



Martina Paganin

Date of birth: 15/08/1988

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CONTACT

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WORK EXPERIENCE

09/09/2019 – CURRENT

Research fellow

Laboratory of Translational Architectomics - Biophysics Institute – CNR, Trento, Italy

Research project on the study of in vivo translational alterations in spinal muscular atrophy at single nucleotide resolution.

Experience with:

- processing and quality control analysis of RNA-Seq and ribosome profiling data from healthy and Spinal Muscular Atrophy-affected mouse tissues;
- development of dedicated pipelines for the analysis of ribosome profiling data;
- usage of dedicated tools and pipelines for the investigation of translational defects potentially associated to the localization and organization of ribosomes along the mRNAs;
- usage of tools for managing and editing Atomic Force Microscopy images;
- development of a dedicated pipeline for the analysis of polysomes from Atomic Force Microscopy.

17/12/2018 – 09/06/2019

Research intern

Laboratory of Translational Architectomics - Biophysics Institute – CNR, Trento, Italy

Research project on the spatial organization of ribosomes within polysomes.

Experience with:

- development of a pipeline to manage single-polysome images acquired through Atomic Force Microscopy;
- application of probabilistic models and clustering algorithms for the analysis of the structural organization of ribosomes within polysomes.

Trento, 12/07/2023

28/02/2017 – 12/05/2017

Research intern

Okkam S.R.L., Trento, Italy

Comparative analysis of string similarity algorithms applied in the context of inconsistency and redundancy in database archives.

Experience with:

- literature survey of string similarity algorithms;
- programming languages (Java, Python);
- usage of machine learning approaches to real life applications in a business context.

EDUCATION AND TRAINING

Master of Science (MSc) in Computer Science (LM-18)

17/09/2017 – 17/07/2019 – Trento, Italy

University of Trento

Mentors: Dr. Gabriella Viero, Dr. Andrea Passerini

Final grade: 107/110

Thesis: "TSPolysomes: development of a computational pipeline to unravel a structural code in cellular polysomes

EQF level 7

Bachelor's Degree in Computer Science (L-31)

15/09/2014 – 17/07/2017 – Trento, Italy

University of Trento

Mentor: Dr. Paolo Bouquet

Final grade: 93/110

Thesis: "Name matching: analyses of string similarity algorithms applied to personal Italian names"

EQF level 6

09/2009 – 06/2014 – Belluno, Italy

High School Diploma

Istituto Tecnico Commerciale Pier Fortunato Calvi

Final grade: 97/100

LANGUAGE SKILLS

MOTHER TONGUE(S): Italian

OTHER LANGUAGE(S): English

Listening	Reading	Spoken production	Spoken interaction	Writing
B2	C1	B1	B1	B2

DRIVING LICENCE

Driving Licence: B



ORGANISATIONAL SKILLS

- performing research activities, attending seminars and conferences;
- presenting the on-going research work;
- adequately scheduling and planning my activities;
- organizing my work.

COMMUNICATION AND INTERPERSONAL SKILLS

- Presentation of Journal Clubs and laboratory progress reports;
- communication with researchers with different backgrounds (biology, mathematics, biochemistry);
- presentation of results to scientific collaborators;
- poster presentation.

JOB-RELATED SKILLS

- knowledge and usage of programming languages (Java, Python and R);
- identification and application of machine learning models, such as regression, classification and clustering to address various problems;
- development of computational pipelines and scripts for statistical data manipulation and analysis;
- development of R packages for visually represent complex biological data for effective communication and results interpretation;
- usage of image processing programs for the analysis of images acquired through Atomic Force Microscopy.

SUMMER SCHOOLS

The CODATA-RDA Research Data Science Summer School, The Abdus Salam International Centre for Theoretical Physics, 11-22 July 2022, 80 hours.

