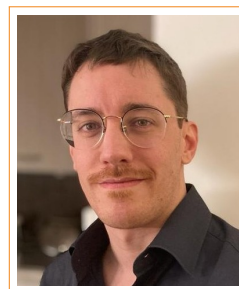


Matteo Tomasini

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Summary

I am an enthusiast scientist, active for years in the theoretical realm of evolutionary biology. I am fascinated with statistical and computational problems of various nature, and I have a keen eye for using the right methods for each problem at hand. My toolbox is particularly well suited for statistical and analytical modelling, and encompasses both mathematical and computational methods.

Skills

Statistical analysis, (R, Stan), I performed statistical analysis on simulations outputs and datasets using different methodologies, including Bayesian inference and machine learning. I further worked towards the development of a statistical method to extract information from genomic datasets. I also taught applied biostatistics to master students.

Mathematical modelling, (Wolfram Mathematica), I worked on several mathematical models to study selected questions in population genetics and climatology.

Programming, (Python, R, C++, Matlab), I developed various simulations to address questions in population genetics and climatology.

Scientific writing, (\LaTeX , Word), I wrote several papers exposing the research results from my team, and published them in international peer-reviewed journals.

Management, I planned my own time schedules, projects, and deliverables during years in academia. I have also been responsible for the logistical processes of a unit during military service in Switzerland.

Leadership, I led the logistics of a unit during military service in Switzerland.

Scientific dissemination, I contributed during 10 years to the growth of one of the largest Facebook pages about popular science in Italian.

Experience

Research

Mar 2021 – Present **Postdoctoral research fellow**, *Department of Marine Sciences, Göteborgs Universitet, Sweden.*

I modelled evolutionary mechanisms leading to the establishment of species' distributions in the Baltic Sea, using Python, C++ and Matlab.

Sep 2019 – Dec 2020 **Postdoctoral research associate**, *Department of Integrative Biology, Michigan State University, United States of America.*

I worked on developing a Bayesian statistical method to harness genetic information for the inference of the demographic history of a species.

Feb 2015 – Jun 2019 **PhD student**, *Interfaculty Bioinformatics Unit, Universität Bern, Switzerland.*

I developed mathematical models and simulations in Python to study the rapid adaptation of species at risk of extinction in a spatially structured model.

Teaching

- Sep 2017 – Jun 2019 **Substitute lecturer**, *Applied Biostatistics I and II*, Universität Bern.
Substitution of main lecturer in case of absence.
- Sep 2015 – Jun 2019 **Teaching assistant**, *Applied Biostatistics I and II*, Universität Bern.
Management of exercise sessions and support for MSc students, correction of exercise sheets.
- Sep 2015, 2016, 2017 and 2018 **Teaching assistant**, *Introduction to R*, Universität Bern.
Teaching assistant during a 5 days introductory course to the R language.

Education

- Feb 2015 – Jun 2019 **PhD studies in ecology & evolution**, *Universität Bern, Switzerland*, Supervisors: Dr. S. Peischl and Prof. L. Excoffier.
Relevant courses and workshops: best practices in programming, introduction to Markov models, machine learning. Thesis topic: theoretical population genetics.
- Sep 2012 – Oct 2014 **MSc in physics (orientation theoretical physics)**, *Université de Genève, Switzerland*.
Relevant courses: introduction to perturbative methods, non-linear dynamics, phase transitions and critical phenomena. Thesis topic: theoretical climatology
- Sep 2009 – Aug 2012 **BSc in physics**, *Université de Genève, Switzerland*.

Miscellaneous

Languages

written / spoken	Italian	Native language
written / spoken	French	Full professional working proficiency
written / spoken	English	Full professional working proficiency
spoken	German	Limited working proficiency
written / spoken	Swedish	Elementary proficiency (A1/A2)

Other activities

- Oct 2021 – Present **Steering Committee member**, *Linnaeus Centre for Evolutionary Marine Biology (CeMEB)*.
Co-organization and planning of activities within the CeMEB, an international network of marine biologists hosted by the University of Gothenburg
- Jan 2021 – Present **Reviewer**, *Molecular Ecology, Genetics, Mathematical Biosciences*.
Peer-review of papers in international journals
- Mar 2012 – Mar 2022 **Co-admin**, *Meccanica Quantistica: gruppo serio*.
Co-administrator and moderator of the largest Facebook page of quantum physics dissemination in Italian language (~ 34'000 subscribers).
- Aug 2009 – Apr 2019 **Battery Sergeant Major**, *Swiss Armed Forces*.
I was responsible for logistics in an artillery battery – in particular personnel, equipment, ammunition, health service and barracks administration – during the yearly one month service.
- Nov 2015 – Jun 2018 **Head of refereeing**, *Swiss Tchoukball*.
Head of the refereeing commission and member of the executive committee of the Swiss federation of tchoukball; I developed refereeing in the sport as well as worked on referees' formation.

Leisure activities

- Endurance sports Regular practice of triathlon (since 2006) and trail running (since 2021), with completion of several competitions up to half-ironman distance.
- Music Regular practice of piano playing since 1997; self-taught guitar player; I sang in 3 choirs between 2006 and 2015.