

# PAOLO DALENA

PhD Student in Applied Data Science & Artificial Intelligence @UniTS  
Health Researcher @IRRCS Burlo Garofolo

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📄 <https://github.com/PaoloDalena>    🌐 <https://paolodalena.netlify.app/>



## RESEARCH EXPERIENCE

### Health Researcher - Data Scientist

#### IRCCS Burlo Garofolo

📅 Jan 2022 – Present    📍 Trieste, Italy

- *Pediatric clinic & genomics* (from Nov 2023);
- Participation in national and international projects as a biostatistician & data scientist;
- Training of residents for epidemiology and data analysis;
- Research topics: health data analytics, genomics;
- Supervisor: Egidio Barbi

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- *WHO Collaborating Center for maternal and child health*;
  - Research topics: maternal and child health, health system research, implementation of WHO recommendations;
  - Supervisor: Marzia Lazerini

### Visiting PhD Student

#### University College Dublin

📅 Mar 2026 – Oct 2026    📍 Dublin, Ireland

- *UCD School of Mathematics and Statistics* - Erasmus+ program;
- Scientific collaboration with Alberto Caimo

### Internship Master thesis

#### Institute for Mathematical Biology - Hochschule Mannheim

📅 Apr 2021 – Sep 2021    📍 Mannheim, Germany

- Collaboration for Master thesis - Erasmus+ program;
- Supervisors: Simone Giannerini, Lutz Strüngmann

### Internship Master student

#### Bundesbank Research Centre

📅 Feb 2021 – Apr 2021    📍 Frankfurt am Main, Germany

- Undisclosed project on quality assessment of research center's publications;
- Applied techniques: Big Data Analytics, Text Mining

### Internship Bachelor student

#### Unit of Biostatistics, Epidemiology and Public Health - University of Padua

📅 Jan 2019 – Mar 2019    📍 Padua, Italy

- Text mining on complex text sources: tumor marker guidelines, development of an R package to import text from PDF files;
- Acquired skills: data science with R, understanding of R language, R programming, R package developing;
- Supervisors: Dario Gregori, Corrado Lanera

## EDUCATION

### PhD Student in Applied Data Science and Artificial Intelligence

#### University of Trieste

📅 01/2024 - Present    📍 Trieste, Italy

- Project title: *Development of a prioritization algorithm of pathogenic variants based on public databases of different origins*;
- Supervisors: Giulia Barbati, Pio Adamo d'Adamo, Alberto Caimo, Massimo Zeviani

### Second-level Short Specialisation Degree in Machine Learning and big data in precision medicine and biomedical research

#### University of Padua

📅 12/2022 - 10/2023    📍 Padua, Italy

- Thesis title: *Prioritization of differential methylation regions for the prediction of celiac disease*

### Master degree in Statistics

#### Alma Mater Studiorum - University of Bologna

📅 09/2019 - 10/2021    📍 Bologna, Italy

- Curriculum Data Science (taught in English)
- Grade 110/110 L - Weighted avg 28,78/30
- Thesis title: *Circular codes, reading frames and error correction in translation*
- Supervisors: Simone Giannerini, Lutz Strüngmann

### Bachelor degree in Statistics

#### Alma Mater Studiorum - University of Bologna

📅 09/2016 - 07/2019    📍 Bologna, Italy

- Curriculum Economics & business
- Grade 110/110 L - Weighted avg 29,15/30
- Thesis title: *Text Mining On Complex Text Sources: Analysis Of The Final Considerations Of The Governor On The Annual Reports Of The Bank Of Italy From 2008 To 2017*
- Supervisors: Ignazio Drudi, Fabrizio Alboni, Corrado Lanera

## SCHOOLS

- MOnitoring Outbreaks for Disease surveillance in a data science context (MOOD) Summer School 2023  
📅 21-27/05/2023 📍 Split, Croatia  
\* awarded of merit-based scholarship  
\* 1st classified hackathon *Predicting the occurrence of ticks in the UK between 2014-2021*
- Utrecht Summer School 2024 - Advanced Multilevel Analysis  
📅 15-17/07/2024 📍 Utrecht, The Netherlands
- CINECA - High Performance Bioinformatics  
📅 04-06/12/2024 📍 Rome, Italy

