

The complete list of publications is appended at the end of this resume. I also presented regularly abstracts/posters at international conferences from 2004 to current date.

RESEARCH SUPPORT

Ongoing Research Support

Extramural Funding

FL DEPT OF HEALTH (Prosperi)	RENEWAL	04/01/2019-03/31/2020	1.2 calendar months
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Role (budget): **PI (\$115,704)**

Title: Spatiotemporal analysis of HIV drug resistance in Florida.

Goal: fine-grained geospatial modelling to relate HIV drug resistance with multiple sociodemographic indicators, from individual- (e.g. age, risk behavior) to community-level factors (e.g. deprivation score).

NIH NCATS 5UL1TR001427-04 (Nelson) 04/01/2019-03/31/2024 1.0 calendar months

Role (budget): Co-I (\$3,418,250 first year)

Title: Together: transforming and translating discovery to improve health.

Goal: The University of Florida's Clinical and Translational Science Institute (CTSI) mission is to improve human health by accelerating the translation of scientific discoveries and the implementation of evidence-based best practices for the diagnosis, treatment, prevention and cure of human disease.

NIH NIA R21AG062884 (Ingibjargardottir-Bjarnadottir, Lucero) 4/1/2019-3/31/2021 1.2 calendar months

Role (budget): Co-I (\$2,571,658)

Title: Advancing Interdisciplinary Science of Aging through Identification of Iatrogenic Complications: The UF EHR Clinical Data Infrastructure for Enhanced Patient Safety among the Elderly (UF-ECLIPSE).

Goal: To enhance the safety of hospitalized older adults by reducing iatrogenic conditions through an effective learning health system.

IT MISI Foundation (Prosperi) 01/15/2019- 12/31/2021 0.18 calendar months

Role (budget): **PI (\$20,400)**

Title: Management of standardized evaluation of retroviral HIV Infection (MASTER).

Goal: To integrate data from established HIV cohorts in Italy that have been collecting data on participants for up to 15 years and address research questions regarding HIV treatment, outcomes and hepatitis co-infection.

NIH NIAID 1R01AI141810-01 (Boucher, Prosperi) 11/26/2018 - 10/31/2023 2.4 calendar months

Role (budget): **MPI (\$2,139,795)**

Title: Developing Computational Methods for Surveillance of Antimicrobial Resistant Agents.

Goal: Develop scalable bioinformatics methods to identify and track drug resistance signatures of pathogens across clinical and agricultural environments.

NIH NIAID 1R21AI138815-01 (Prosperi, Salemi) 04/01/2018-03/31/2020 1.44 calendar months

Role (budget): **PI (\$389,333)**

Title: HIV Dynamic Modelling for Identification of Transmission Epicenters (HIV-DYNAMITE).

Goal: develop a novel theoretical and technical framework to model dynamically HIV transmission clusters on large sequence data.

NIH NINDS R01NS063897 (Salemi) 09/30/2017-06/30/2022 1.2 calendar months

Role (budget): Co-I (\$3,623,736)

Title: Viral evolution in peripheral macrophages and brain during progression to AIDS.

Goal: investigate the role of viral evolution in the development of HIV-associated neurocognitive disorders during antiviral therapy.

NSF SES 1734134 (Prosperi, Bian, Zhou) 09/01/2017-08/31/2020 0.8 calendar months

Role (budget): **PI (\$392,840)**

Title: A Person-Centric Prediction Model of Job Loss based on Social Media.

Goal: study individual and network determinants of dramatic life events like job loss using social media streams through deep learning and natural language processing methods.

Intramural Funding

UNIVERSITY OF FLORIDA's "Creating the Healthiest Generation" Moonshot initiative, which is supported by the UF Office of the Provost, UF Office of Research, UF Health, UF College of Medicine and UF Clinical and Translational Science Institute (Morris) 01/01/2019-12/31/2019 N/A

Role (budget): Co-I (\$265,332 direct only)

Title: Confronting the Threat of Emerging Pathogens and Eliminating Hospital-Acquired Drug Resistant Infections

UNIVERSITY OF FLORIDA's "Creating the Healthiest Generation" Moonshot initiative, which is supported by the UF Office of the Provost, UF Office of Research, UF Health, UF College of Medicine and UF Clinical and Translational Science Institute (Shenkman, Hogan) 01/01/2019-12/31/2019 N/A

Role (budget): Co-I (\$501,150 direct only)

Title: Advance Data Capabilities: Integrating Precision Public Health and Precision Medicine

Completed Research Support

US DEPT OF HOMELAND SECURITY (Blackburn) 06/01/2016-05/31/2019 1.2 calendar months

Role (budget): Co-I (\$1,527,011)

Title: Bacterial Population Genetics of Select Agent Pathogens.

