Fabio Marroni



Topics I love:
Genetics
Bioinformatics
(Meta)Genomics
Statistical Genetics















Personal information

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fabio.marroni@uniud.it; marroni@appliedgenomics.org

Employment history

April, 4th 2022 - Present

Occupation or position held Name and address of employer

Associate Professor, Genetics (BIO/18, 05/I1) University of Udine, Via Palladio 8, 33100 Udine, Italy

Assistant Professor B (Fixed term, L. 240/10)

Bioinformatics analysis of genomic data

April, 2nd 2019 - April, 2nd 2022

Occupation or position held Main activities and responsibilities

Name and address of employer University of Udine, Via Palladio 8, 33100 Udine, Italy

December, 21st 2017 – April, 1st 2019

Occupation or position held Main activities and responsibilities Bioinformatics Operations Manager Coordination of Bioinformatics activities

Name and address of employer | IGA Technology Services s.r.l., Via J. Linussio 51, 33100 Udine, Italy

December, 21st 2012 – December, 20th 2017

Occupation or position held

Main activities and
responsibilities

Assistant Professor A (Fixed term, L. 240/10)
Analysis of genomic data, coordination of PhD students and Post-Docs

Name and address of employer University of Udine, Via Palladio 8, 33100 Udine, Italy

August 2012 - December 2012

Occupation or position held Main activities and responsibilities Research collaborator Bioinformatic data analysis

Name and address of employer IGA Technology Services S.r.I., Via Linussio 51, 33100 Z.I.U. Udine, Italy

August 2008 - August 2012

Occupation or position held
Main activities and
responsibilities

Lab assistant with research duties
Collaboration to the research project ENERGYPOPLAR

Name and address of employer | Institute of Applied Genomics (IGA), Via Linussio 51, 33100 Z.I.U. Udine, Italy

June 2005 - July 2008

Occupation or position held

Main activities and

Researcher, Section Manager Genetic Epidemiology and Biostatistics

responsibilities Name and address of employer

EURAC research, Viale Druso 1, 39100 Bolzano Italy

January 2005 - September 2005

Occupation or position held

Main activities and responsibilities

Name and address of employer

On site Collaborator Genetic Epidemiology and Biostatistics

NIH/NHGRI, IDRB, 333 Cassell Drive, 21224 Baltimore, MD, USA

March 2000 - June 2001

Occupation or position held Main activities and responsibilities Name and address of employer

Collaboration to Research Activity Photobiology and Biophysics

Institute of Biophysics, CNR (National Research Council), Area Della Ricerca, Via G. Moruzzi 1 - 56124 Pisa, Italy

"Abilitazione"

For the purposes of the Italian law, I hold the "abilitazione" for tenure track associate professor in genetics (Genetica, 05/I1) and agricultural genetics (Chimica Agraria, Genetica Agraria e Pedologia, 07/E1), valid until 10/04/2023

Teaching

2021-2022

Teacher of Genetics for first year undergraduate students in Environmental and Natural Sciences, University of Udine (Biologia).

Teacher of Bioinformatics (practical sessions) for undergraduate students in Biotechnology, University of Udine (Genetica Speciale e Bioinformatica)

2021

Teacher in the course "Trascrittoma: dal disegno sperimentale all'interpretazione biologica del dato", organised by the Italian Society for Agricultural Genetics (SIGA). Teacher of Genetics for first year undergraduate students in Environmental and

2020-2021

Natural Sciences, University of Udine (Biologia - AG028). Teacher of Applied Bioinformatics for undergraduate students of the School for

2020

Advanced studies of the University of Udine (SUP0302).

2020

Seminar series (two lessons) in Coffee Genetics - Master in Coffee Economics and

2019

Science "Ernesto Illy" (Trieste, Italy, 6th and 11th February) Seminar series (three lessons) in Coffee Genetics - Master in Coffee Economics

and Science "Ernesto Illy" (Trieste, Italy, 16th, 23rd, and 30th January)

2018

Seminar series (three lessons) in Coffee Genetics - Master in Coffee Economics

and Science "Ernesto Illy" (Trieste, Italy, 17th and 25th January)

2017

Seminar "Mapping the Molecular phenotype: eQTL and sQTL analysis", in the seminar series Frontiers in Biotechnology, held at Scuola Superiore Sant'Anna,

Pisa, Italy, 29th November.

