# Curriculum Vitae

## Personal information

| | |
|---|---|
| Name / Surname | **Casalvieri, Christian** |
| Personal Email | |
| Nationality | Italian |
| Gender | |
| **Scientific interests** | Physics, Pure and Applied mathematics, Space Science, Didactics of Mathematics, Scientific Dissemination |

## Education and training

| | |
|---|---|
| Dates | July 1992 |
| Title of qualification awarded | High school leaving qualification in scientific studies, grade 60/60 |
| Name and type of organization providing education and training | Liceo Scientifico Talete, Rome, Italy |
| Dates | May 2005 |
| Title of qualification awarded | Master of science in Physics, grade 110/110 |
| Thesis title | "Tidal coupling effects on gravitational radiation emission in binary systems" under the supervision of Prof. Valeria Ferrari |
| Name and type of organization providing education and training | Università degli Studi di Roma 'Sapienza', Rome, Italy |
| Dates | 2019 |
| Title of qualification awarded | Appointment as Expert in Mathematical Analysis |
| Name and type of organization providing education and training | Università degli Studi di Roma 'Sapienza', Rome, Italy |
| Dates | May 2023 |
| Title of qualification | PhD in Didactics of Mathematics |
| Thesis title | "Graphical recognition of the properties of derivatives and anti-derivatives: analysis of different strategies using an eye-tracker" under the supervision of Prof. Alessandro Gambini |
| Name and type of organization providing education and training | Università degli Studi di Roma 'Sapienza', Rome, Italy |

## Principal publications

1) Casalvieri C., Ferrari V., Stavridis A., Gravitational signals due to tidal interactions between white dwarfs and black holes, MNRAS 365, 3, 929 (2006)

2) Casalvieri C., De Cicco V., 'Esercizi di Analisi Matematica II in campo reale ed in campo complesso', Ed. LaDotta, 2017

3) Capone, R., Casalvieri, C., Gambini, A., Spagnolo, C., 'L'Eye-tracking e le prove INVALSI: uno studio idiografico sui processi risolutivi di quesiti di Matematica'. In "I dati Invalsi: uno strumento per la ricerca", Franco Angeli, 2021

4) Capone, R., Casalvieri, C., Ferretti, F., Gambini, A., Spagnolo, C., 'Which strategies do students adopt when reading a text containing a mathematical problem? Initial results of an exploratory study with eye-tracking', In: QUADERNI DI RICERCA IN DIDATTICA. - ISSN 1592-4424 - (2022), pp. 1-13

5) Casalvieri, C., Gambini, A., Analysis of the solution of a Cauchy Problem using an Eye-Tracker, THE INTERNATIONAL JOURNAL FOR TECHNOLOGY IN MATHEMATICS EDUCATION, ISSN 1744-2710. - 29:4(2022), pp. 189-199

6) Casalvieri, C., Gambini, A., Viola, G., 'The concept of derivatives through eye-tracker analysis', PROCEEDINGS OF CSEDU 2023 - Volume 2 - (978-989-758-641-5), Prague, Czech Republic

7) Spagnolo, C., Casalvieri, C., Gambini, A. (2024). Different Processes for Graphical Recognition of Derivative of a Function: An Eye-Tracker Analysis. In: Yang, XS., Sherratt, S., Dey, N., Joshi, A. (eds) PROCEDINGS OF NINTH INTERNATIONAL CONGRESS ON INFORMATION AND COMMUNICATION TECHNOLOGY. ICICT 2024 2024. Lecture Notes in Networks and Systems, vol 1000. Springer, Singapore. https://doi.org/10.1007/978-981-97-3289-0$_4 4$

8) Casalvieri, C., Gambini, A., Spagnolo, C., Viola, G. (2024). Graphical Recognition of Antiderivatives: Analysis of Different Strategies Reflecting Level of Expertise Using Eye-Tracker Tool. In CSEDU (1) (pp. 202-215)

## Language skills

Mother tongue **Italian**

Other language(s)

*Self-assessment*
*European level*(*)

| | Understanding | | Speaking | | Writing |
|---|---|---|---|---|---|
| | Listening | Reading | Spoken interaction | Spoken production | |
| **English** | C1 Proficient User | C1 Proficient User | B2 Proficient User | B2 Proficient User | C1 Proficient User |

(*) *Common European Framework of Reference* (CEF) level

## Computer skills and competences

- Good knowledge of Windows operating systems and Office software
- Good knowledge of LateX language
- Basic Fortran, Basic Matlab programming skills

## Teaching skills and competences

Dates 2008 → 2010

- Tutor in Mathematical Analysis I at the Faculty of Engineering, University of Rome 'Sapienza', degree course in Management Engineering.

Dates 2010 → 2014

- Adjunct professor in Mathematical Analysis I at the Faculty of Engineering, University of Rome 'Sapienza', degree course in Management Engineering.

Dates 2014 → 2016

- Adjunct professor in Mathematical Analysis I at the Faculty of Engineering, University of Rome 'Sapienza', degree course in Aerospace Engineering.

Dates 2010 → 2018

- Adjunct professor in Mathematical Analysis II at the Faculty of Engineering, University of Rome 'Sapienza', degree course in Aerospace Engineering.

Dates 2015 → 2018

- Adjunct professor in Mathematical Analysis II at the Faculty of Engineering, University of Rome 'Sapienza', degree course in Clinical Engineering.

Dates 2016 → 2017

- Adjunct professor in Mathematical Analysis I at the Faculty of Engineering, University of Rome 'Sapienza', degree course in Energy Engineering.

Dates 2017 → 2018

- Adjunct professor in Mathematical Analysis I at the Faculty of Engineering, University of Rome 'Sapienza', degree course in Building Engineering Architecture.

Dates 2019 → 2020

-Tutor in Mathematics at the Latina campus of the Faculty of Economics at the University of Rome 'Sapienza'.

Dates 2018 $\rightarrow$ 2022

-Tutor in Mathematical Analysis I at the Faculty of Engineering, University of Rome 'Sapienza', degree course in Energy Engineering.

Dates since 2017

-Creator of the database of questions assigned to AEOs (Additional Educational Obligations) and selector of Advanced Course Mathematics tests for the Faculty of Civil and Industrial Engineering.

Dates 2023

- INVALSI math test coder at the national level and ICILS test coder at the international level.

Dates December 2023 $\rightarrow$ June 2024

- Collaboration grant for the organisation and updating of OFA tests, mathematics pre-courses and self-assessment tests in Mathematical Analysis and Geometry.

## Social skills and competences

-Good capacity of adapting myself to socially variegated sectors and of communication due to my cultural training.

## Organisational skills and competences

-Good experience in conducting projects and groups, due either to training's activity in University.

## Other skills and competences

-Among my hobbies I specially prefer: reading, playing chess, walking in nature and every outdoors activity.