

ORESTE AFFATATO

Researcher in Medicine and Scientific Methods

@ o.affatato@gmail.com Uppsala, Sweden oresteaffatato.github.io oresteaffatato



I am a passionate scientist that works on improving the quality of scientific methods in medicine and biology.

EDUCATION

Ph.D. degree in Medicine - Neuroscience

Uppsala University

June 2024 Uppsala, Sweden

Thesis: "Beating of hammers"
I investigated the pathophysiology of migraine and depression, using many approaches, from physiology to meta-science. During my doctoral studies, I read mostly courses in neuroscience, mental health, epidemiology and statistics

M.Sc. in Physics

University of Milan

April 2020 Milan, Italy

Thesis: "Survival of early replicators under transient compartmentalization"
I specialized in theoretical physics, mathematical physics and mathematical modelling applied to biology

B.Sc. in Physics

University of Milan-Bicocca

July 2017 Milan, Italy

Thesis: "Nonlinear field equations: symmetries and solitons"
I read standard Bachelor courses in physics and mathematics. I took elective courses in theoretical physics, mathematical physics and numerical analysis

RESEARCH EXPERIENCE

Ph.D. studies

Uppsala University

September 2020 – September 2024 Uppsala, Sweden

- Meta-research on pharmacological treatment efficacy in patients with migraine and comorbid depressive symptoms
- Estimating associations between migraine and depression and brain morphology (structural MRI)
- Job-related risk factors for migraine

TEACHING EXPERIENCE

Program in Biomedicine

Uppsala University

2021 - 2023

EXPERTISE

- Meta-Science Neuroscience
- Neurology Psychiatry Psychology
- Epidemiology Causal Inference
- Bayesian Methods Statistics
- Applied Mathematics

STRENGTHS

- Programming (R, Python, Matlab, \LaTeX)
- Mathematical modelling
- Statistical Analysis Study Design
- Open Science Microsoft Office
- Project Management Problem Solving
- Active Listening Critical Thinking
- Teamwork Independence Motivation
- Positive Attitude Public Speaking
- Research Collaboration Self Learning
- Knowledge Sharing

LANGUAGES

"Alle volte uno si crede incompleto ed è soltanto giovane." - Italo Calvino ●●●●

"I measured out my life with coffee spoons." - Thomas Stearns Eliot ●●●●

"Eu tinha a grande saúde de não perceber coisa nenhuma." - Álvaro de Campos ●●●●●

"Los espejos y la cópula son abominables porque multiplican el número de los hombres." - Jorge Luis Borges ●●●●●

- Statistics, mathematical modelling and basic R programming
- Co-supervision of Bachelor's thesis projects

Medical Program

Uppsala University

📅 2021 - 2023

- Journal clubs, seminars on psychiatry and neurology

PUBLICATIONS

📄 Journal Articles

- S. L. Muataz, J. Mwinyi, **O. Affatato**, et al., "Exploring sex differences: Insights into gene expression, neuroanatomy, neurochemistry, cognition, and pathology," *Frontiers in Neuroscience*, vol. 18, 2024. DOI: 10.3389/fnins.2024.1340108.
- **O. Affatato**, A. Dahlén, G. Rukh, H. Schiöth, and J. Mwinyi, "Assessing volumetric brain differences in migraine and depression patients: A uk biobank study," *BMC Neurology*, vol. 23, 2023. DOI: <https://doi.org/10.1186/s12883-023-03336-x>.
- **O. Affatato**, G. Rukh, H. Schiöth, and J. Mwinyi, "Volumetric differences in cerebellum and brainstem in patients with migraine: A uk biobank study," *Biomedicines*, vol. 11, 2023. DOI: <https://doi.org/10.3390/biomedicines11092528>.
- **O. Affatato**, M. M, S. HB, and M. J., "Major sex differences in migraine prevalence among occupational categories: A cross-sectional study using uk biobank," *Journal of Headache and Pain*, vol. 4, 2021. DOI: 10.1186/s10194-021-01356-x.
- **O. Affatato**, M. TC, P. C, et al., "High efficacy of onabotulinumtoxin treatment in patients with comorbid migraine and depression: A meta-analysis," *J Transl Med*, vol. 19, 2021. DOI: 10.1186/s12967-021-02801-w.
- F. Cabral, **O. Affatato**, M. de Oliveira, and C. Dias, "Modelagem matemática e computacional no crescimento do glioblastoma multiforme," *Brazilian Journal of Development*, vol. 6, 2020. DOI: 10.34117/bjdv6n3-096.

📖 Books

- **O. Affatato**, *Beating of hammers*. Acta Universitatis Upsaliensis, 2024.

GRANTS AND AWARDS

- Sederholm, Nordic travel scholarships (2024)
- Busoli Gian Carlo and Birgit grant (2022)

RELEVANT EXPERIENCE

- **Guest Researcher at NTNU**: Research conducted as visiting PhD student in January 2024 at the Norwegian University of Science and Technology (NTNU) in Trondheim. Supervisors: prof. Leif Edward Ottesen Kennair and prof. Thomas Haarklau Kleppesø, department of Psychology (Sederholm, Nordic travel scholarships).
- **European Educational Programme in Epidemiology**: 35th Residential 3-week Summer Course in Epidemiology 2022 in Fiesole (Italy) - biostatistics and epidemiology training (Busoli Gian Carlo and Birgit grant).

"Döden är vindstilla." - Thomas Tranströmer



SCIENCE OUTREACH

Science Fika

Stadsbiblioteket i Uppsala

I am a co-founder, Board member and one of the main activists of Science Fika. This association promotes science popularization through public talks at the City Library of Uppsala (Sweden). We invite researchers with different backgrounds to give public talks to disseminate knowledge and passion for scientific inquiry.
Website: Science Fika

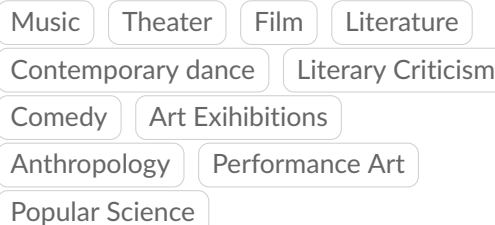
OPEN SCIENCE

More on my research projects and teaching materials (such as R scripts and supplementary information) can be found on my GitHub page: OresteAffatato

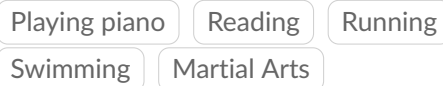
REFEREES

Available upon request

INTERESTS



HOBBIES



- **International Summer school in functional pharmacology 2022 - FAT4BRAIN:** Teacher in the workshop on statistics and data visualization with R - Latvian Institute of Organic Synthesis, Rīga (Latvia).
- **Erasmus studies:** One year (academic year 2018/2019) as an Erasmus+ Student at the University of Coimbra (Portugal).

ABOUT ME

A thirst for knowledge is the major driving force of my life. I delve into any subject with the utmost passion and drive, from the classics of world's literature, to the theories of space and time, and to the traits in our body that make us vulnerable to diseases. Ideas, perspectives and methods from different fields helped me immensely in framing research questions and in finding diverse ways to address them. Cultivating interest in a wide range of disciplines is for me a major resource for thinking outside the box, and growing as a scientist and as a person.

Moreover, I believe that knowledge has an immense transformative power and for this reason I am also a passionate educator. I put a great effort in my teaching activities both inside and outside the academic environment. My aim is to discuss ideas, challenge points of view, foster curiosity and ignite passion for scientific inquiry. Ultimately, I believe that our research, our knowledge, should be used to transform our society in a better version of itself. And better for everyone.