

UNIVERSITY OF MILAN

Public selection for recruiting No.1 tenure track researcher(s) (RTT) for competition sector 02/A2 _____, (scientific-disciplinary sector FIS/02) at the Department of physics "ALDO PONTREMOLI", (announcement published in Official Gazette No. 49 of 18-06-24 _____) - Competition code 5577

Gianluca Ascolani

CURRICULUM VITAE

PERSONAL DATA (DO NOT INCLUDE YOUR PERSONAL ADDRESS AND LANDLINE OR MOBILE PHONE NUMBER)

SURNAME	ASCOLANI
NAME	GIANLUCA
DATE OF BIRTH	28/05/1981

QUALIFICATIONS

DOCTORAL DEGREE OR EQUIVALENT QUALIFICATION EARNED IN ITALY OR ABROAD / MEDICAL SPECIALISATION DIPLOMA OR EQUIVALENT QUALIFICATION, FOR THE RELEVANT SECTORS, EARNED IN ITALY OR ABROAD

(Specify qualification full name and related score, institution, date, thesis title, etc.)

PhD in Physics, University of North Texas, Denton, Texas, USA, 15-05-2010
 Title: "EEG, Alpha Waves and Coherence".
 Modelling and analysis of neural networks, anomalous diffusion processes, EEG, renewal systems, memory and aging.

DEGREE

(Specify full degree name and related score, University, date, thesis title, etc.)

Master Degree in Physics (108/110), University of Pisa, 26-05-2006,
 Title: "Renewal stochastic systems and linear response: beyond the Green-Kubo theory".
 Development of a new fluctuation dissipation theorem for renewal systems.

RESEARCH CONTRACTS, RESEARCH FELLOWSHIP CONTRACTS, POSTDOCTORAL SCHOLARSHIPS OR SIMILAR CONTRACTS

(Specify, for each contract, university/institution, starting and termination date, duration in years, etc.)

Research Associate: Department of Informatics, Systems and Communications, University of Milano-Bicocca, Italy,
 from: June 2019, to: May 2024, duration 5 years.
 Major activities: Analyses, validation of measures and development of new models for Next Generation Sequencing data. Processing and integration of scRNA, scDNA sequencing data. Feature extraction and profiling of cells, ML approaches for longitudinal cancer evolution to estimate best phylogenetic trees sequencing data including false positive and false negative events, development of AI models for denoising of sampled transcript data or generative models for simulated sequencing data, development of physics informed neural networks for COVID-19 propagation.

Research Associate: Oncology and Metabolism, University of Sheffield, UK,
from; October 2017 to: February 2019, duration: 1.5 years.
Major activities: Agent Based Modelling of cell populations, molecular and gene networks on HPC. developing 3D out-of-equilibrium mechanotransduction models to detect critical events in osteoblast differentiation molecular pathways.

Research Associate: Department of Computer Science and Technology, University of Cambridge, UK,
from: July 2013 to: September 2017, duration: 4 years.
Major activities: Multimodal data analyses and integration, programming, mathematical modelling of out of equilibrium processes concerning cancer, inflammation and comorbidities.

Postdoctoral position: CNRS, Imagerie et Modélisation en Neurobiologie et Cancérologie Lab, Paris XI, France,
from: November 2010 to: July 2013, duration: 3 years.
Major activities: Development of analytical models, implementation of simulations and data analyses to study the migration of glioma cells. Interfacing with neurobiologists in the facility.

TEACHING ACTIVITIES AT ITALIAN OR FOREIGN UNIVERSITIES

(Specify academic year, university, degree course, number of hours/CFU, indicate type of activity, start and end date - day, month, year, etc.)

2017, Department of Computer Science and Technology, University of Cambridge, UK,
"Multi Omics summer school 2017 / Mimomics",
from: 20 August, to: 27 August.
Activities: Instructor on analyses and integration of multimodal data.

2015, Department of Computer Science and Technology, University of Cambridge, UK,
Mathematical Methods for Computer Science,
3 hours/week.
Activities: Supervisions of students, teaching, homework correction.