Goal: Sequence and characterize evolutionary history of C. Botulinum via next-gen bioinformatics.

FL DEPT OF HEALTH (Prosperi) 05/01/2018-03/31/2019 2.0 calendar months

Role (budget): **PI (\$115,704)**

Title: Spatiotemporal analysis of HIV drug resistance in Florida.

Goal: fine-grained geospatial modelling to relate HIV drug resistance with multiple sociodemographic indicators, from individual- (e.g. age, risk behavior) to community-level factors (e.g. deprivation score).

NIH NCI R21CA195251-01A1 (Mai, Prosperi) 01/06/2016-12/31/2017 ext. 12/31/2018 1.2 calendar months

Role (budget): **PI (\$258,542)**

Title: Big data approach for correlating gut microbiota with epithelial methylation pattern.

Goal: Investigate multi-domain large scale modelling to associate methylation data and gut microbiota with colorectal cancer.

ARBOR PHARMACEUTICALS (Cottler) 09/01/2018 - 11/30/2018 0.6 calendar months

Role (budget): Co-I (\$377,539)

Title: Study of Non-Oral Administration of Prescription Stimulants (SNAPS).

Goal: Investigate the prevalence of the different patterns of use and predictors of the transition from oral to non-oral administration of prescription stimulants using traditional survey methods and infodemiology (social media surveillance using artificial intelligence).

UNIVERSITY OF FLORIDA's Health Cancer Center (Asirvatham, Chim, Mai, Prosperi, Yaghjian) 10/2017-09/2018 N/A

Role (budget): **PI (\$42,200)**

Title: Correlations between breast microbiota and tissue methylation pattern.

Goal: Profiling microbiota in normal breast tissue and link it to genome methylation.

EU H2020-PHC-32-2014 #634650 (Vandamme) 06/01/2015-05/31/2018 2.4 calendar months

Role (budget): **PI of work package (€437,560 / total project costs €2,995,968)**

Title: Virogenesis: Virus discovery and epidemic tracing from high throughput metagenomics sequencing.

Goal: To develop novel bioinformatics models, methods and tools for virome analysis and epidemic tracing using next-generation sequencing data.

NIH NIMH 1R21MH109360/01-02 (Marshall) 04/05/2016-03/31/2018 0.9 calendar months
 Role (budget): **PI of subaward (\$37,590 / total project costs \$261,525)**
 Title: Enhancing pre-exposure prophylaxis implementation to optimize individual and community-level impact.
 Goal: Develop an agent-based simulation model of outcomes and effectiveness of HIV pre-exposure prophylaxis.

IT MISI Foundation (Prosperi) 03/31/2015-03/31/2018 0.7 calendar months
 Role (budget): **PI (\$24,354)**
 Title: Management of standardized evaluation of retroviral HIV Infection (MASTER).
 Goal: To integrate data from established HIV cohorts in Italy that have been collecting data on participants for up to 15 years and address research questions regarding HIV treatment, outcomes and hepatitis co-infection.

IT CINECA ISCRA SCAI HP10CD4PA7 (Milicchio, Prosperi) 10/2016-10/2017 N/A
 Role (budget): **PI (4Million CPU-hours)**
 Title: Tools for Assembly of Next-Generation Sequencing U-mer Data Objects
 Goal: To develop and test parallel C++ assembly methods of next-generation sequencing data.

University of Florida's Health Cancer Center & Institute on Aging (Bird, Gerke, Manini, Prosperi) 02/2016-02/2018 N/A
 Role (budget): **PI (\$40,000)**
 Title: Endotype discovery in prostate cancer and multi-domain analysis of age-related comorbidities.
 Goal: Secondary analysis of large genomic and clinical data base to identify endotypes of prostate diseases related to prostate malignancy and age-related comorbidities.