Teacher (eQTL mapping) in the Course organized by the Italian Society of Agricultural Genetics "GWAS: from theory to practice", Canazei July 4th-7th. Seminar series (three lessons) in Coffee Genetics - Master in Coffee Economics and Science "Ernesto Illy" (Trieste, Italy, 2nd, 3rd and 5th May)

2016

Seminar series (two lessons) on analysis of NGS data for undergraduate students. Course "Genome analysis and Bioinformatics" (on behalf of Michele Morgante).

2015

Seminar series (three lessons) on analysis of NGS data for undergraduate students. Course "Genome analysis and Bioinformatics" (on behalf of Michele Morgante).

2014

One day teaching in Scuola Superiore Sant'Anna (Pisa, Italy) course in Applied Bioinformatics (Graduate and Undergraduate students)

Seminar series (16 hours) in NGS analysis of structural variants in the Course PON Ricerca e Competitività (PONa3 00134/F5) (November 20th and 21st CRA, Turi,

Teacher of the short course "Introduction to Genomics" in the framework of the project: "MODULI FORMATIVI DALLA SCUOLA ALL'UNIVERSITA'" (Three lessons)

2013

Seminar series (three lessons) on Fst, Hardy-Weingberg equilibrium, and nucleotide diversity for undergraduate students. Course "Genetic Resources in Agriculture" (on behalf of Raffaele Testolin).

Seminar series (two lessons) on RNAseq for undergraduate students. Course

"Genome analysis and Bioinformatics" (on behalf of Michele Morgante). One day teaching in the Bioinformatics Module in the Course PON Ricerca e Competitività 2007-2013 (01_01623/F)

One day teaching in Animal Genetics Module in the Course PON Onev – Corso Esperto in Omiche Animali

Seminar series (two lessons) on RNAseq for undergraduate students. Course "Genome analysis and Bioinformatics" (on behalf of Michele Morgante).

One day teaching in Scuola Superiore Sant'Anna (Pisa, Italy) course in Applied

Bioinformatics (Graduate and Undergraduate students)

2008-2010 Contract professor of the course "Genetics (BIO/05)" for first year undergraduate students of "Veterinary Medicine" and "Environmental and Natural Sciences",

University of Udine, Italy.

2008 Seminar series (two lessons) on Hardy-Weingberg equilibrium for undergraduate students. Course "Genetic Resources in Agriculture" (on behalf of Raffaele

Testolin).

PhD tutoring

Co-supervisor (together with Prof. Michele Morgante) of the PhD projects "Building Catalogues of Genetic Variation in Poplar" (PhD candidate, Sara Pinosio, 2012), "Characterisation of the pan-genome of Vitis vinifera using Next Generation Sequencing" (PhD candidate Gabriele Magris, 2014), "Identification and mapping of loci controlling viability in *Vitis vinifera* crosses (PhD candidate Alice Fornasiero, 2016) and "Identification of structural variation in *Zea mays*: use of paired-end mapping and development of a novel algorithm based on split reads" (PhD candidate Ettore Zapparoli, 2016).

Education and training

2005: PhD Experimental and Molecular Oncology

Thesis La predizione dello stato di portatore di mutazioni germinali in *BRCA1* e *BRCA2* -

Valutazione dei modelli esistenti, stima delle penetranze, ed elaborazione di un modello adattato alle popolazioni italiane (Predicting carrier status for mutations in *BRCA1* and *BRCA2* - Evaluation of existing models, penetrance estimation, and

development of a model tailored for the Italian populations).

University | University of Pisa

Date 08/04/05

Tutor | Silvano Presciuttini

1999: MSc | Biology (110/110 *cum laude*)

Thesis | Risposta e fotorisposta di Ophryoglena flava a radiazioni ultraviolette (Response

and Photoresponse of Ophryoglena flava to UV radiations)

University University of Pisa

Date 19/07/1999

Tutor | Giuliano Colombetti and Roberto Marangoni

Personal skills and competences

Mother tongue | Italian

English German

Other languages Self-assessment

European level (*)

English, German

	Understanding				Speaking				Writing	
	Listening			Reading		Spoken Spoken				
					interaction		production			
C	1	Proficient	C1	Proficient	C1	Proficient	C1	Proficient	C1	Proficient
Е	31	Independent	B1	Independent	В1	Independent	В1	Independent	В1	Independent

(*) Common European Framework of Reference for Languages

Citation Indices

Web of Science: Total citations **6901**, H-index **30** Google Scholar: Total citations **9945**, H-index **33**

