



# Francesco Ambrogi

## Curriculum Vitae

*"Considerate la vostra semenza:  
fatti non foste a viver come bruti,  
ma per seguir virtute e canoscenza"*  
**Dante Alighieri - Divine Comedy**

### Education

- 2019–now **PhD Candidate in Mechanical Engineering**, *Queen's University*, Kingston, Ontario.
- Research: My research focuses on computational and theoretical studies of turbulent boundary layers (TBLs) with pressure gradients. Specifically, I am interested in simulating the effect of strong unsteady adverse and favorable pressure gradients on the physics of wall bounded flows.
- 2016–2018 **MSc Student in Energy and Nuclear Engineering**, *Alma Mater Studiorum University of Bologna*, Bologna, Italy.
- Thesis: Tritium Transport and In-Core Absorption in the Fluoride-salt-cooled High-temperature Reactor (FHR)
- 2011–2015 **Bachelor's Degree in Mechanical Engineering**, *University of Modena and Reggio Emilia - "Enzo Ferrari" department*, Modena, Italy.
- Thesis: "Identification, analysis and experimental validation of predictive models to calculate injection molding machine's energy consumption."
- 2006–2011 **High School - Classical Education**, *Liceo Ginnasio Cornelio Tacito*, Terni, Italy.

### Experiences

- Sept 2019 - **Graduate Research Assistant**, *Queen's University*, Kingston, ON.  
Present
- Sept 2019 - **Teaching Assistant**, *Queen's University*, Kingston, ON.  
Present
- Since the beginning of my PhD at Queen's I have been assigned as teaching assistant for several courses such as:
- MECH398 Mechanical Engineering Laboratory I
  - MECH241 Fluid Mechanics I
  - MECH341 Advanced Fluid Mechanics

- Jan - Apr 2022 **Lead Teaching Assistant, Queen's University, Kingston, ON.**  
On January 2022 I have been selected from Queen's University to participate in the pilot course "Interdisciplinary Engineering for Sustainability and Innovation" as the Lead Teaching Assistant. This 4 credit course for the Winter 22 was held in 4 different institutions: Queen's University, McGill University, Ryerson University, and the University of Waterloo. My role was to coordinate a Team of 5 Teaching Assistants (myself included) to mentor, guide, and improve the learning journey of the students. My cohort was composed of 12 teams, each containing 3 to 4 students coming from a wide range of different backgrounds.
- Nov 2021 **Lead Teaching Assistant, How to Change the World, Kingston, ON.**  
On November 2021 I have been selected as Lead Teaching Assistant in the How to Change the World program at the Southern Alberta Institute of Technology (SAIT). My role was to guide and coordinate a Teaching Team in mentoring the students during their learning process.
- Feb 2020 **Teaching Assistant, How to Change the World, Kingston, ON.**  
On February 2020 I have been selected from Queen's University to participate in the How to Change the World program as a Teaching Assistant. During the program hundreds of students from all over the world had the chance of working together in Teams to tackle the United Nations development challenges.
- 18-22 June 2018 **Intensive Course, Nuclear Energy Agency (NEA), Paris.**  
Course held by Prof. Barry D. Ganapol, University of Arizona.
- Jan - May 2018 **University Internship, Montecuccolino Nuclear Engineering Laboratory, Bologna, Italy.**  
  - Learning the Monte Carlo Code FLUKA
- Nov 2017 **Marawas 2017, University of Hasselt, Hasselt, Belgium.**  
  - Intensive course on Management of Radioactive Waste.

## Honors and Awards

- May 2022 **Dean's Teaching Assistant Award (DTA), Queen's University, Kingston, ON.**  
This award recognizes exceptional Teaching Assistants who have been nominated by their departments.

## Computer Skills

- Basic FORTRAN90, C++  
Good MATLAB, PYTHON, ZOOM  
Advanced UNIX, LATEX, MICROSOFT OFFICE, TEAMS

## Languages

- Italian **Mothertongue**  
English **Advanced** *Fluent in speaking, very good in listening and good in writing*

## Volunteering and Association

- April 2021 - **Rotaract Club of Kingston, Member, Kingston, Canada.**  
Present
  - I joined the Rotaract Club of Kingston in early April 2021. Our main goal is to help the community thrive while strengthening our leadership skills

April 2021 - **Alumni Rotary 2072**, Member, Bologna, Italy.

- Present
- I joined the Alumni Rotary district 2072 association in early April 2021. The association is composed of university students and young professionals. My role is to create and facilitate an international connection between Italy and Canada by promoting events and fundraisers to help the community.

August 2020 **Royal Astronomical Society of Canada (RASC)**, *Kingston Center*, Member, Kingston, Ontario.

- I joined the RASC club of Kingston Center due to my passion for astronomy and my deep interest in scientific communication.
- Within RASC, I am also member of the Education and Public Outreach (EPO) committee.

2016 - 2019 **Rotaract Club**, *Secretary*, Member, Modena, Italy.

- I joined the Rotaract Club of Castelvetro di Modena Terra dei Rangoni on 2016, and I have been the secretary of the club for 2 years.