UNIVERSITY OF FLORIDA's Health Quasi Endowment Fund – Renewal (Lucero) 02/2017-02/2018 1.2 calendar months
 Role (budget): **Co-I (\$50,000)**
 Title: Strengthening the UFHealth Nursing Academic Partnership Phase III: Generating Practice-based Evidence for Quality Improvement
 Goal: To develop an Electronic Hospital-Acquired Condition Data Registry and build a precision medicine model of fall prevention and post-fall recovery outcomes in high-risk populations.

UNIVERSITY OF FLORIDA's Health Quasi Endowment Fund (Lucero) 02/2016-02/2017 1.2 calendar months
 Role (budget): **Co-I (\$64,358)**
 Title: Strengthening the UFHealth Nursing Academic Partnership Phase III: Generating Practice-based Evidence for Quality Improvement
 Goal: To develop an Electronic Hospital-Acquired Condition Data Registry and build a precision medicine model of fall prevention and post-fall recovery outcomes in high-risk populations.

IT EURESIST FOUNDATION (Prosperi) 07/15/2015-07/14/2016 0.72 calendar months
 Role (budget): **PI (\$19,600)**
 Title: EuResist Engine retraining and revision.
 Goal: Inference and implementation of a machine learning model (command-line and web-service) for the optimization of HIV antiretroviral therapy based on patients' characteristics and viral genotype data.

FLORIDA ACADEMIC CANCER CENTER ALLIANCE (Yaghjian) 2015-2016 N/A
 Role (budget): **Co-I (\$50,000)**
 Title: Gut microflora and estrogens: a new paradigm for breast cancer risk reduction
 Goal: The study investigates the association of intestinal microbiome with endogenous estrogen metabolism in healthy postmenopausal women undergoing routine mammographic screening.

IT CINECA ISCRA SCAI HP10CU1H2A (Milicchio, Proserpi) 09/2014-09/2015 N/A
 Role (budget): **PI (200,000 CPU-hours)**
 Title: Distributed Processing of High-Throughput Sequencing Data via De Bruijn Graphs (PHERCOI)
 Goal: To develop and test parallel software in C++ for error correction of next-generation sequencing data.

NIH NIAID R01 AI097405-03 (Morris) 08/01/2014-11/30/2015 0.96 calendar months
 Role (budget): Co-I (\$2,724,560)
 Title: Cholera Transmission in Gressier Region, Haiti: Refinement of Bioinformatics.
 Goal: 1) Identification of *V. cholerae* in household members and in the environment; 2) Assessment and comparison of evolutionary changes in clinical and environmental *V. cholerae* isolates, making use of VNTR and whole genome SNP analysis; 3) Further refinement and validation of mathematical models of cholera transmission, including assessments of the impact of immunization and other interventions on transmission.

UK MRC MR/L011808/1 (Griffiths) 09/2014-08/2019 N/A
 Role (budget): Researcher (£5,004,540)
 Title: Psoriasis Stratification to Optimise Relevant Therapy (PSORT)
 Goal: To better understand determinants of response to biologic therapies and deliver, in close collaboration with commercial partners, a PSORT stratified algorithm to guide psoriasis management.

UK BBSRC BB/M001121/1 (Robertson) 09/2014-08/2017 N/A
 Role (budget): Co-I (£274,155)
 Title: Computational methods for microbial next-generation sequencing data
 Goal: 1) To address a specific set of unsolved theoretical problems in the fields of metagenomics and microbiology/virology-associated sequencing projects; and 2) to introduce new methods for visualizing next-generation sequencing alignments graphically, for example, in three-dimensional space.

UK MRC MR/L012693/1 (Johnston) 05/2014-05/2019 N/A
 Role (budget): Co-I; *role ended after leaving UK* (£2,200,000)
 Title: Phenotyping immune responses in asthma and respiratory infections - a systems approach to understanding changes from childhood to adulthood
 Goal: To conduct computational analysis to identify novel mechanisms related to increased susceptibility to asthma, allergies and respiratory diseases, elucidating the development of functional antiviral and anti-bacterial immune responses and of epigenetic marks in relation to genetics from childhood to adulthood.