Selected Publications

- 1. Paxton RJ, Schäfer MO, Nazzi F, Zanni V, Annoscia D, Marroni F, Bigot D, Laws-Quinn ER, Panziera D, Jenkins C, Shafiey H: **Epidemiology of a major honey bee pathogen, deformed wing virus: potential worldwide replacement of genotype A by genotype B.** *International Journal for Parasitology: Parasites and Wildlife* **2022**, 18, 157-171
- 2. Buoso S, Musetti R, Marroni F, Calderan A, Schmidt W, Santi S: Infection by phloem-limited phytoplasma affects mineral nutrient homeostasis in tomato leaf tissues *Journal of Plant Physiology* **2022** 271, 153659
- 3. Magris G, Marroni F, D'Agaro E, Vischi M, Chiabà C, Scaglione D, Kijas J, Messina M, Tibaldi E, Morgante M: ddRAD-seq reveals the genetic structure and detects signals of selection in Italian brown trout. *Genetics Selection Evolution*. 2022. 54(1), 1-14
- 4. Di Gaspero G, Radovic S, De Luca E, Spadotto A, Magris G, Falginella L, Cattonaro F, Marroni F: Evaluation of sensitivity and specificity in RNA-Seqbased detection of grapevine viral pathogens. *Journal of Virological Methods*. **2022.** 300 114383.
- 5. Magris et al., The genomes of 204 Vitis vinifera accessions reveal the origin of European wine grapes. *Nature communications*. 2021. 12(1), 1-12.
- 6. Sherbina K, León-Novelo LG, Nuzhdin SV, McIntyre LM, Marroni F: **Power** calculator for detecting allelic imbalance using hierarchical Bayesian model. *BMC research notes*. **2021**. 14(1) 1-18.
- 7. Buoso S, Tomasi N, Arkoun M, Maillard A, Jing L, Marroni F, Pluchon S, Pinton R, Zanin L: **Transcriptomic and metabolomic profiles of Zea mays fed with urea and ammonium.** *Physiologia plantarum.* **2021**. 173(3) 935-953.
- 8. Miculan M, Nelissen H, Ben Hassen M, Marroni F, Inze D, Pè ME, Dell'Acqua M: A forward genetics approach integrating genome-wide association study and expression quantitative trait locus mapping to dissect leaf development in maize (Zea mays). The Plant journal: for cell and molecular biology. 2021. 107 (4), 1056-1071.
- 9. Miller BR, Morse AM, Borgert JE, Liu Z, Sinclair K, Gamble G, Zou F, Newman JRB, León-Novelo LG, Marroni F, McIntyre LM: **Testcrosses are an efficient strategy for identifying cis-regulatory variation: Bayesian analysis of allele-specific expression (BayesASE).** *G3.* **2021**. 11 (5) jkab096.
- 10. Valadares R, Marroni F, Sillo F, Oliveira RRM, Balestrini R, Perotto S: A Transcriptomic Approach Provides Insights on the Mycorrhizal Symbiosis of the Mediterranean Orchid Limodorum abortivum in Nature. *Plants* 2021. 10(2), 251.
- 11. Misson G, Mainardis M, Marroni F, Peressotti A, Goi D: Environmental methane emissions from seagrass wrack and evaluation of salinity effect on microbial community composition. *Journal of Cleaner Production*. 2020 12546
- 12. Ciani E, et al. On the origin of European sheep as revealed by the diversity of the Balkan breeds and by optimizing population-genetic analysis tools. *Genetics Selection Evolution.* **2020** 52, 1-14.
- 13. Pinosio S, Marroni F, Zuccolo A, Vitulo N, Mariette S, Sonnante G, Aravanopoulos FA, Ganopoulos I, Palasciano M, Vidotto M, Magris G, lezzoni A, Vendramin GG, Morgante M. A draft genome of sweet cherry (*Prunus avium L.*) reveals genome-wide and local effects of domestication. *The Plant Journal.* 2020. 103 (4), 1420-1432
- Marino M, Dubsky de Wittenau G, Saccà E, Cattonaro F, Spadotto A, Innocente N, Radovic S, Piasentier E, Marroni F. Metagenomic profiles of different types of Italian high-moisture Mozzarella cheese. Food microbiology 2019 79:123-131.
- 15. Leon-Novelo L, Gerken AR, Graze RM, McIntyre LM, Marroni F. **Direct Testing for Allele-Specific Expression Differences Between Conditions.** *G3: Genes, Genomes, Genetics* **2017** doi: 10.1534/g3.117.300139
- Marroni F, Scaglione D, Pinosio S, Policriti A, Miculan M, Di Gaspero G, Morgante M. Reduction of heterozygosity (ROH) as a method to detect mosaic structural variation. *Plant Biotechnol J.* 2017 Jan 5. doi: 10.1111/pbi.12691.
- 17. Pinosio S, Giacomello S, Faivre-Rampant P, Taylor G, Jorge V, Le Paslier MC,