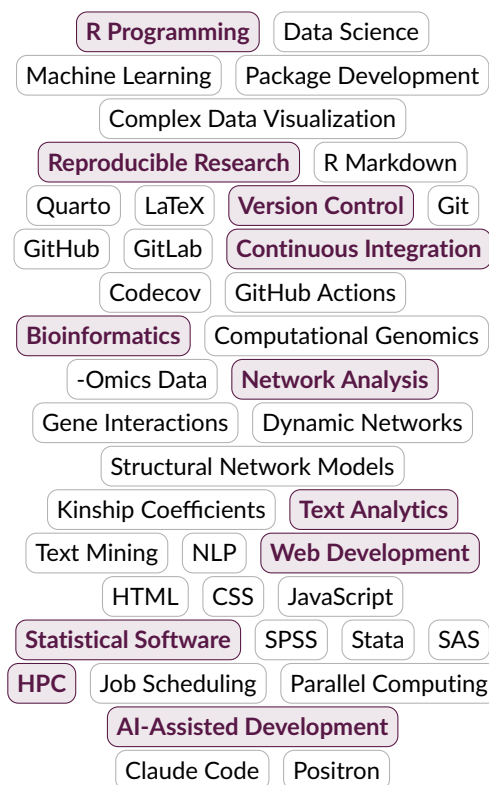
## CONFERENCES

- 30th International Pediatric Association (IPA) Congress & 60th Annual Conference of the Indian Academy of Pediatrics (IAP) 2023 - oral & 3 poster presentations  
📅 18-22/02/2023 📍 Gandhinagar, India
- European Scientific Conference on Applied Infectious Disease Epidemiology (ESCAIDE)  
📅 22-24/10/2023 📍 Barcelona, Spain
- 45th Annual Conference of the International Society for Clinical Biostatistics (ISCB) 2024 - 2 poster presentations  
📅 21-25/07/2024 📍 Thessaloniki, Greece
- 13th International Conference on Complex Networks and their Applications (CNA) 2024 - oral presentation  
📅 10-12/12/2024 📍 Istanbul, Turkey
- 1st Workshop on Data Science for Health and Biology 2025 - poster presentation  
📅 07-09/04/2025 📍 Milan, Italy
- Italian Statistical Society (SIS) Conference 2025  
📅 06-18/06/2025 📍 Genova, Italy
- 15-th Scientific Meeting Classification and Data Analysis Group - CLADAG 2025 - oral presentation  
📅 08-10/09/2025 📍 Naples, Italy
- 29th Young Statisticians Meeting - oral presentation for invited session  
📅 26-28/09/2025 📍 Basovizza, Italy
- SIS-FENStatS 2026 Conference 2026 - oral presentation  
📅 22-25/06/2026 📍 Rome, Italy

## HOBBIES & INTERESTS

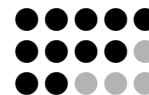
I enjoy going on hikes and walks in the wild. I'm a rubbish footballer, a reasonably good climber, and a table football champion.

## PROGRAMMING SKILLS



## LANGUAGES

Italian  
English  
French



## TEACHING EXPERIENCE

- Training of residents for epidemiology and data analysis (IRCCS Burlo Garofolo, from Nov 2023)
- Co-teaching for the course "Statistical Learning in Epidemiology" (University of Trieste, 2023/24 and 2024/25)
- Teaching for the course "Mathematics and general statistics" (LifeTech ITS Academy, Trieste, 2025)

## PROFESSIONAL ACHIEVEMENTS

- R package **tastypie** available on CRAN - 10/02/2021
- PeerJ Enhanced Lifetime Individual Membership, Leanpub Lifetime Reader Membership (hackathon prizes)
- Reviewer for **Frontiers in Endocrinology**
- Reviewer for **The R Journal**

# CONFERENCE PROCEEDINGS

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- 62nd Annual Meeting of the European Society for Paediatric Endocrinology (ESPE) 2024  
*Decreased serum DHEAS to cortisol ratio in adolescents evaluated for gender dysphoria*  
G. Tornese, G. Bresciani, A. Roia, et al.  
doi: 10.1159/000541189  
[Hormone Research in Paediatrics \(2024\) - open access](#)
- 50th Annual Conference International Society for Pediatric and Adolescent Diabetes (ISPAD) 2024  
*Carbohydrates intake in children and adolescents with type 1 diabetes mellitus and its relation with physical activity*  
C. Carletti, V. Manfredini, G. Tamaro, et al.  
doi: 10.1159/000541195  
[Hormone Research in Paediatrics \(2024\) - open access](#)
- 13th International Conference on Complex Networks and their Applications (CNA) 2024  
*RedKinNet: Node Centrality-Driven Kinship Matrix Reduction*  
P. Dalena, S. Geremia, G. Barbati, P. A. d'Adamo  
[CNA 2024 Book of Abstracts - open access](#)
- European Society of Cardiology - Preventive Cardiology 2025  
*Polygenic risk scores in dilated cardiomyopathy: associations with arrhythmic events and implications for clinical research*  
I. Gandin, M. Rossi, P. Dalena, et al.  
doi: 10.1093/eurjpc/zwaf236.021  
[European Journal of Preventive Cardiology \(2025\) open access](#)
- 15-th Scientific Meeting Classification and Data Analysis Group - CLADAG 2025  
*Prioritization of differential methylation regions for the prediction of coeliac disease: a Machine Learning approach*  
P. Dalena, L. De Leo, E. Spinelli, G. Barbati, A. P. d'Adamo  
[CLADAG 2025 Book of Abstracts - open access](#)
- 13th SISMEC National Congress 2025  
*Exploring the Genetic Link between Clonal Hematopoiesis and Dilated Cardiomyopathy: Insights from a Polygenic Risk Score Analysis*  
I. Gandin, P. Dalena, A. P. d'Adamo, et al.  
doi: 10.54103/2282-0930/29519  
[Epidemiology, Biostatistics, and Public Health - open access](#)
- SIS-FENStatS Conference 2026  
*Evaluating the role of hypomorphic variants in cholestasis via network analysis techniques*  
P. Dalena, G. Barbati, A. P. d'Adamo  
[Statistical Science: From Theory to Applied Research - open access](#)