IT FONDAZIONE MISI (Proserpi) 2012-2014 N/A
 Role (budget): **PI (€18,000)**
 Title: Management of standardized evaluation of retroviral HIV Infection" (MASTER).
 Goal: To integrate data from established HIV cohorts in Italy that have been collecting data on participants for up to 15 years to address research questions regarding HIV treatment, outcomes and hepatitis co-infection. Objectives include epidemiological-, clinical-, laboratory-, and health service research, as well as improving service and infrastructure for future projects.

UNIVERSITY OF FLORIDA's NIH NCRR UL1 RR029890 (Proserpi) 2011-2012 N/A
 Role (budget): **PI (\$25,000)**
 Title: Solving the puzzle of quasispecies reconstruction using next-generation sequencing technologies.
 Goal: Develop and implement algorithms and software for viral population assembly using next-generation sequencing data

UNIVERSITY OF FLORIDA's EPIG (Proserpi) 2011-2012 N/A

Role (budget): **PI (\$5,000)**

Title: HIV-1 intra-host evolution in HLA-B*5701 patients with slow disease progression.

Goal: Study evolutionary dynamics of HIV-1 intra-host in slow-progressors using phylodynamics methods.

TEACHING, SELECTED INVITED TALKS & MENTORING

Sep. 2019 (seminar)	Guest seminar “Big data hurdles in precision medicine and public health” at Northeastern University, Boston, MA.
June 2019 (seminar)	Invited talk “Big data hurdles in precision medicine and public health” at the Digital Health summit in Grasmere, UK, organized by Lancaster University.
Mar. 2019 (seminar)	Invited seminar “Dynamic Modelling of Phylogenies for Identification of Transmission Epicenters in the HIV Epidemic, HIV-DYNAMITE” at the Center for Statistics and Quantitative Infectious Diseases (CSQUID) working group, University of Florida.
Jan.-Apr. 2019 (course, 14 hrs)	University of Florida’s PHC6937: Topics in Precision Medicine and Public Health Informatics.
Nov. 2018 (seminar)	Guest lecture for University of Florida’s GMS 6803: Data Science in Clinical Research. Title: “Eagle’s view on machine learning”.
Oct. 2018 (seminar)	Invited seminar “Predicting human-immunodeficiency virus rebound after therapy initiation/switch using genetic, laboratory, and clinical data” for University of Florida’s HSC6935: Core Seminar in the Translational Science of Alcohol and HIV Infection.
Aug. 2018 (course, 15 hrs)	Organizer and teacher at the “23 rd International Bioinformatics Workshop on Virus Evolution and Molecular Epidemiology” Robert Koch Institute, Berlin, Germany.
June 2018 (seminar)	Invited seminar “A Combined Man-Machine Modelling Pipeline for Characterizing Life Events from Twitter” School of Business and Administration, Zhejiang GongShang University, Hangzhou, China.
May-June 2018 (course, 14 hrs)	University of Florida’s PHC7083: Computational Epidemiology in Population Science.
Jan. 2018 (seminar)	Guest seminar (CME-accruing) at Vanderbilt University, Nashville, TN. Title: “Challenges in Next-Generation Metagenomics: Rethinking the Microbiome/Virome Characterization for Known Species, and Chasing the Unknown.”
Jan.-Mar. 2018 (course, 14 hrs)	University of Florida’s PHC6937: Topics in Precision Medicine and Public Health Informatics.
Nov. 2017 (seminar)	Guest lecture for University of Florida’s GMS 6803: Data Science in Clinical Research. Title: “Big Data Schmucks in Precision Medicine and Precision Public Health”.
Sep. 2017 (seminar)	Invited seminar at the University of Florida’s “College of Medicine Alumni Weekend”. Title: “Big Data Science for Precision Medicine and Precision Public Health”.
Aug. 2017 (course, 15 hrs)	Organizer and teacher at the “22 nd International Bioinformatics Workshop on Virus Evolution and Molecular Epidemiology” Nova University, Lisbon, Portugal.
July 2017 (seminar)	Guest lecture for University of Florida’s PHC4101: Public Health Concepts. Title: “Big Data Science for Precision Medicine and Precision Public Health”.
May-June 2017 (course, 14 hrs)	University of Florida’s PHC7083: Computational Epidemiology in Population Science (4.7/5.0 students’ evaluation score).
Mar. 2017 (seminar)	Guest lecture for University of Florida’s PHC7000: Epidemiology Seminar Series II. Title: “Overview of Genome-Wide Analyses”.
Mar. 2017 (seminar)	Guest seminar at Brown University, Providence, Rhode Island “Precision Medicine via