- Zaina G, Bastien C, Cattonaro F, Marroni F, Morgante M. Characterization of the Poplar Pan-Genome by Genome-Wide Identification of Structural Variation. *Mol Biol Evol.* **2016** Oct;33(10):2706-19. doi: 10.1093/molbev/msw161
- 18. International Peach Genome Initiative, Verde I, Abbott AG, Scalabrin S, Jung S, Shu S, Marroni F, Zhebentyayeva T, Dettori MT, Grimwood J, Cattonaro F, Zuccolo A, Rossini L, Jenkins J, Vendramin E, Meisel LA, Decroocq V, Sosinski B, Prochnik S, Mitros T, Policriti A, Cipriani G, Dondini L, Ficklin S, Goodstein DM, Xuan P, Del Fabbro C, Aramini V, Copetti D, Gonzalez S, Horner DS, Falchi R, Lucas S, Mica E, Maldonado J, Lazzari B, Bielenberg D, Pirona R, Miculan M, Barakat A, Testolin R, Stella A, Tartarini S, Tonutti P, Arús P, Orellana A, Wells C, Main D, Vizzotto G, Silva H, Salamini F, Schmutz J, Morgante M, Rokhsar DS. The high-quality draft genome of peach (Prunus persica) identifies unique patterns of genetic diversity, domestication and genome evolution. Nat Genet. 2013 May;45(5):487-94.
- 19. Dastani Z, et al. Novel loci for adiponectin levels and their influence on type 2 diabetes and metabolic traits: a multi-ethnic meta-analysis of 45,891 individuals. PLoS Genet. 2012;8(3):e1002607.
- Marroni F, Pinosio S, Di Centa E, Jurman I, Boerjan W, Felice N, Cattonaro F, Morgante M. Large-scale detection of rare variants via pooled multiplexed next-generation sequencing: towards next-generation Ecotilling. *Plant J*, 2011 Aug;67(4):736-45.
- 21. Marroni F, Pinosio S, Zaina G, Fogolari F, Felice N, Cattonaro F, Morgante M. Nucleotide diversity and linkage disequilibrium in Populus nigra cinnamyl alcohol dehydrogenase (CAD4) gene. *Tree Genetics and Genomes*, 2011, 7(5): 1011-23.
- 22. Teslovich TM *et al.* **Biological, clinical and population relevance of 95 loci for blood lipids.** *Nature*, **2010** Aug 5;466(7307):707-13.
- 23. Pichler I, Fuchsberger C, Platzer C, Calişkan M, Marroni F, Pramstaller PP, Ober C. Drawing the history of the Hutterite population on a genetic landscape: inference from Y-chromosome and mtDNA genotypes. *Eur J Hum Genet.* **2010** 18(4):463-70.
- 24. Pichler I, Marroni F, Pattaro C, Lohmann K, de Grandi A, Klein C, Hicks AA, Pramstaller PP. **Parkin gene modifies the effect of RLS4 on the age at onset of restless legs syndrome (RLS).** Am J Med Genet B Neuropsychiatr Genet, **2010**: Jan 5;153B(1):350-5.
- 25. Hicks AA et al. Genetic determinants of circulating sphingolipid concentrations in European populations. PLoS Genet. 2009 Oct;5(10):e1000672.
- 26. Marroni F, Pfeufer A, Aulchenko YS, Franklin CS, Isaacs A, Pichler I, Wild SH, Oostra BA, Wright AF, Campbell H, Witteman JC, Kääb S, Hicks AA, Gyllensten U, Rudan I, Meitinger T, Pattaro C, van Duijn CM, Wilson JF, Pramstaller PP, on behalf of the EUROSPAN Consortium. A Genome-Wide Association Scan of RR and QT Interval Duration in 3 European Genetically Isolated Populations: The EUROSPAN Project. Circ Cardiovasc Genet, 2009 Aug; 2: 322 328.
- 27. Pattaro C, Aulchenko YS, Isaacs A, Vitart V, Hayward C, Franklin CS, Polasek O, Kolcic I, Biloglav Z, Campbell S, Hastie N, Lauc G, Meitinger T, Oostra BA, Gyllensten U, Wilson JF, Pichler I, Hicks AA, Campbell H, Wright AF, Rudan I, van Duijn CM, Riegler P, Marroni F, Pramstaller PP; EUROSPAN Consortium. Genome-wide linkage analysis of serum creatinine in three isolated European populations. Kidney Int. 2009 Aug;76(3):297-306.
- 28. Johansson A, Marroni F, Hayward C, Franklin CS, Kirichenko AV, Jonasson I, Hicks AA, Vitart V, Isaacs A, Axenovich T, Campbell S, Dunlop MG, Floyd J, Hastie N, Hofman A, Knott S, Kolcic I, Pichler I, Polasek O, Rivadeneira F, Tenesa A, Uitterlinden AG, Wild SH, Zorkoltseva IV, Meitinger T, Wilson JF, Rudan I, Campbell H, Pattaro C, Pramstaller P, Oostra BA, Wright AF, van Duijn CM, Aulchenko YS, Gyllensten U; EUROSPAN Consortium.: Common variants in the JAZF1 gene associated with height identified by linkage and genome-wide association analysis. Hum Mol Genet. 2009 Jan 15;18(2):373-80.
- 29. Aulchenko YS, et al. Loci influencing lipid levels and coronary heart disease risk in 16 European population cohorts. Nat Genet. 2009

