


Name: **Moreno**

Surname: **Zolfo**

Nationality: Italian 

Place and date of birth: Cuneo, Italy – 24th July 1991

Address: 11, Via Tessadri – 38123, Trento (TN) - Italy

Phone: (+39) 334.1073138 - (+39) 0461.285285

E-mail: moreno.zolfo@unitn.it

 ORCID ID: [0000-0001-6661-4046](https://orcid.org/0000-0001-6661-4046)

Links: [[Linkedin](#)]

RESEARCH INTERESTS

I am an enthusiast young researcher fascinated by bioinformatics, biology-applied computer science, microbiology, metagenomics, data analysis and Next Generation Sequencing. I am interested in biological-relevant data manipulation strategies and in the development of computational solutions address biologically relevant challenges. I am also interested in microbiome research, specifically oriented to human-associated microbial communities. My current research focuses on the characterization of viruses in the human microbiome.

WORK EXPERIENCE

Current position **Ph.D. Student in Biomolecular Sciences**

Centre for Integrative Biology (CIBIO) – University of Trento

I am working at the [Laboratory of Computational Metagenomics](#) (P.I. **Dr. Nicola Segata**). My project is mainly focused on the metagenomics-based characterization and discovery of viruses associated with cystic fibrosis.

2014 - 2016

Student Internship | Laboratory of Computational Metagenomics

Centre for Integrative Biology (CIBIO) – University of Trento

During my internship and thesis, I worked on the development of computational methods for microbial identification and tracking from metagenomics data. Here I developed MetaMLST, a software enabling *in silico* MLST-analysis without the need for cultivation.

2015 May-Sep

iGEM Team Member | CIBIO, University of Trento

“Solar pMFC: a microbial fuel cell with a light driven Escherichia coli engine”.

We aimed to produce electricity through a genetically modified *E. coli* strain. We presented our project at the 2015 **International Genetic Engineering Competition** in Boston (MA), and were nominated for the “Best Project in the Energy Track” award.

2012 - 2013

Software Analyst and Developer | G.E.C. SpA

Gestione Esazioni Convenzionate – Cuneo (Italy)

Junior backend programmer for G.E.C. SpA, a large tax collection company. As a member of the ICT office, I developed software to handle the production, calculation and elaboration of taxes data, invoices and payment solutions. I worked in PHP and SQL.

- 2009 - 2010 **Instructor | City of Roccavione and Istituto Tecnico Delpozzo - Cuneo (Italy)**
- Basic computer-usage course for elderly with little or no experience. MS Office Suite, Internet and e-mail, Multimedia and Social Networks. (40 hrs, 50 people)
 - Basic Linux: fundamentals of the most popular Open Source Operating System. A hands-on Linux course for high school students (35 hrs, 2 classes of 25 people)
- 2009 Jun-Aug **Intern | G.E.C. SpA**
Gestione Esazioni Convenzionate – Cuneo (Italy)
Analysis, development and deployment of a web-based intranet and web-software.
- 2008 Jul-Aug **Intern | City of Cuneo – Data Elaboration Bureau – Cuneo (Italy)**
Development of on-LAN client-server software for the City Central Library.

EDUCATION

- 2014 - 2016 M.Sc. in **CELLULAR AND MOLECULAR BIOTECHNOLOGY – 110** / 110 with honours
Centre for Integrative Biology (CIBIO), University of Trento, Italy
Other activities: Students Representative, iGEM 2015 Team member
Thesis: Identification, Discovery and Characterisation of Viruses in the Human Microbiome
ADVISOR | Dr. Nicola Segata
- 2010 - 2014 B.Sc. in **COMPUTER SCIENCE – 101** / 110
Department of Engineering and Information Science (DISI), University of Trento, Italy
Interdisciplinary programme in **COMPUTATIONAL BIOLOGY**
Merit Scholarship awarded by the University of Trento (2014)
Thesis: A computational metagenomic pipeline for cultivation-free bacterial strain typing
ADVISOR | Prof. Enrico Blanzieri
SUPERVISORS | Dr. Nicola Segata, Prof. Olivier Jousson
- 2005 - 2010 High School Diploma: **INDUSTRIAL TECHNICIAN, COMPUTER SPECIALIST – 100** / 100
Istituto Tecnico Industriale “M. Delpozzo” – Cuneo, Italy
Final Project: A real-time end-to-end cryptography system with dsPIC microcontrollers
Merit Scholarships: Young Piedmontese Excellences (2009), Carelli-Masante Merit Prize (2008)
Other activities: Students Representative (2007-2010)

PUBLICATIONS

[\[Google Scholar\]](#)

- 2017 S. Duranti, G. A. Lugli, L. Mancabelli, F. Armanini, F. Turrone, K. James, P. Ferretti, V. Gorfer, C. Ferrario, C. Milani, M. Mangifesta, R. Anzalone, M. Zolfo, A. Viappiani, E. Pasolli, I. Bariletti, R. Canto, R. Clementi, M. Cologna, T. Crifò G. Cusumano, S. Fedi, S. Gottardi, C. Innamorati, C. Masè, D. Postai, D. Savoi, M. Soffiati, S. Tateo, A. Pedrotti, N. Segata, D. van Sinderen and M. Ventura. **Maternal inheritance of bifidobacterial communities and bifidophages in infants through vertical transmission – *Microbiome* 5:66**
- 2017 A. Tett, E. Pasolli, S. Farina, D.T. Truong, F. Asnicar, M. Zolfo, F. Beghini, F. Armanini, O. Jousson, V. De Sanctis, R. Bertorelli, G. Girolomoni, M. Cristofolini and N. Segata. **Unexplored diversity and strain-level structure of the skin microbiome associated with psoriasis – *Nature Biofilms and Microbiomes* 3, 14.**