	Multi-Domain Inference, to Say Nothing of Big Data”.
Mar. 2017 (course, 10 hrs)	Co-organizer and teacher for the “Genomic Virology Workshop” held in Montreal, Canada, with McGill University and Genome Quebec, funded by the Canadian Food Inspection Agency.
Feb. 2017 (seminar)	Invited seminar at University of Texas Medical Branch, Galveston, Texas “Challenges in Next-Generation Metagenomics - Refining the Microbiome / Virome Characterization for Known Species, and Chasing the Unknown”.
Nov. 2016 (seminar)	Guest lecture for University of Florida’s GMS6850: Foundations of Biomedical Informatics. Title: “Multi-domain Inference in Healthcare” (4.3/5.0 students’ evaluation score).
Sep. 2016 (keynote)	Invited keynote at the 2016 Annual Meeting of the American College of Clinical Pharmacology, Bethesda, MD. Title: “Multi-domain inference in healthcare”.
Aug. 2016 (course, 15 hrs)	Organizer and teacher at the “21 st International Bioinformatics Workshop on Virus Evolution and Molecular Epidemiology” Korea University, Seoul, South Korea.
May-June 2016 (course, 14 hrs)	University of Florida’s PHC6937: Computational Epidemiology in Population Science (4.8/5.0 median students’ evaluation score).
Dec. 2015 (seminar)	Guest lecture for University of Florida’s GMS6850: Foundations of Biomedical Informatics. Title: “Precision Genomic/Molecular Medicine” (4.7/5.0 students’ evaluation score).
Aug. 2015 (keynote)	Invited keynote “Multi-Domain Inference in Healthcare: Building the Big Data Community” at the “Phenotypic Prediction Workshop” University of Florida, FL, USA.
Aug. 2015 (course, 15 hrs)	Organizer and teacher at the “20 th International Bioinformatics Workshop on Virus Evolution and Molecular Epidemiology” University of West Indies, Trinidad and Tobago.
Sep. 2014 (course, 15 hrs)	Organizer and teacher at the “19 th International Bioinformatics Workshop on Virus Evolution and Molecular Epidemiology” National Institute of Infectious Diseases, Rome, Italy.
2013-2014 (tutoring, 70 hrs)	Tutor for Professional and Personal Development, University of Manchester, UK.
Dec. 2013 (seminar)	Invited seminar “Big Data Inference in Healthcare” University of Manchester, UK.
Aug. 2013 (course, 20 hrs)	Organizer and teacher at the “18 th International Bioinformatics Workshop on Virus Evolution and Molecular Epidemiology” University of Florida, FL, USA.
May. 2013 (seminar)	Invited seminar “Bayesian network inference for large-scale data (to say nothing of the other methods)” University of Sheffield, UK.
Mar. 2013 (seminar)	Invited seminar “Bayesian Networks and Large Scale Data Mining” Catholic University of Leuven, Leuven, Belgium.
Aug. 2012 (course, 5 hrs)	Teacher at the “17 th International Bioinformatics Workshop on Virus Evolution and Molecular Epidemiology” University of Belgrade, Serbia.
Oct. 2011 (course, 15 hrs)	Teacher at the international workshop “Bioinformatics for Phylogenetic Reconstruction in Virology” Hospital de Pediatria Garrahan, Buenos Aires, Argentina.
Aug. 2010 (course, 5 hrs)	Teacher at the “16 th International Bioinformatics Workshop on Virus Evolution and Molecular Epidemiology” Johns Hopkins University, Rockville, MD, USA.
June 2010 (seminar)	Invited seminar “Mathematical Models for HIV-1 Therapy Optimisation” Institute for Scientific Interchange (ISI), Turin, Italy.
Jan.-Mar. 2010 (course, 15 hrs)	“Biostatistics for physicians” at the doctorate school in Biology and Clinic of Tropical and Infectious Diseases, Catholic University of the Sacred Heart, Rome, Italy.
Dec. 2008 (seminar)	Invited seminar “Bioinformatics helps to make sense of HIV drug resistance” Borodino

