

# Fabio Caratori Tontini

Associate professor

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## *Education and training*

**2003**

### **PhD in physics**

The Gaussian approximation in the numerical inversion of geomagnetic data

University of Pisa - Pisa - IT

**1998**

### **MSc in Physics**

Una verifica del modello standard nella violazione di CP nei mesoni B - 110/110 e lode

University of Pisa - Pisa - IT

## *Academic experience*

**2021 - ONGOING**

### **Associate Professor**

University of Genova - Genova - IT

**2009 - 2021**

### **Senior Scientist**

GNS Science - Wellington - NZ

**2006 - 2009**

### **Research Scientist**

INGV - Portovenere - IT

**2003 - 2006**

### **Postdoctoral fellow**

INGV - Portovenere - IT

## *Language skills*

### **Italian**

Mother tongue

### **English**

Proficient

## *Teaching activity*

- 2002 - now: Supervisor of 3 MSc thesis;

- 2021 - now: Teaching classes in Applied Geophysics and Marine Geophysics (University of Genova).

## *Postgraduate research and teaching activity*

### **Supervision of PhD students, residents and post-doctoral fellows**

From 2004, Supervisor of three PhD projects (University of Bologna, Victoria University of Wellington)

## *Research interests*

### RESEARCH INTERESTS:

- Arcs and backarc basins, rifting and spreading;
- Marine geomagnetism and paleomagnetism;
- Seafloor hydrothermal systems;
- Submarine volcano internal structure and gravitational stability;
- Seafloor geophysical properties;
- Deep-sea mineral resources;
- Computational geophysics and scientific software;
- Airborne geodesy and gravity-derived bathymetry
- Stability of ice shelves.

### RESEARCH METHODS:

- Geological and geophysical investigations from different platforms (shipborne, airborne, autonomous underwater vehicles, remotely operated vehicles, oceanic drilling);
- Geomagnetism, rock magnetism and paleomagnetism;
- Potential-field data (gravity and magnetics);
- High-resolution bathymetry and backscatter data analyses;
- Oceanography data (CTDO and MAPR);
- Heat-flow data;
- Inversion of geophysical data;
- Numerical modelling;
- Development of scientific/geophysical software.

### FIELD EXPERIENCE:

- 31 research cruises;
- ~750 days at sea;
- 3 seasons in Antarctica.

## *Grants*

2021 - ONGOING

**BOOST - Bridging Onshore-Offshore Structures at the Pacific Coast of north Victoria Land (Antarctica) an integrated approach**

Programma Nazionale di Ricerca in Antartide - IT  
111600 EUR - Participant

2021 - ONGOING

**Beneath the Waves Preparedness and resilience to New Zealands nearshore volcano hazards**

Ministry of Business Innovation and Employment (MBIE) - NZ  
15295000 NZD - Participant

2019 - 2021

**Geothermal next generation**

Ministry of Business Innovation and Employment (MBIE) - NZ  
11000000 NZD - Participant

2016 - 2018

**Brothers volcano arc flux**

GNS Science - NZ  
300000 NZD - Participant

2015 - 2017

**Unknown faults under cities**

Natural Hazards Research Platform - NZ  
326000 NZD - Participant

2014 - 2017

**Vulnerability of the Ross Ice Shelf in a Warming World**

New Zealand Antarctic Research Institute - NZ  
398805 NZD - Participant

2013 - 2014

**Inhouse training for graphical user interface with Matlab**

GNS Science - NZ  
25000 NZD - Pricipal investigator

2013 - 2014

**Development of a modern gravity landmark database (South Island of New Zealand)**

GNS Science - NZ  
76000 NZD - Pricipal investigator

2012 - 2013

**Development of a modern gravity landmark database (North Island of New Zealand)**

GNS Science - NZ  
80000 NZD - Participant

2011 - 2012

**Christchurch aerogravity surveys**

GNS Science - NZ

45000 NZD - Pricipal investigator

2010 - 2013

**Losing the tops off submarine volcanoes potential tsunami hazard**

The Royal Society of New Zealand - NZ

300000 NZD - Pricipal investigator

2008 - 2010

**Geophysical measurements for INSAS sonar surveys**

ENI - IT

50000 EUR - Pricipal investigator

2007 - 2008

**Tyrrhenian Seamount Ecosystems an integrated study**

MIUR - IT

71000 EUR - Participant

***Editorial activity***

2016 - now: Associate Editor, Journal of Applied Geophysics

2017 - now: Associate Editor, Annals of Geophysics