2010, Department of Physics, University of North Texas, USA,
January-February, 4 hours/week,
Tutor for undergraduate astrophysics class
Activities: Providing lessons and lab activity explanations for astrophysics students

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2007, Department of Physics, University of North Texas, USA, Experimental Physics I, January-March, 10 hours/week, Teaching Assistant Activities: Teaching experiments and conducting lab activities.

SPEAKING AT NATIONAL AND INTERNATIONAL CONFERENCES AND CONVENTIONS

(Specify conference/convention title, date, duration in days/hours, organizing institution, etc.)

"Mutations and migration in tumour progression", 2016, 11-15 July European Conference on Mathematical and Theoretical Biology, Nottingham, UK

"Multiscale model for CTC", 2015, February 13, Cancer research in Cambridge; an academic perspective, CRUK, Cambridge, UK

"Breast Cancer and TGF β signalling", 2014, June 15-19, European Conference on Mathematical and Theoretical Biology, Gothenburg, Sweden

"Glioma Cells Exchanging Information Via Gap Junctions and Their Migration Process" 2011, October 28, Michigan State University

"Migration processes of interacting cancerous cells: beyond the mean field approximation", 2011, 28 June – 2 July, European Conference on Mathematical and Theoretical Biology, Krakow, Poland

SCIENTIFIC PRODUCTION

SCIENTIFIC PUBLICATIONS

(For each publication, specify the following: authors' names, full title, publisher, date and place of publication, ISBN/ISSN/DOI or equivalent code)

G. Ascolani, F. Angaroni, et al. , "LACE 2.0: a R tool for the inference and visualization of longitudinal cancer evolution", BMC Bioinf., 2023, 24, 99, <http://dx.doi.org/10.1186/s12859-023-05221-3>

D. Ramazzotti, F. Angaroni, D. Maspero, G. Ascolani, I. Castiglioni, R. Piazza, M. Antoniotti, "Variant calling from scRNA-seq data allows the assessment of cellular identity in patient-derived cell lines", Nat. Commun., 2022, 13, 1-3, <http://dx.doi.org/10.1038/s41467-022-30230-w>

Angaroni, Guidi, Ascolani, d'Onofrio, Antoniotti, Graudenzi, "J-SPACE: a Julia package for the simulation of spatial models of cancer evolution and of sequencing experiments", BMC Bioinf., 2022 23, 269, <http://dx.doi.org/10.1186/s12859-022-04779-8>

D. Ramazzotti, F. Angaroni, D. Maspero, G. Ascolani, I. Castiglioni, R. Piazza, M. Antoniotti, "Longitudinal cancer evolution from single cells", JoCS, 2021,58, 101523, <https://doi.org/10.1016/j.jocs.2021.101523>

G. Ascolani et al., "Analysis of mechanotransduction dynamics during combined mechanical stimulation and modulation of ERK cascade uncovers hidden information within the signalling noise", Royal Soc Int Focus, 2021, 11, 20190136, <http://dx.doi.org/10.1098/rsfs.2019.0136>

G. Ascolani et al., "Revealing hidden information in osteoblast's mechanotransduction through analysis of time patterns of critical events", BMC Bioinformatics, 2020, 21, <https://doi.org/10.1186/s12859-020-3394-0>

G. Ascolani, P. Lio', "Modeling breast cancer progression to bone: how driver mutation order and metabolism matter", BMC Medical Genomics, 2019, 12, <https://doi.org/10.1186/s12920-019-0541-4>

G. Ascolani, A. Occhipinti, P. Lio', "Modelling circulating tumour cells for personalised survival prediction in metastatic breast cancer", PLoS Comput Biol, 2015, 11, 5, <http://dx.doi.org/10.1371/journal.pcbi.1004199>

G. Ascolani, P. Lio', "Modeling TGF-beta in early stages of cancer tissue dynamics", PloS ONE, 2014, 9(2): e88533, <http://dx.doi.org/10.1371/journal.pone.0088533>

G. Ascolani, EEG, Alpha Waves and Coherence, 2010, Phd Thesis, University of North Texas Libraries, UNT Digital Library, <https://digital.library.unt.edu/ark:/67531/metadc28389/>

Date

18/07/2024

Place

Milano