- Jan;41(1):47-55.
- 30. Pichler I, Marroni F, Beu Volpato C, Gusella JF, Kleine C, Casari G, De Grandi A, Pramstaller PP: Linkage Analysis Identifies a Novel Locus for Restless Legs Syndrome on Chromosome 2g in a South Tyrolean Population Isolate. American Journal of Human Genetics 2006 79(4):716-23.
- 31. Marroni F, Aretini P, D Andrea E, Caligo MA, Cortesi L, Viel A, Ricevuto E, Montagna M, Cipollini G, Federico M, Santarosa M, Marchetti P, Bailey-Wilson JE, Bevilacqua G, Parmigiani G and Presciuttini S: Penetrances of breast and ovarian cancer in a large series of families tested for BRCA1/2 mutations. European Journal of Human Genetics 2004;12(11):899-906.
- 32. Marroni F, et al: Evaluation of widely used models for predicting BRCA1 and BRCA2 mutations. Journal of Medical Genetics 2004;41(4):278-85.

Visiting Scientist

October 2004: Johns Hopkins University, Department of Biostatistics, Baltimore, MD, USA (prof. Giovanni Parmigiani)

June 2006: Medical Research Council, Human Genetics Unit, Western General Hospital, Edinburgh, Scotland, UK (Dr. Veronique Vitart)

19th August - 8th September 2014: INTA, Hurlingham, Buenos Aires, Argentina. Visiting researcher in the framework of the project DEANN (Grant Agreement number: PIRSES-GA-2013-612583). Reference: Norma Paniego

17th August - 7th September 2015: Langebio/CINVESTAV, Irapuato Mexico. Visiting researcher in the framework of the project DEANN (Grant Agreement number: PIRSES-GA-2013-612583). Reference: Rafael Montiel

15th August - 23th September 2016: University of Florida, Gainesville, FL, USA. Visiting researcher in the framework of the project DEANN (Grant Agreement number: PIRSES-GA-2013-612583). Reference: Lauren McIntyre 21th August - 28th September 2017: University of Florida, Gainesville, FL, USA.

Visiting researcher in the framework of the project DEANN (Grant Agreement number: PIRSES-GA-2013-612583). Reference: Matias Kirst

19th November 2019 - 2nd February 2020: CSIRO St Lucia, Brisbane (Australia). Visiting researcher in the framework of the GenSal project. Reference: James Kijas

Research Projects

2022-2023

Artificial Intelligence: grant financed by the University of Udine (Role: I am one of the several proponents and involved in applications of AI)

2021-2026

SEEDFORCE: Using SEED banks to restore and reinFORCE the endangered native plants of Italy (LIFE20 NAT/IT/001468), financed by the European Union (Role: responsible of the genetics unit, together with my colleague Emanuele De

2019-2020

GenSal: Genomic analysis of brown trout (Salmo trutta), financed by University of Udine. (Role: Participant)

2014-2017

DEANN: Developing an European American NGS Network (PIRSES-GA-2013-612583) (Role: Participant)

