

# FRANCESCO SARANDREA

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I am an Italian student who is currently studying for a PhD in theoretical particle physics at Durham University. I have recently been awarded a Masters degree with Merit at Imperial College London. I am experienced to work and study in international context with a wide range of interests and excellent academic achievements. I am a native Italian speaker, I am fluent in English and know French at good level. My abilities include interpersonal skills, teamwork skills, good programming competence and a very strong preparation in Mathematics and Physics.

## EDUCATION

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**Institute for Particle Physics Phenomenology, Durham University** *January 2019 - Present*  
PhD program funded by the European Research Council Consolidation Grant *High Precision Multi-Jet Dynamics at the LHC*

**Imperial College London** *September 2018 - September 2019*  
MSc with Merit in *Quantum Fields and Fundamental Forces*. Overall Percentage: 68

**The University of Edinburgh** *September 2013 - July 2017*  
First Class Honours Degree in Theoretical Physics. Overall Percentage: 74

**Liceo Scientifico Statale Farnesina** *September 2008 - July 2013*  
Diploma Esame di Stato. Final Mark: 100/100

**International English Language Testing System** *July 2013*  
Use of English in academic context Overall Mark: 7.5/9

## WORK EXPERIENCE

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**Private Tutoring**  
Worked for many years as a private tutor supplying academic assistance in Mathematics, Physics, Philosophy and Italian to students of different ages from Middle School (13 years) to University level. Successfully prepared students for Italian Esame di Stato and University first year Physics exams.

**Internship in Condensed Matter Research** *June 2016-August 2016*  
Awarded a bursary by the Engineering and Physical Sciences Research Council and worked as an intern at the University of Edinburgh in the Condensed Matter department, developed codes which efficiently performed analysis of data of supercomputer simulations of hydrogen at high pressures.

**Internship in Quantum Physics Research** *June 2017-August 2017*  
Awarded a Career Development Summer Scholarship by the University of Edinburgh and worked on the Formal Theory of Scattering in particle physics, successfully built python simulations of scattering processes of particles and produced a literature review on the topic.

## TEACHING AND SCIENCE OUTREACH

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**Maths and Stats Lab Tutor** *January 2019-Present*  
Working as a tutor at Durham University in a team that provides help in mathematics and statistics to undergraduates of all departments.

**Teaching Assistant in Theoretical Physics** *October 2019-Present*

Working as a teaching assistant in a second year undergraduate course in theoretical physics, directing weekly workshops to help students consolidate the lectures' material and solve new problems.

**Demonstrator at Durham Open Days and School Festivals** *January 2019-Present* Worked as a demonstrator in numerous science fairs and festivals, doing science outreach for kids and young adults of ages ranging from 8 to 18 years old. Some of the events include Celebrate Science, School Science Festival (both held in Durham City) and numerous open days for the university's perspective students.

## LANGUAGES

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<b>Italian</b>	Native Speaker
<b>English</b>	C2 European Framework Reference for Languages
<b>French</b>	Basic writing skills, good at speaking, listening and reading

## COMPUTER SKILLS

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**Programming Languages:** C++, Python, Java, MATLAB, Mathematica, Latex

**Software development Platforms:** NetBeans, Emacs, Visual Studio, Pycharm

**Scientific Programming:** attended courses in Scientific Computer Modelling and Algorithms, Numerical Analysis and Numerical Methods at the University of Edinburgh. Worked on projects with particular focus of data analysis and visualisation of complex models, experience in image analysis.

## AWARDS AND INTERNATIONAL EXPERIENCES

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Student Employee of the Year Award, awarded by the National Association of Student Employment Services

Vice President of the Security Council in the seventh edition of Rome International Model United Nations (MUN) in Rome in 2013.

Delegate in many MUN simulations around the world: RIMUN V edition, MUNOL (Model United Nations of Lubek, Germany) IV edition, HMUN (Harvard Model United Nations Beijing, China) III edition, RIMUN VI edition, THIMUN (The Hague International Model United Nations, The Nederland) VI edition.

Responsible and coordinator of activities of foreign delegations in Rome during the RIMUN VI edition.

Winner of Best Delegation Award of MUNOL in 2011 and Best Delegate of the Committee Award of RIMUN in 2012.

Interpreter from English and French to Italian in a high-school exchange program in Budapest.

Involved in coordinating high-school exchange programs in the UK, Hungary and the USA.