Panagiotis Parthenios Sakagiannis

Curriculum Vitae

Education

2018–2025 **Doctorate in Natural Sciences (Computational Biology)**, *University of Cologne*, Cologne, Germany

2014–2016 **Master of Neuroscience**, *University of Heraklion*, Heraklion, Greece

2007–2012 **Bachelor of Mathematics**, *Aristotle University*, Thessaloniki, Greece

2000–2006 **Bachelor of Medicine**, *Aristotle University*, Thessaloniki, Greece

Clinical Medicine Work Experience

2015–2016 **Neurology Resident**, *"PAGNI" University General Hospital*, Heraklion, Greece

2013–2015 **Neurology Resident**, *"Papanikolaou" University General Hospital*, Thessaloniki, Greece

2012–2013 **Neurology Resident**, *"Papageorgiou" University General Hospital*, Thessaloniki, Greece

2011–2012 **Psychiatry Resident**, *424 General Military Hospital*, Thessaloniki, Greece

2010–2011 **Internal Medicine Resident**, *424 General Military Hospital*, Thessaloniki, Greece

2007–2008 **General Practicioner**, *401 General Military Hospital*, Athens, Greece

Certifications

2012 **Medical Specialty Degree in Neurology**, *Greek Health and Care Administration*

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Memberships

- European Academy of Neurology (EAN)
- Federation of European Neuroscience Societies (FENS)
- Hellenic Society for Neurosciences (HSFN)
- Greek Neurological Society

Doctorate thesis

- **Holistic behavioral modeling : A case study on Drosophila larva foraging**. Awarded with highest distinction (summa cum laude, Grade 0.0 / Excellent), examination date : 6/10/2025

Publications

- Sakagiannis, P., Rapp, H., Jovanic, T., & Nawrot, M. P. (2025). **Larvaworld : A behavioral simulation and analysis platform for Drosophila larva.** bioRxiv 10.1101/2025.06.15.659765
- Sakagiannis, P., Jürgensen, A.-M., & Nawrot, M. P. (2025). **A behavioral architecture for realistic simulations of Drosophila larva locomotion and foraging.** eLife 10.7554/eLife.104262.1
- de Tredern, E., Manceau, D., Blanc, A., Parameswaran, A., Sakagiannis, P., Barre, C., Sus, V., Viscido, F., Akiki, P., Hasan, M. A., Autran, S., Laurent, F., Nawrot, M. P., Masson, J.-B., & Jovanic, T. (2025). **Feeding state-dependent neuropeptidergic modulation of reciprocally interconnected inhibitory neurons biases sensorimotor decisions in Drosophila.** Nature Communications, 10.1038/s41467-025-61805-y
- Kafle, T., Grub, M., Sakagiannis, P., Nawrot, M. P., & Arguello, J. R. (2025). **Evolution of temperature preference behaviour among Drosophila larvae.** iScience, 10.1016/j.isci.2025.112809
- Jürgensen, A.-M., Sakagiannis, P., Schleyer, M., Gerber, B., & Nawrot, M. P. (2024). **Prediction error drives associative learning and conditioned behavior in a spiking model of Drosophila larva.** iScience, 10.1016/j.isci.2023.108640
- Sakagiannis, P., Aguilera, M., & Nawrot, M. P. (2020). **A Plausible Mechanism for Drosophila Larva Intermittent Behavior.** Lecture Notes in Computer Science 10.1007/978-3-030-64313-3
- Sakagiannis P., Mantzouranis P., Daglis I., Kazis D., Mpostantzopoulou S. (2014) **Anti-CASPR (+) autoimmune encephalopathy** , Neurologia 23 : 31-32

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Presentations

17.9.2024 **Larvaworld:A virtual lab for behavioral modeling**, *iBehave Summer School, Odenthal, Germany*

10.5.2021 **Modeling larva foraging across neural, behavioral & homeostatic timescales**, *The Monthly Maggot Monday*

11-13.12.2019 **A layered behavioral architecture of Drosophila larva foraging**, *3rd HBP Curriculum Workshop Series: Modern trends in cognitive architectures and systems, Glasgow, UK*

30-31.8.2019 **Insect Foraging vs Human Speech : Any common principles in behavioral modeling?**, *Workshop: Computational approaches in language and music cognition research, University of Cologne, Cologne, Germany*

2-8.2.2019 **Biological Modeling : An Interactive Walkthrough**, *Spring School 2019 - Language and Music in Cognition: Integrated Approaches to Cognitive Systems, University of Cologne, Cologne, Germany*

17-18.3.2018 **Neurons in silico - Introduction to computational Neuroscience**, *Exploring the Brain, S.Niarhos Cultural Centre, Hellenic Society for Neurosciences*

7.9.2017 **Modeling behavior across timescales : How to have neurons, individuals and genomes in the same model**, *Sakagiannis P., Pavlidis P., Promponas V., Iliopoulos I. Hellenic Bioiformatics 10, FORTH, Heraklion, Greece*

Posters

28-30.7.2020 **A Plausible Mechanism for Drosophila Larva Intermittent Behavior**, *Living Machines Conference 2020*

17-20.09.2019 **Towards whole-organism modeling: A behavioral architecture of drosophila larva foraging**, *Bernstein Conference 2019, Berlin*

Schools

16-18.9.2024 **iBehave Summer School**, *Odenthal, Germany*

23-26.9.2019 **Summerschool : Recent Developments in Situated Cognition – Empirical and Philosophical Investigations**, *Bochum, Germany*

2-8.8.2019 **Springschool 2019 : Language and Music in Cognition: Integrated Approaches to Cognitive Systems**, *University of Cologne, Cologne, Germany*

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3-15.6.2018 **Nengo Summerschool 2018**, *Centre for Theoretical Neuroscience at the University of Waterloo. Waterloo, Ontario, Canada*

23-30.5.2018 **Recruitment Summerschool of the Research Training Network : Neural Circuit Analysis on the Cellular and Subcellular Level**, *University of Cologne, Cologne, Germany*

20-28.07.2017 **Learning and Gaining from your Model: A Course in Analysis, Application, and Publication of Individual/Agent-Based Models**, *TU Dresden Course in Individual – and Agent - Based Modeling*

Software

Behavioral Modeling

- ***Larvaworld : A behavioral analysis and simulation platform for Drosophila larva*** *(available as Python package)*

Skills

Languages

- ***English*** *:* ***C2*** *(Cambridge Certificate of Proficiency in English)*
- ***Italian*** *:* ***C1*** *(CELI 4 Universita per stranieri di Perugia)*
- ***Spanish*** *:* ***B2*** *(DELE – Nivel Intermedio, Universidad de Salamanca)*
- ***French*** *:* ***A2*** *(DELF 1 Ministère de l'Éducation Nationale)*
- ***Greek*** *:* ***Native***

Computer skills

- *OS :* ***Linux****, Unix, Windows*
- *Programming :* ***Python****, JAVA*
- *Data analysis : Matlab, R*
- *Typography :* ***LaTeX****, Lyx*
- *Agent-based modeling : Mesa, Repast Symphony*
- *Neural simulators :* ***Nengo****, BRIAN*

Communication

- *Extensive experience with* ***patient handling and communication*** *due to clinical medical work experience.*
- *Integrative role in* ***interdisciplinary teams*** *due to broad educational background and participation in sociopolitical activism and theatre/music groups.*
- *Administrative skills in* ***team formation/organization/leading****, task delegation due to administrative roles held in military and clinical facilities*

Hobbies

- *Philosophy of mind, Phenomenology*
- *Political activism.*
- *Classic guitar*
- *Chess*
- *Observational astronomy*

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