2012-2017

NOVABREED: Novel variation in plant breeding and the plant pan-genomes (ERC 294780) (Role: Participant)

2008-2012

ENERGYPOPLAR:

Enhancing Poplar Traits for Energy Applications (FP7, grant 211917) (Role: Participant)

2005-2008

EUROSPAN: EUROpean special populations research Network: quantifying and harnessing genetic variation for gene discovery (FP6, Grant Number LSHG-CT-2006-018947) (Role: Participant)

Workshops/ Conferences Organization

2018

Scientific co-director of the bioinformatics courses "Data Crunching: from hell to heaven" (Udine, 25th-27th July 2018) and "Epigenetics: on the top of Genetics" (Udine, September 4th-7th).

Scientific co-director of the ECM course: "Next Generation Diagnostics: la diagnostica ai tempi del sequenziamento di nuova generazione" held in Udine, June 22nd 2018.

2016 Member of the organising committee of the bioinformatics course: "Bioinformatica per tutto, bioinformatica per tutti" on behalf of the Società Italiana di Genetica Agraria (Italian Society of Agriculture Genetics), and teacher in the same course, held in Udine 28th June - 1st July 2016

In the framework of the EU-funded DEANN project, member of the organizing committee of the NGS Workshop "On top of genetics" 22-23 June, Udine, Italy (http://bioinfo.cipf.es/deann/?tribe events=epigen-ngs-workshop)

Talks/Lectures

Winter School in Agricultural Chemistry (ACWS), February 14th - 17th Udine, Italy (online)

2018 BITS, meeting of the Italian Bioinformatics Society, June 27th – 29th Turin, Italy.

2014 GRAcious symposium on grape genetics, genomics and physiology (Sde Boqer, Israel, October 29-31, 2014)

Bioinformatiha 3 (Pisa, October 20, 2014)

Genomics meets metabolomics (IGA, Udine, Italy, 05/10/2014)

Scuola Superiore Sant'Anna, Pisa (05/03/2014)

2013 IGA Technology services (Watbio)

Università di Udine (Study day on Big Data)

2012 | METLA, Helsinki (Noveltree)

IGA Technology services (Course, Data Crunching: from hell to heaven)

Editor/Reviewer

Editor for: Scientific Data, Frontiers in Plants Science (Technical Advances). **Reviewer for:** BMC Genetics, BMC genomics, Journal of Genetics, PLoS One, Molecular Ecology, European Journal of Human Genetics, Human Mutation, Journal of Medical Genetics, Tree Genetics and Genomes, Journal of the American Society for Horticultural Science, Clinical Genetics, Human Molecular Genetics, Human Biology, Journal of Experimental Botany, Molecular Biology Reports, Plant Science, Plant Genetic Resources, Scientific Reports

Member of the Program Committee of ISBM 2018.

Grant Reviewer

European Commission, Malta Council for Science and Technoloy, Czech Science Foundation, National Research Foundation of South Africa, Regione Autonoma Sardegna

Awards

2011

New Phytologist Trust travel grant: 26th New Phytologist Symposium "Bioenergy

2017

Recipient of the "Finanziamento delle attività base di ricerca" grant/award (3000 Euros)

2019-2020

Scaling up Genomics in Aquaculture, Short Mission Grant, University of Udine

Popular science

Marroni F: La misura dell'isolamento. Academia N.42 (EURAC's quarterly science magazine), December 2006.

Marroni F: **Viaggi genetici? No grazie.** Academia N.45 (EURAC's quarterly science magazine), December 2007.

Professional Skills

Experience with statistical methods for linkage and association mapping of quantitative and qualitative traits.

Experience in population genetics: population differentiation, LD structure, mutation dating, haplotype inference, phylogeny.

Experience in statistical and bioinformatics analysis of Next Generation Sequencing data

Laboratory Skills

Electrophoresis, DNA/RNA extraction, PCR, Sanger sequencing, library preparation for next generation sequencing.

Programming Skills Research Interests

R, shell scripting.

Applications of Next Generation Sequencing

Study of gene expression using RNAseq

Genome Wide Association Mapping, QTL mapping, eQTL mapping

Metagenomics

Identification of structural variants

Genomics

Population genetics

Linkage and association mapping of quantitative and qualitative traits

Interests and hobbies

Genetic Epidemiology

Actor in several non-professional acting companies.

Writer of several short stories and poems (in Italian).

Founding member of Kaleidoscienza, a not for profit association for the advancement and public understanding of science.