2004-2008 (teaching assistance, ~10/20 hrs per course)	Ht., Moscow, Russia. Teaching assistant at the faculty of Computer Science Engineering of the Roma Tre University, Rome, Italy, for the courses of: “Misure e strumentazione per l’automazione” [Measures and Instruments for Automation] (Master’s level), “Intelligenza artificiale” [Artificial Intelligence] (Master’s level), “Fondamenti di automatica” [Foundations of Automation] (Bachelor’s level).
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Mentoring

Fellows: Carla Mavian (2016-2017); Giuseppe Tradigo (2016); Rebecca Rose (2015-2018) at University of Florida.

Graduate students: Kai Wang (PhD, 2018), Zhaoyi Chen (PhD, 2019), Jae Min (PhD, 2019), Shannan Rich (PhD expected 2021), Inyoung Jun (PhD expected 2022) at University of Florida; Paolo Fraccaro (PhD, 2017), Rebecca Howard (PhD, 2018) at University of Manchester, UK; Rebecca Hunter Smith (MSc, 2018) at University of Florida; Arturo Franchini (MEng, 2017) at University of Brescia, Italy; Hans-Joachim Sonntag (MSc, 2014) at University of York, UK; currently advising MPH students at University of Florida, 2-3 per year (2015-2018).

Certified supervisor for PhD students (May 2014, University of Manchester, UK –it enables to take the role of main PhD supervisor in UK).

Undergraduate students trained or being trained: 6 at University of Manchester (2013-2014).

EDITORIAL APPOINTMENTS, MEMBERSHIPS, RELEVANT SERVICES

Editorial Appointments

2019 – current	Associate Editor of <i>Global Health Research and Policy</i> (IF=TBA).
2017	Guest editor of <i>Current Medicinal Chemistry</i> (IF=3.8).
2011 – current	Associate Editor of <i>BMC Medical Informatics and Decision Making</i> (IF=2.6).

International Workshops / Conferences

2014 - current	Member of the program committees of: ISCB/ISMB (2014); IEEE/CBMS (2014); DMMI-AMIA (2014-2015, 2018), IEA/AIE (2017), ACM-BCB (2017-2019, including track and publicity chair), SIMBIG (2018-2019), IEEE-BIBM (2018).
2013 - current	Organizer of the International Bioinformatics Workshop on Virus Evolution and Molecular Epidemiology (http://rega.kuleuven.be/cev/avd/meetings/international-bioinformatics-workshops).

Professional / Scientific Memberships

2018 - current	Member of the American Medical Informatics Association (AMIA, https://www.amia.org/)
2016 - current	Member of the Association for Computing Machinery (ACM, https://www.acm.org/).
2015 - current	Member of University of Florida’s: 1) Cancer Center; 2) Genetics Institute; 3) Emerging Pathogens Institute.
2012 - current	Member of the scientific committee of the Management of Standardized Evaluation of Retroviral HIV Infection (MASTER) cohort (http://www.mastercohort.it/).
2003 - current	Member of the scientific committee of the Italian Antiretroviral Resistance Cohort Analysis (ARCA) (www.hivarca.net).

Grants Review / Study Sections

2019	US National Institutes of Health (NIH): study section ZRG1 AARR-N (51) R.
2018	US National Science Foundation (NSF): Computer, Information Science and Engineering (CISE).
2018	UK Royal Society.
2018	UK Wellcome Trust.

2017	US National Institutes of Health (NIH): study section ZAI1 JA-M M2 1.
2017	UK Medical Research Council (MRC).
2016	Swiss Institute of Bioinformatics (SIB).
2013 - 2018	Research Foundation Flanders - Fonds Wetenschappelijk Onderzoek - Vlaanderen, Belgium.
2013	US-Israel Binational Science Foundation.