- 2017 F. Asnicar, S. Manara, M. Zolfo, D. T. Truong, M. Scholz, F. Armanini, P. Ferrretti, V. Gorfer, A. Pedrotti, A. Tett and N. Segata. **Studying Vertical Microbiome Transmission from Mothers to Infants by Strain-Level Metagenomic Profiling** – *mSystems*, 2 e00164-16.
- 2017 M. Zolfo, A Tett, O Jousson, C Donati and N Segata. **MetaMLST: multi-locus strain-level bacterial typing from metagenomic samples** – *Nucleic Acids Res* (2017) 45 (2): e7.
- 2016 C. Donati, M. Zolfo, D. Albanese, D. T. Truong, F. Asnicar, V. Iebba, D. Cavalieri, O. Jousson, C. De Filippo, C. Huttenhower and N. Segata. **Uncovering oral Neisseria tropism and persistence using metagenomic sequencing** – *Nature Microbiology* 1, Article: 16070.
- 2016 M. Scholz, D. Ward, E. Pasolli, T. Tolio, M. Zolfo, F. Asnicar, D. T. Truong, A. Tett, A. L. Morrow and N. Segata. **Strain-level microbial epidemiology and population genomics from shotgun metagenomics** – *Nature Methods* 13, 435–438.
- 2016 D. V. Ward, M. Scholz, M. Zolfo, D. H. Taft, K. R. Schibler, A. Tett, N. Segata and A. L. Morrow. **Metagenomic Sequencing with Strain-Level Resolution Implicates Uropathogenic *E. coli* in Necrotizing Enterocolitis and Mortality in Preterm Infants** – *Cell Reports* 14: 12. 2912-2924.

AWARDS AND CONFERENCES

- 2017 **CAMDA Travel Fellowship** and **Outstanding Presentation Award at ISMB/ECCB**
Talk: Strain-level bacterial and viral diversity in the MetaSUB dataset [Prague, Czech Republic]
- 2015 **iGEM 2015 Gold Medal**: For the fulfillment of the prescribed gold requirements in the iGEM competition. Solar pMFC nominated in the top three projects of the Energy Track. [Giant Jamboree, Boston, MA]
- 2015 **Travel Award: Symbiomes: Systems Biology of Host-Microbes Interactions**:
Short talk and poster. Fellowship from the European Science Foundation [Pultusk, Poland]

CONFERENCES (ATTENDED)

- 2014 - Sep **3S Biology Summer School**: Systems, Synthetic and Semantic Biology [Trento, Italy]
- 2014 - Feb The Microbiota: human-microbial interactions, recent studies and therapies [Trento, Italy]
- 2009 - Sep Orientation pre-university course organized by the **Scuola Normale Superiore di Pisa** and the **University of Trento**. [Rovereto, Italy. Access upon national selection]
- 2009 - May **6th congress “Crescere tra le righe”**. Debates and round tables about mass media and journalism organized by the **Permanent Young-Publishers Observatory**. [Siena, Italy. Access upon national selection]

LANGUAGES

Italian	Native speaker
English	Professional working proficiency, oral and written 2006 – <i>Semi-Intensive English</i> / <i>Concorde International School, Canterbury (UK)</i> 2007 – <i>Semi-Intensive English</i> / <i>EAC language Centre, Edinburgh (UK)</i> 2009 – <i>Cambridge P.E.T. Exam</i> – 98 / 100
French	Limited working proficiency
Japanese	Elementary proficiency

COMPUTER SKILLS

Languages	Python, C/C++/mikroC, PHP, Bash, SQL, Java, Javascript, JQuery, HTML 5, Assembly (Intel / AT&T, Microchip), Visual Basic .NET, R, O'CamI, Ruby, R
Software skills	Experience with Linux and Windows operating systems. Everyday use of various Bioinformatics Software. I love to experience with new software packages.

OTHER SKILLS

Basic molecular biology-lab training acquired as part of my B.Sc. and M.Sc. Good social and Team-Leading skills acquired in the following roles:

- Vice President of two nonprofits: "RagionevolMente" (since 2015) and "Parole con le Ali" (2010-2013)
- Students Representative at the Centre for Integrative Biology, University of Trento (2015-2016)
- Team Leader of a small group of programmers for the creation of a prototype web-app for Trento's Science Museum (MUSE) (2013)
- Administrator of an online roleplaying community, counting more than 50 people (2013)

VOLUNTERING / OTHER ACTIVITIES

2015 - Present	Vice President Non-Profit Organization “RagionevolMente” I am a co-founder of RagionevolMente : a non-profit active in scientific communication that organizes events to communicate Science to the public. RagionevolMente's mission is to encourage the communication of sciences and to promote the access to scientific information.
2014 - Present	Volunteer (Ticketing and reception coordinator) TEDx Trento I am a volunteer for TEDx Trento , a yearly conference that aims to spread ideas, advances in research, examples of creativity, activism and non-conventional thinking.
2015 - 2016	Students Representative CIBIO Council, University of Trento
2012 - 2014	Administrator and Lead Programmer Star Trek Federation RPG I developed and managed the software platform of an online gaming community based on the Star Trek saga, involving more than 50 people.
2010 - 2013	Vice President Non-Profit Organization “Parole con le Ali” – Cuneo "Parole con le Ali" was a non-profit organization promoting the connection between schools and workplaces with training projects and workshops in schools.