

## Curriculum Vitae – Gabriele Sbaiz

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&

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### PERSONAL INFORMATION

Date and place of birth: 19th September 1994 – Latisana (UD), Italy

### CURRENT POSITION (from 1st November 2018)

**Università Degli Studi di Trieste (Italy) & Université Claude Bernard - Lyon 1 (France)**

PhD candidate with bursary (Cod. D/8) in “Earth Science, Fluid-Dynamics and Mathematics. Interactions and Methods” (XXXIV cycle) & in “InfoMaths”

Project Title: “*Some stability and instability issues in the dynamics of highly rotating fluids*”

Supervisor: DEL SANTO Daniele (Università Degli Studi di Trieste, Italy)

Co-supervisor: FANELLI Francesco (Université Claude Bernard – Lyon 1, France)

Date of the defence: 29/03/2022

### EDUCATION

**Università Degli Studi di Trieste (Italy) – Dipartimento di Matematica e Geoscienze**

LM-40 Laurea Magistrale (Master Degree)

Date: 25/10/2018

Thesis title: “*On the existence of infinite weak solutions for the Euler equations*”

Mark: *110/110 cum laude*

Supervisor: DEL SANTO Daniele

Co-supervisor: CUCCAGNA Scipio

**Università Degli Studi di Trieste (Italy) – Dipartimento di Matematica e Geoscienze**

L-35 Laurea Triennale (Bachelor Degree)

Date: 22/09/2016

Thesis title: “*Perfect fluids – The Euler model*”

Mark: *110/110 cum laude*

Supervisor: DEL SANTO Daniele

## PUBLICATIONS

- 2023** D. Del Santo, F. Fanelli, G. Sbaiz, A. Wróblewska-Kamińska: *"On the influence of gravity in the dynamics of geophysical flows"*. *Mathematics in Engineering*, **5**, n. 1, paper n. 8, 33 pp.
- 2022** G. Sbaiz: *"Fast rotation limit for the 2-D non-homogeneous incompressible Euler equations"*. *Journal of Mathematical Analysis and Applications*, **512**, n. 1, 126140, 41 pp.
- 2021** D. Del Santo, F. Fanelli, G. Sbaiz, A. Wróblewska-Kamińska: *"A Multiscale Problem for Viscous Heat-Conducting Fluids in Fast Rotation"*. *Journal of Nonlinear Science*, **31**, n. 1, paper n. 21, 63 pp.

## TALKS

- 24/02/2022:** *"The influence of gravity in the behaviour of geophysical flows"* Webinar at ESFM Presentation Days (Trieste, Italy)
- 23/04/2021:** *"Singular Perturbation Problems for Geophysical Flows"* Webinar at GIM Seminars
- 19/03/2021:** *"Interaction of multiple scales in geophysical fluid dynamics"* Webinar at CRISIS Kick-off event (Lyon, France)
- 25/02/2021:** *"Multi-scale Analysis in Geophysical Fluid-Dynamics"* Webinar at ESFM Presentation Days (Trieste, Italy)
- 06/10/2020:** *"Singular perturbation and multi-scale problems for fluids in fast rotation"* at Journée d'équipe EDPA (Lyon, France)
- 14/08/2020:** *"MPE Webinar"* at 2020 SIAM Mathematics of Planet Earth (Virtual Meeting)
- 08/06/2020:** *"A multi-scale problem for viscous heat-conducting fluids in fast rotation"* Webinar at Séminaire des Doctorants et Doctorantes (Lyon, France)
- 09/12/2019:** *"Mathematical models for atmospheric flows"* at ESFM Presentation Days (Trieste, Italy)
- 04/05/2018:** *"Algebraic equations: a journey through the history"* at Giornata di Formazione per Docenti di Scuole di ogni Ordine e Grado (Trieste, Italy)

## ORGANIZATION OF EVENTS

- 2021** Organizer of ["Séminaire des Doctorants et Doctorantes 2020-2021"](#)
- 2020** Organizer of ["Séminaire des Doctorants et Doctorantes 2020-2021"](#)  
Organizer of ["Mathematics of Planet Earth Webinars: Analysis and Modelling"](#)

## GRANTS AND PROJECTS

- CRISIS - *"Critical Regularity, Interfaces, Scale Interactions and Singularities in the dynamics of non-homogeneous fluids"* (February 2021-January 2025), supported by the ANR (Agence Nationale de la Recherche), Project "ANR JCJC 2020" (coordinator: FANELLI Francesco)
- *"Su alcuni problemi di stabilità e instabilità nella dinamica dei fluidi in rotazione rapida"/C2-1288* (January 2020-December 2022), supported by [Università Italo-Francese/Université Franco-Italienne](#) in the program "Vinci 2020"

## EXERCISE SESSIONS AND TUTORING ACTIVITIES

**2021** Exercise sessions offered to undergraduate students - *“Matematica Generale”* DEAMS

Complementary tutoring and teaching activities offered to undergraduate students - *“Metodi e Modelli Matematici per l’Intelligenza Artificiale”* AI and Data Analytics degree

**2019** Complementary tutoring and teaching activities offered to undergraduate students - *“Istituzioni di Matematica”* STAN degree

## DISSEMINATION ACTIVITIES

**2021** “PhD Top Stories” at UniTs

## PARTICIPATION IN CONFERENCES, SCHOOLS AND WORKSHOPS

**2022** Workshop: *“TURBIN – Turbulence and Intermittency”* (Lyon, France)

**2021** Workshop: *“TURB1D 2021”* (Online)

INdAM Workshop: *“Qualitative properties of dispersive PDEs”* (Online)

Workshop: *“One World Meeting of Young Mathematicians in Fluid Dynamics”* (Online)

INdAM Workshop: *“Nonlinear Phenomena: between ODEs and PDEs”* (Online)

Spring School: *“Huitième école EGRIN”* (Online)

Workshop: *“CRISIS”* kick off-event (Online)

Conference: *“Journées Jeunes EDPistes 2021”* (Online)

**2020** Conference: *“TURB1D 2020”* (Online)

Winter School: *“Turbulence in Fluids and PDEs”* (Lausanne, Switzerland)

**2019** IHP Trimester: *“The Mathematics of Climate and the Environment”* (Paris, France)

INdAM Workshop: *“Anomalies in PDEs”* (Roma, Italy)

Workshop: *“Alessio Figalli, Fields Medallist 2018”* (Pisa, Italy)

**2018** Winter School: *“Fluid-Dynamics, Dispersive Equations and Quantum Fluids”* (Bressanone, Italy)

## LANGUAGES

Italian – Native speaker

English – Fluent

French – Intermediate level