

# Raffaele Rainone

## Curriculum Vitae

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### PERSONAL INFORMATION

Date of Birth December 12, 1985  
Place of Birth Battipaglia (SA), ITALY  
Citizenship Italian  
Languages Italian (mother tongue), English (fluent)

### PROFESSIONAL CAREER

- Jan 2015 – now RF/DSP Developer, **Path Intelligence Ltd.**, Portsmouth UK.
- Python, C++ developer.
  - Code review of other developers using tools such as Phabricator and Arcanist.
  - Worked on WiFi location algorithm, which translates raw data collected by units' WiFi-scan into location analytics. Tasks included bug fixing, optimisation of existing code, developing new features, adding unit tests, analysing WiFi data in order to improve existing Bayesian Model.
  - Designed and developed a full automated testing and provisioning system for QA of units - mainly developed in Python, along with the development of GNURadio blocks in C++.
  - Designed and developed tests to assess the behaviour of WiFi scan of units, in order to gain a better understanding of how to interpret the data collected.
  - Constant interfacing with Data Science team to share discoveries on units WiFi-related research.
- Oct 2010 – Jan 2014 Graduate teaching assistant and Instructor. University of Southampton, UK

### KEY SKILLS

I am a technology enthusiast with an analytical mind and a strong problem solving attitude. I can learn new concepts and tools extremely quickly. In fact, I am willing to learn and to expand my knowledge of programming languages to develop clean, robust and scalable code.

I can work on several projects at the same time and I possess good time management skills, e.g. I can easily reorganize my work prioritizing new tasks.

### IT SKILLS

**Operating Systems:** *Windows*, *MacOS* (7 years of experience), *Linux* (6 years of experience).

**Script:** Bash.

**Programming Languages:** *Python* & *C++* (working knowledge), *Fortran 77* (several projects delivered for undergraduate exams), *JavaScript* (1 year of experience), *Objective-C* (2 months experience), *MatLab* & *GAP* (3 years of experience - used during the PhD).

**Markup Languages:** *HTML* and *CSS* (1 year of experience), *LaTeX* (working knowledge: theses, reports, articles, presentations; 7+ years of experience).

**Others:** *Mathematica* (4 years of experience).

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## ACADEMIC CAREER

- Oct. 2010 - **Ph.D. Mathematics**, *EPSRC Doctoral Training Award*, University of Southampton, UK.  
Mar. 2014 THESIS: “*Geometric actions of classical algebraic groups*”, supervisor: Dr. T. C. Burness.
- Sep. 2009 - **2nd year M.Math. International Master ALGANT (European grant)**, *Mathematisch*  
Jul. 2010 *Instituut*, Universiteit Leiden, The Netherlands.  
THESIS: “*On the inverse problem for deformation rings of representations*”, supervisor: Prof. B. De Smit.
- Oct. 2008 - **1st year M.Math. International Master ALGANT**, *Dipartimento di Matematica Pura e*  
Jul. 2009 *Applicata*, Università di Padova, Italy.
- Oct. 2004 - **B.MathSc., grade 110/110 cum laude**, *Dipartimento di Matematica e Applicazioni*, Uni-  
Mar. 2008 versità di Napoli “Federico II”, Italy.
- 2004 **High school degree (equivalent to GCSEs and A-levels)**, *Liceo Scientifico “E.Medi”*,  
grade 89/100, Battipaglia (SA), Italy.

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## COMMUNICATION AND INTERPERSONAL SKILLS

Able to explain complex ideas to non-technical people, ability to calibrate a talk to suit the audience.

- Several conferences attended Several international conferences attended in the period 2009 - 2013 (e.g. France, Israel, Italy, The Netherlands, UK). In most of these meetings **I delivered a talk**.
- Teaching experience **Graduate Teaching Assistant/Instructor** at University of Southampton (2010–2014): several tutorials classes (both elementary and advanced courses). Responsibilities comprised:
- answering students’ questions related to the taught module;
  - marking weekly exercise sheets and class tests;
  - providing feedback on assessed work.

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## AWARDS AND OTHER ACTIVITIES

- Mathematics During the secondary school (2001–04), I took part to the “*Campionati internazionali di giochi matematici*”. I reached the **National Final** in the years 2003 and 2004.
- Awards and scholarship **Academic prize** for high grades average 2005 and 2006. **ALGANT scholarship** 2009. **EPSRC Doctoral Training Award** 2010/13.
- Music I studied and I can play (with a range of skills) violin, guitar and ukulele.
- Strategy Games I like all sort of turn-based strategy games and chess.
- Poker In tandem with my postgraduate studies, I played online poker in the period 2009–11.
- Travel I love traveling, explore new places and discover new cultures. I have had the opportunity to visit several countries: Belgium, Croatia, England, France, Israel, Netherlands, Scotland, Slovenia, Spain, Switzerland, Tunisia.

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## REFERENCES

Available upon request.