CERTIFICATIONS

ECDL certificate

ECDL advanced certificate

FIRST certificate in English

ORAL PRESENTATIONS

SELECTED

MULTI-LEVEL TRANSLATOME ANALYSES REVEAL UNEXPECTED ROBUST AND PRE-SYMPTOMATIC DEFECTS IN SMA

10-11/09/2020, UK SMA Research Conference (Virtual)



POSTERS

TSPolysomes: a computational pipeline to unravel a structural code in cellular polysomes

Applied Bioinformatics in Life Sciences (3rd edition)

13-14/02/2020, Leuven, Belgium

MULTI-LEVEL TRANSLATOME ANALYSIS REVEALS UNEXPECTED ROBUST PRE-SYMPTOMATIC DEFECTS IN SMA

Motor neuron diseases: understanding the pathogenic mechanisms to develop therapies

06 – 07/11/2020, Virtual - Torino University

expressyouRcell: shooting for space-time changes in gene expression in cells

VIZBI 2021 - the 11th international meeting on Visualizing Biological Data

March 24–26 2021

expressyouRcell: shooting for space-time changes in gene expression in cells

XXV Congresso S.I.B.P.A. 2021, organizzato online dalla società italiana di biofisica pura ed applicata, 28/06-01/07 2021

The organization of ribosomes in polyribosomes during evolution: application of a processing pipeline for Atomic Force Microscopy images

Convegno virtuale 2021, Istituto di biofisica – CNR, 23-25 Novembre 2021

Multi-level translome analysis reveals stage-specific codon usage patterns on SMA-relevant transcripts

EMBO Workshop - Codon usage: Function, mechanism and evolution, EMBO, Edinburgh, United Kingdom, 08-11 April 2022

expressyouRcell: shooting for space-time changes in gene expression in cells

18th annual meeting of the Bioinformatics Italian Society BITS 2022, Verona, Italy, 27-29 June 2022

Multidimensional genome-wide analysis reveals robust pre-symptomatic defects in translation in two SMA mouse models

5th Brainstorming research assembly for young neuroscientists, Brayn association, Roma, Italy, 28-30 September 2022

Multidimensional genome-wide analysis reveals robust pre-symptomatic defects in translation in three SMA mouse models

SMA Europe - Barcelona, Spain

21-23rd October 2023

CONFERENCES AND SEMINARS

3rd International Scientific Congress on Spinal Muscular Atrophy

SMA Europe - Barcelona, Spain

21-23rd October 2023

5th Brainstorming research assembly for young neuroscientists

Brayn association - Roma, Italy



28-30th September 2022

18th annual meeting of the Bioinformatics Italian Society BITS 2022

Bioinformatics Italian Society - Verona, Italy

27-29th June 2022

EMBO Workshop - Codon usage: Function, mechanism and evolution

EMBO - Edinburgh, United Kingdom

08-11th April 2022

Convegno virtuale 2021, Istituto di biofisica

CNR

23-25th November 2021

XXV Congresso S.I.B.P.A. 2021

Società italiana di biofisica pura ed applicata

28th June – 1st July 2021

RNA2021

RNA Society

25th May-5th June 2021 - Virtual

JCB–JEM 2021 Symposium on Neurodegeneration

26-27th April 2021 - Virtual

EMBL Conference: Visualizing Biological Data

EMBL Advanced Training Centre

24th - 26th March 2021 – Virtual

RNA AT THE BENCH AND BEDSIDE II

Nature Conferences

11th-13th November 2020 – Virtual

MOTOR NEURON DISEASES: UNDERSTANDING THE PATHOGENETIC MECHANISMS TO DEVELOP THERAPIES

Torino University

06th – 07th November 2020 – Virtual

UK SMA RESEARCH CONFERENCE

SMA Europe

10/09/2020 – 11/09/2020 – Virtual

RNA2020

RNA Society

26/05/2020 – 31/05/2020 – Virtual

APPLIED BIOINFORMATICS IN LIFE SCIENCES (3RD EDITION)

VIB

13/02/2020 – 14/02/2020 – Leuven, Belgium



INTERNATIONAL SCIENTIFIC CONGRESS ON SPINAL MUSCULAR ATROPHY

SMA Europe

05/02/2020 – 07/02/2020 – Evry, France

Trento, 12/07/2023