# Matteo Tomasini

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# Experience

#### Research

Mar 2021 – Present **Postdoctoral research fellow**, *Modelling of range expansions in marine envi*ronments, Department of Marine Sciences, University of Gothenburg, Principal Investigator: Prof. M. Rafajlovic.

Sep 2019 – Dec 2020 **Postdoctoral research associate**, *Development of methods for statistical inference from patterns of isolation by distance*, Department of Integrative Biology, Michigan State University, Principal Investigator: Prof. G. Bradburd.

Feb 2015 – Jun 2019 **PhD student**, On the theory of rapid adaptation in the presence of gene flow, Interfaculty Bioinformatics Unit, Universität Bern, Supervisors: Dr. S. Peischl and Prof. L. Excoffier.

#### **Teaching**

Sep 2017 – Jun 2019 **Substitute lecturer**, *Applied Biostatistics I and II*, Universität Bern, Main lecturers: Dr. A. Hauser, Dr. S. Peischl.

Substitution of main lecturer in case of absence.

Sep 2015 – Jun 2019 **Teaching assistant**, *Applied Biostatistics I and II*, Univesität Bern, Main lecturers: Dr. A. Hauser, Dr. S. Peischl.

Management of exercise sessions and support for MSc students, correction of exercise sheets.

Sep 2015, 2016, 2017, **Teaching assistant**, *Introduction to R*, Univesität Bern, Main lecturers: Prof. L. Ex-2018 and 2019 coffier, Dr. S. Peischl, Dr. V. Sousa.

Teaching assistant during a 5 days introductory course to the R language.

#### Education

Feb 2015 – Jun 2019 **PhD studies in ecology & evolution**, *Universität Bern*, Supervisors: Dr. S. Peischl and Prof. L. Excoffier.

Relevant courses and workshops: best practices in programming, introduction to markov models, machine learning. Main topic: theoretical population genetics.

Sep 2012 – Oct 2014 MSc in physics (orientation theoretical physics), Université de Genève.

Relevant courses: cosmology, group theory, introduction to nanoelectronics, introduction to perturbative methods, non-linear dynamics, phase transitions and critical phenomena, quantum field theory.

Sep 2009 – Aug 2012 **BSc in physics**, *Université de Genève*.

Relevant courses: algebra, calculus; analytical mechanics, electrodynamics, experimental physics, general relativity, quantum mechanics, statistical mechanics, thermodynamics; introduction to C++.

#### Other relevant training

Jan 2020 SLiM Workshop, Cornell University, Ithaca, NY. Trainer: Dr. Ben Haller

## **Publications**

- 2. M. Tomasini, S. Peischl, (2020), When does gene flow facilitate evolutionary rescue?, Evolution, 74(8), 1640 - 1653
- 1. M. Tomasini, S. Peischl, (2018), Establishment of locally adapted mutations under divergent selection, Genetics, 209(3), 885 - 895

## **Preprints**

1a. M. Tomasini, S. Peischl, (2021), Evolutionary rescue in one dimensional stepping stone models, bioRxiv, https://doi.org/10.1101/2020.10.29.360842

#### Grants

Rejected with Seal of The evolution of marine species in continuous space, Marie Skłodowska-Curie Excellence Actions – Individual Fellowship 2020, Evaluation Score: 90.40%

# Oral presentations

Jun 2019 Effects of gene flow and fragmentation on evolutionary rescue, Modelling Ecology & Evolution Zurich 2019, Zurich

Aug 2018 Evolutionary rescue in structured habitats (poster), Second Joint Congress of Evolutionary Biology, Montpellier

# Volunteering

Reviewer Genetics, Mathematical Biosciences

## Miscellaneous

#### Past research experience

Sep 2013 – Oct 2014 MSc student, Effect of snow covering and ocean mixed layer on the irreversibility of sea ice retreat, Institut des Sciences de l'Environnement, Université de Genève, Supervisors: Dr. M. Brunetti and Dr. S. Marshall.

> BSc student, Measures of polarization of the solar light around the Balmer Jump, Istituto Ricerche Solari Locarno and Université de Genève, Supervisors: Dr. M. Bianda and Dr. M. Audard.

#### IT skills

Regular user Python, R; SLiM, STAN; LATEX; git

Intermediate user Mathematica; Bash, C++ Basic knowledge Julia; Maple; Jekyll, Django Operating systems **Ubuntu**; Linux Mint, Windows

Editors Neovim, RStudio; IDLE, PyCharm, VSCode

#### 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

#### Extra-scientific activities

Mar 2012 – Present **Co-admin**, *Meccanica Quantistica: gruppo serio.* 

Co-administrator and moderator of the largest Facebook page of quantum physics dissemination in Italian language ( $\sim$  30'000 subscribers).

Aug 2009 – Apr 2019 Chief Sergeant Major, Swiss Army.

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 executive committee of the Swiss federation of tchoukball; development of refereeing in the sport and referees' formation.