## PUBLICATIONS

TOTAL = 25

\*FIRST/LAST/CORRESPONDING = 7

SECOND = 5

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- *Women's suggestions on how to improve the quality of maternal and newborn care during the COVID-19 pandemic in Italy: A co-occurrence network analysis*  
S. Geremia, E. Pessa Valente, I. Mariani, P. Dalena, M. Lazzerini  
doi: 10.7189/jogh.13.06013 - [Journal of Global Health \(2023\) - open access](#)
- *Evaluation of the WHO standards to assess quality of care for children with acute respiratory infections: findings of a baseline multicentre assessment (CHOICE) in Italy*  
M. Lazzerini, M. Dagnelut, P. Dalena, et al. \*  
doi: 10.1136/bmjpo-2024-002552 - [BMJ Paediatrics Open \(2024\) - open access](#)
- *Implementation of the WHO standards to assess the quality of care for children with acute diarrhoea: findings of a multicentre study (CHOICE) in Italy*  
M. Lazzerini, I. Sforzi, I. Liguoro, et al. \*  
doi: 10.1136/bmjpo-2024-002569 - [BMJ Paediatrics Open \(2024\) - open access](#)
- *Implementation of the WHO standards to assess quality of care for children with acute pain in EDs: findings of a multicentre study (CHOICE) in Italy*  
E. Balestra, G. Cozzi, I. Sforzi, et al. \*  
doi: 10.1136/bmjpo-2024-002610 - [BMJ Paediatrics Open \(2024\) - open access](#)
- *Implementation of the WHO Standards to assess quality of paediatric care at the facility level using service users' perspective as source of data: a multicentre quality improvement study in Italy*  
S. Bressan, G. Sartor, P. Dalena, et al. \*  
doi: 10.1136/bmjpo-2024-002600 - [BMJ Paediatrics Open \(2024\) - open access](#)
- *Parental stress, depression, anxiety and participation in care in Neonatal Intensive Care Unit: a cross-sectional study in Italy comparing mothers versus fathers*  
J. Bua, P. Dalena, I. Mariani, et al. \*  
doi: 10.1136/bmjpo-2023-002429 - [BMJ Paediatrics Open \(2024\) - open access](#)
- *Parental stress, depression, anxiety and participation to care in neonatal intensive care units: results of a prospective study in Italy, Brazil and Tanzania*

M. Lazzerini, D. Barcala Gomez, G. Azzimonti, et al. \*  
doi: 10.1136/bmjpo-2024-002539 - [BMJ Paediatrics Open \(2024\) - open access](#)

- *Lesson in understanding parents' perspective: perception of quality of care and COVID-19-related fears among users of paediatric health services over the COVID-19 pandemic in 11 facilities in Italy*  
P. Dalena, A. Zago, A. Troisi, et al. \*  
doi: 10.1136/bmjpo-2024-002926 - [BMJ Paediatrics Open \(2024\) - open access](#)

