

ALESSANDRO TAMAI

Mathematician

Born in Treviso on February 24, 1995.

@ atamai@sissa.it

Trieste, Italy

<https://www.linkedin.com/in/alessandro-tamai-6b8719203/>



EDUCATION

Ph.D. in Theoretical and Scientific Data Science



International School of Advanced Studies (SISSA)

2021-(present)

Trieste, Italy

Master's degree in Mathematics



University of Trieste

2017-2020

Trieste, Italy

Final Mark: 110/110 (summa cum laude)

Bachelor's degree in Mathematics



University of Trieste

2014-2017

Trieste, Italy

Final Mark: 104/110

- Erasmus program at "UCL: Université Catholique de Louvain-La-Neuve":

Sept. 2017- Feb. 2017

Louvain-la-Neuve, Belgium

Diploma of Perito Chimico

Istituto Superiore Statale "Giorgi-Fermi"

2009-2014

Treviso, Italy

Final Mark: 78/ 100

DISSERTATION WORK

Bachelor Thesis

Introduzione alla Teoria delle Perturbazioni di Sistemi Hamiltoniani Autonomi

- Symplectic geometry and Liouville-Arnol'd Theorem.
- Introduction to perturbation theory.
- Summary of the historical contrast between ergodic theory and perturbation theory.
- KAM Theorem and its similarities with Liouville-Arnol'd Theorem.

Master Thesis

Singular Solutions of Rolling Balls Model: a Topological View

- Lie groups and semisimple Lie algebras classification with a focus on the G_2 group.
- Division algebras: quaternions, the octonions and relations with G_2 group.
- Sub-Riemannian geometry and singular solutions.

TECHNICAL STRENGTH

C++



Python



MATLAB



MS Office



LaTeX



LANGUAGES

English



STRENGTHS

Hard-working

Decision Making

Creative

VOLUNTEER ACTIVITY

Trieste Science Fiction Festival

October 2019

Trieste, Italy

- Science fiction film festival in Trieste, Italy.

Trieste Next

September 2020

Trieste, Italy

- Scientific research festival in Trieste, Italy.

- Overview on the most recent results: relations between the model and quaternions, octonions and the G_2 group.
- Presentation of the research work's results: description of the geometric spaces of singular solutions and their topological properties.

UNIVERSITY PROJECTS

- "Flux Analysis for Competing Firms":
(Final exam of "Stochastic Modelling and Simulation" course)
Given a set of consumers and firms distributed on a geographic region, can we estimate how the consumers' choice depends on some given parameters? In the project I try to answer this question by design a mathematical model based on discrete Markov's chains and analyzing the simulations made by it python implementation.

SCIENTIFIC WORK

"Singular Solutions of Rolling Balls Problem"



Geometric Structures Research Seminar

January 12, 2021 SISSA, Trieste, Italy

- Speaker.

<https://sites.google.com/view/geometric-structures/>

"Singular Solutions of Rolling Balls Problem"



Geometry and Dynamical System Group Seminar

April 19 2021 UPC, Barcelona, Spain

- Speaker.

SCHOLARSHIPS



Ph.D Fellowship

September 2021 - (present) SISSA, Trieste, Italy



Postgraduate Fellowship

April 2021 - July 2021 SISSA, Trieste, Italy

WORK EXPERIENCE

Exerciser of "Geometria 1" (double assignment, ch. A,B)

Università' degli Studi di Trieste

October 2019- January 2020 Trieste (Italia)

- Exercises sessions on the course's topics.
- Correction of practice tests.

Exerciser of "Geometria 3B"

Università' degli Studi di Trieste

March 2019- June 2019 Trieste (Italia)

- Exercises sessions on the course's topics.

Exerciser of "Analisi 1" (double assignment, ch. A,B)

Università' degli Studi di Trieste

October 2018- January 2019 Trieste (Italia)

- Exercises sessions on the course's topics.
- Correction of practice tests.

HOBBIES



Reading newspaper

I like to be informed about current economic and social events.



Music Addict

I love listening music of every genre and year.



Music Player

I play guitar and some piano, sinths, armonica... I also sing and compose music by using computer.



Movies Addict

I love watching new and old movies of all kinds.



Reader

I read books of all kinds, from novels to books of poetry.