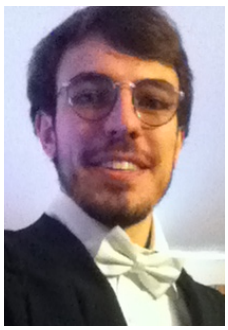

CURRICULUM VITAE

Giuseppe De Laurentis

PERSONAL DETAILS

Personal Email	g.dl@hotmail.it
University Email	giuseppe.de-laurentis@durham.ac.uk
Skype Contact	giuseppe_dela
Nationality	Italian

HIGHER EDUCATION

- PhD in Particle Physics Phenomenology — October 2016 - March 2020 (Expected)
  Durham University - Institute for Particle Physics Phenomenology
  Supervisor: Daniel Maitre
- Master of Physics - First Class - Winton Capital Prize — October 2012 - September 2016
  Oxford University - St Hugh's College
  Major Options - Theoretical and Particle Physics
  Qualifying examinations - Passed with Distinction
- Harvard University — Summer Term 2011
  Physics (Mark: A)
- Stanford University — Summer Term 2010
  Calculus (Mark: A+)
  Introduction to Statistics (Mark: A)

AWARDS

- Nick Brown Memorial Award — 2019
- 3.5 years STFC scholarship for a PhD at the IPPP (Durham University) — October 2016 - March 2020
- Winton Capital Prize for the best MPhys Research Project — 2016
- Title of Scholar at St. Hugh's college — 2013 - 2016

ADDITIONAL EDUCATION & EXAMS

- GRE General — 1 October 2015
  Verbal Reasoning - Scaled Score: 165/170 - Percentile: 95^o
  Quantitative Reasoning - Scaled Score: 168/170 - Percentile: 95^o
  Analytical Writing - Scaled Score: 3.5/6 - Percentile: 38^o
- GRE Physics — 19 September 2015
  Scaled Score: 920/990 - Percentile: 87^o
- SAT Maths 2 800/800 - Percentile: 88^o — 2011
- SAT Physics 800/800 - Percentile: 89^o
- Stanford University Mathematics Camp (SUMaC) — One month during summer 2009
- ID Tech Camp in Orlando, Florida — Two weeks during summer 2008
  ID Tech Camp in Stanford, California — Two weeks during summer 2007
  Programming and web design (C,C++,Flash,Dreamweaver)
- Diploma di Maturita' - Italian scientific high school diploma — September 2007 - June 2012
  Liceo Scientifico Statale Leonardo da Vinci, Milan

TEACHING

- 3rd Year Foundations of Physics 3A Demonstrator — 2018 - 2020
  Durham Univeristy - Department of Physics
- 3rd Year Mathematical Workshop Demonstrator — 2016 - 2018
  Durham Univeristy - Department of Physics

INDUSTRY EXPERIENCE

- Internship at Mecaer Aviation Group - AugustaWestland supplier
  Via Arona 46 - Borgomanero (No) 28021 — One month during summer 2013
  Description: I assisted a senior engineer to modify a valve (to reduce production costs) and I wrote reports on experiments made to assess the durability and reliability of a specific model of servo-control (a hydraulic component that transmits the signal from the cloche to the plane of rotation of the helicopter blades).

TALKS GIVEN AT CONFERENCES

- QCD@LHC 2019
  Analytical amplitudes from numerical evaluations (indico)
- YETI 2019 - To Infinity and Beyond: New Techniques for New Physics
  Numerical To Analytical Amplitudes (indico)

PHYSICS SCHOOLS ATTENDED

- QCD Master Class — 9 - 22 June 2019
  Saint-Jacut-de-la-Mer
- MITP 2018 Summer School — 15 July - 3 August 2018
  Mainz Institute for Theoretical Physics
- Amplitudes 2017 Summer School — 3 - 7 July 2017
  University of Edinburgh - Higgs Centre for Theoretical Physics
- 47th British Universities Summer School in Theoretical Elementary Particle Physics (BUSSTEPP)
  University College London — 21 August - 1 September 2017

PUBLICATIONS

- Extracting analytical one-loop amplitudes from numerical evaluations (JHEP, ArXiv)
  Giuseppe De Laurentis, Daniel Maitre — 2019
- The CHY formalism for massless scattering (PDF)
  Giuseppe De Laurentis - Supervisor: Yang-Hui He — 2016
  Master Thesis - Unpublished

COMPUTER SKILLS

My PhD project involves extensive programming in Phyton and some programming in C++ and CUDA. I also have a fair experience with a number of other programs, such as: LaTex, Origin, Office, C, Mathematica, TurboPascal, AutoIt and some notions of Flash and Dreamweaver.

LANGUAGES

Italian - Mother language.
English - C2 - Undergraduate and graduate institution language. TOEFL (102/120) taken in 2011
French - A2 - (Intensive course at Institut Francais in Milan during summer 2014)

DRIVING LICENCE

Cars and small motorbikes (Patente B)

ACADEMIC INTERESTS

Broadly speaking, I am interested in Standard Model phenomenological predictions, in particular those involving collider experiments. The idea of predicting from pure theoretical principles something that actually happens in nature is extremely fascinating. More concretely, I find the study of fixed order scattering amplitudes especially compelling, because the final results are often elegant despite the apparent complexity of the calculation. This can be interpreted as a hint of the existence of better computational methods or compact general expressions.

My PhD research lies on the boundary between physics, mathematics and computer science. It focuses on developing calculation tools and applying them for precision predictions of standard model processes at particle colliders. I started by considering the problem of recovering analytical expressions for high multiplicity processes in pure QCD at one-loop, published in JHEP. Since then I have expanded our tools to processes involving matter as well as more abstract applications. I am currently applying what we learned from QCD amplitudes to theories with quartic propagators, such as DF^2 and conformal gravity.

FURTHER INTERESTS

My other interests are mainly related to gaming, science fiction, computer science and travelling. I used to paint miniatures, I have assembled my own high-performance desktop and programmed an AI able to play a browser game by itself. Another hobby I have, for instance, is doing puzzles, the largest one I did barley falling short of 10.000 pieces. More recently, I have take an interest in the Japanese art of Bonsai and started several trees from seeds.

As far as travelling is concerned, I've travelled extensively through Europe, North and Central America; I've also visited Turkey and some countries in North Africa.

Citing Huygens, *The world is my country, science is my religion.* [1]

[1] The attribution is disputed.