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- *Risk of malignant transformation and infections in congenital lung malformations in adults: a systematic review*  
F. Pederiva, P. Dalena, N. Pasqua, I. Bresesti, V. Testa, S. Zirpoli, V. Gentilino  
doi: 10.1183/16000617.0254-2024 - [European Respiratory Review \(2025\) - open access](#)
- *Parental Stress, Depression, Anxiety, and Participation in Neonatal Care in a Referral Brazilian NICU over Different Phases of the COVID-19 Pandemic*  
D. Barcala Gomez, E. Pessa Valente, P. Dalena, et al.  
doi: 10.3390/children12040496 - [MDPI Children \(2025\) - open access](#)
- *Back to normal? A retrospective study on stimulation test and endocrinological diagnosis before, during and after COVID-19 pandemics*  
M. Peinkhofer, S. Passarella, P. Dalena, et al.  
doi: 10.3389/fendo.2025.1571685 - [Frontiers in Endocrinology \(2025\) - open access](#)
- *Impact of Muscle Paralysis After Primary Esophageal Atresia Repair*  
F. Pederiva; T. Soyer, P. Dalena, et al.  
doi: 10.1016/j.jpedsurg.2025.162361 - [Journal of Pediatric Surgery \(2025\) - open access](#)
- *Headache in the paediatric population: the role of the ophthalmologist*  
M. Degrassi, S. Tonetto, P. Michieletto, P. Dalena, E. Barbi, S. Pensiero  
doi: 10.3389/fped.2025.1547750 - [Frontiers in Pediatrics \(2025\) - open access](#)
- *Dexmedetomidine Versus Midazolam for Propofol Sparing in Procedural Sedation of Children With Leukemia: A Consecutive Case Series*  
D. Squillaci, K. Console, L. Colussi, V. Kiren, M. Rabusin, G. Stocco, A. Longo, P. Dalena, E. Barbi  
doi: 10.1111/aas.70107 - [Acta Anaesthesiologica Scandinavica \(2025\) - open access](#)
- *Reply to: Comment on: Risk of malignant transformation and infections in congenital lung malformations in adults: a systematic review*  
F. Pederiva, P. Dalena, N. Pasqua, I. Bresesti, V. Testa, S. Zirpoli, V. Gentilino  
doi: 10.1183/16000617.0166-2025 - [European Respiratory Review \(2025\) - open access](#)
- *Impact of VACTERL association and chromosomal anomalies on outcomes after esophageal atresia repair: insights from the EUPSA registry*  
T. Soyer, F. Pederiva, P. Dalena, L. Pio, M. Kakar, N. J. Hall, F. Morini  
doi: 10.1055/a-2708-2852 - [European Journal of Pediatric Surgery \(2025\) - open access](#)
- *Quality of life and psychological impact in families with congenital lung malformations*  
F. Pederiva, M.E. Bolis, M. Nassano, M. Quadrelli, B. Sgobbi, P. Dalena, M. Agosti, V. Gentilino  
doi: 10.1007/s00383-025-06251-z - [Pediatric Surgery International \(2025\) - open access](#)
- *Users' capabilities related to the electronic RHIS for newborn and stillbirth indicators: quantitative and qualitative findings of the IMPULSE study across 151 sites in the Central African Republic, Ethiopia, Tanzania, and Uganda*  
O. Mouhamadou, L.G. Cora, J. Minja, et al.  
doi: 10.7189/jogh.15.04239 - [Journal of Global Health \(2025\) - open access](#)
- *Availability and the quality of key newborn data within routine health facility data: findings of the IMPULSE observational study in the Central African Republic, Ethiopia, Tanzania, and Uganda*  
R.M. Kananura, P. Dalena, L.G. Cora, et al.  
doi: 10.7189/jogh.15.04359 - [Journal of Global Health \(2025\) - open access](#)
- *Organisational and management factors and related end-users' perspectives relevant to newborn and stillbirth data at different levels of the health system: findings of the IMPULSE study in Uganda, Ethiopia, Tanzania, and the Central African Republic*  
I. Mariani, F. Abathun, O. Mouhamadou, et al.  
doi: 10.7189/jogh.15.04329 - [Journal of Global Health \(2025\) - open access](#)
- *Functionalities of electronic routine health information systems related to newborn data: findings of the IMPULSE study in Uganda, Ethiopia, Tanzania, and the Central African Republic*  
M. Ayele, I. Mariani, F. Abathun, et al.  
doi: 10.7189/jogh.15.04330 - [Journal of Global Health \(2025\) - open access](#)
- *Facility newborn and stillbirth data use and enabling factors at different levels of the health system: findings of the IMPULSE study across 142 sites in the Central African Republic, Ethiopia, Tanzania, and Uganda*  
F. Abathun, P. Dalena, R.M. Kananura, et al.  
doi: 10.7189/jogh.15.04295 - [Journal of Global Health \(2025\) - open access](#)

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- *Public awareness of Type 1 Diabetes and the new Italian childhood screening program: results from a cross-sectional survey in Italy*  
I.L. Guerrero Almeida, A. Fachin, E. Catamo, A. Robino, P. Dalena, G. Tamaro, C. Braidà, G. Tornese  
doi: 10.1016/j.eprac.2026.01.018 - [Endocrine Practice \(2026\) - open access](#)
- *Adrenal Biomarkers of Stress in Transgender and Gender-Diverse Adolescents*

S. Coslovich, S. Tonetto, G. Bragato, et al.

doi: 10.1002/dev.70156 - [Developmental Psychobiology \(2026\) - open access](#)

- *Comorbidity burden and treatment patterns in Tourette syndrome and persistent motor or vocal tic disorder*

A. Sica, B. Puglisi, S. Pintar, **P. Dalena**, E. Barbi, A. Skabar

doi: 10.1007/s00431-026-07009-y - [European Journal of Pediatrics \(2026\) - open access](#)