Journal Peer Review

Generalist	Interciencia; PeerJ; PLOS ONE; Scientific Reports (Nature's).
Bioinformatics / Health Informatics	Bioinformatics; BMC Genomics; BMC Medical Informatics and Decision Making; IEEE/ACM Transactions on Computational Biology and Bioinformatics; IEEE Journal of Biomedical and Health Informatics; Journal of Biomedical and Health Informatics; Mathematical Problems in Engineering; PLOS Computational Biology.
Molecular Evolution	Infection, Genetics and Evolution.
Epidemiology / Infectious Diseases	AIDS Research and Human Retroviruses; Antiviral Therapy; BMC Infectious Diseases; International Journal of STD & AIDS; Journal of AIDS and HIV Research; Lancet HIV; The Journal of Infectious Diseases; Virology Journal; Virus Research.

Other Services

2016 - 2017	Ombudsman for University of Florida's Department of Epidemiology.
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HONORS, SCHOLARSHIPS & AWARDS

2018	University of Florida's Faculty Enhancement Opportunity (http://aa.ufl.edu/resources/resources-for-faculty/programs-for-faculty/faculty-enhancement-opportunity-feo/).
2017	Southeastern Conference (SEC) Visiting Faculty Travel Grant (http://www.theseecu.com/programs/sec-faculty-travel-program/2017-2018-sec-faculty-participants/).
2016	First place in the Illumina, Inc., "GoMini Scientific Challenge", with award comprising a MiniSeq, a Mini Cooper, and reagents for three sequencing runs, for a cash value ~\$100,000 (http://www.illumina.com/company/news-center/feature-articles/illumina-announces-winners-of-miniseq-scientific-challenge.html).
2012	Runner-up (2 nd place) in the Geneious' "iEvoBio" challenge for the best bioinformatics plugin (http://www.geneious.com).
2009	ComputerWorld Honors Awards (Washington DC, http://www.cwhonors.org/), given to the EuResist project.
2009	Merit scholarship, Specialty Course in Phylogenetics and Bioinformatics, University of Milan.
2005 - 2008	Merit scholarship, Ph.D., Roma Tre University.
1999	"Erasmus" University scholarship (one year) from the EU.
1996	Stage offered by "Scuola Normale Superiore di Pisa" to the best high-school students in Italy.

SOFTWARE RELEASED

- HIV-DYNAMITE – Dynamic identification of transmission clusters using phylogenetic methods (<https://github.com/ProsperiLab/HIVdynamite>)
- LibSeq and NanoPAL – Generic programming library in C++ for next-generation sequencing data analytics, with focus on portable mobile computing of Oxford's Nanopore data (<https://fmilicchio.bitbucket.io/nanopal.html>).

- QuRe – Viral quasispecies assembly from next-generation sequencing data (<http://sourceforge.net/projects/quire/>)
- HErCoOl - Error correction software for next-generation sequencing data based on *k*-mer spectrum and de Bruijn graph (<http://sourceforge.net/projects/hercool/>)
- PhyloPart – Large-scale phylogeny partition (<http://sourceforge.net/projects/phylopart/>)
- PhyloTempo – Assessing/Visualizing Temporal Clustering in Genealogies (<http://sourceforge.net/projects/phylotempo/>)
- *The Threshold Bootstrap Clustering (TBC)* – Bootstrapped partition of molecular sequence alignment via leader clustering (<http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0013619>)
- Trophix – Prediction of co-receptor tropism for human immunodeficiency virus (<http://sourceforge.net/projects/trophix/>)

FULL LIST OF PUBLICATIONS

Letters and editorials

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4. Wang K, Chen X, Cheng TD, Qiu P, Bird VY, **Prosperi M.** Association of Long-Term Dynamics in Circulating Testosterone with Serum PSA in Prostate Cancer-Free Men with Initial-PSA < 4 ng/mL. *Horm Cancer.* 2019 Oct 16. doi: 10.1007/s12672-019-00369-y. [Epub ahead of print]
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9. Modave F, Zhao Y, Krieger J, He Z, Guo Y, Huo J, **Prosperi M,** Bian J. Understanding Perceptions and Attitudes in Breast Cancer Discussions on Twitter. *Stud Health Technol Inform.* 2019 Aug 21;264:1293-1297. doi: 10.3233/SHT190435.
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