

PERSONAL INFORMATION

Last name: **Karamanlis**
First name: **Dimokratis**
Nationality: Greek
Date of birth: November 28, 1991
Position: Postdoctoral researcher
Email: dimokratis.karamanlis@unige.ch
Website: <https://dimokaramanlis.github.io/>
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EMPLOYMENT HISTORY

02/2023 – **Postdoctoral researcher**
Laboratory of Sami El-Boustani, University of Geneva (Switzerland)

04/2022 – 12/2022 **Postdoctoral researcher**
Laboratory of Tim Gollisch, University Medical Center Göttingen (Germany)

05/2017 – 03/2022 **Graduate researcher**
Laboratory of Tim Gollisch, University Medical Center Göttingen (Germany)

EDUCATION & TRAINING

05/2022 **CAJAL Advanced Neuroscience Training**
Neural circuit basis of computation and behaviour (France)
Directors: Fritjof Helmchen, Andreas Frick, Cyril Herry
Project supervisors: Lisa Roux, Naoya Takahashi

10/2017 – 02/2022 **PhD in Neuroscience**
International Max Planck Research School for Neurosciences (Germany)
Thesis: How nonlinear processing shapes natural stimulus encoding in the retina
Supervisor: Tim Gollisch / Defense date: 23/02/2022
Grade: *summa cum laude*

10/2015 – 05/2017 **Master in Neuroscience**
International Max Planck Research School for Neurosciences (Germany)
Thesis: Spatial integration in mouse retinal ganglion cells
Supervisor: Tim Gollisch
Grade: 1.1 (1.0 down to 5.0)

10/2011 – 08/2017 **Online coursework in Mathematics, Physics and Machine Learning**
Selected courses: logic, calculus, linear algebra, statistics, electricity and magnetism, electrical circuits, statistical thermodynamics, artificial intelligence, computational neuroscience, deep learning
Platforms: Coursera, edX
Statements of accomplishment are available on request

09/2009 – 06/2015 **Doctor of Medicine**
Aristotle University of Thessaloniki (Greece)
Grade: 8.11 (out of 10)

PRIZES, AWARDS, AND FELLOWSHIPS

02/2025	Best poster award , 25 th Annual Meeting of the Swiss Society for Neuroscience
09/2023 – 08/2024	Swiss Government Excellence Scholarship for postdoctoral research
08/2021	Best poster award , Retinal Circuits Symposium (online)
01/2018 – 09/2020	Boehringer Ingelheim Fonds PhD fellowship
11/2018	Nomination for the Lindau Nobel Laureate Meeting (Physics) by the Göttingen Graduate Center for Neurosciences, Biophysics, and Molecular Biosciences
10/2015 – 05/2017	Study scholarship for graduates of all disciplines German Academic Exchange Service (DAAD)
03/2009	Bronze medal in National Mathematical Olympiad Hellenic Mathematical Society

TEACHING

02/2023 –	Master's project supervision Students of the Master in Neuroscience at UNIGE (Switzerland) <ul style="list-style-type: none">- Andrea Valderrama Alvarez (2023 – 2024)- Yuqiao Xie (2024 – 2026)
2023 – 2024	Tutor of paper readings (<i>chapitres choisis</i>, for graduate students) Two-hour-long team discussions Faculty of Medicine, UNIGE (Switzerland)
05/2019	Course instructor (for graduate students) Introduction to spike-train analysis with Python Göttingen Graduate Center for Neurosciences, Biophysics, and Molecular Biosciences (Germany)
03/2019	Course instructor (for Master students) Vision (retina, lateral geniculate nucleus, primary visual cortex) International Max Planck Research School for Neurosciences (Germany)
03/2017 – 04/2018	Rotation project supervision (for Master students) Two-month projects on analysis of multielectrode-array data from the retina International Max Planck Research School for Neurosciences (Germany)
05/2010	Course instructor (for medical students) Personal Health Record module of Medical Informatics I course Aristotle University of Thessaloniki (Greece)

ACADEMIC SERVICE

Paper Reviewing	<i>Nature Communications, PLOS Computational Biology</i>
Grant Reviewing	<i>ERC Advanced Grants</i>

CONFERENCE CONTRIBUTIONS

06/2024	FENS Forum 2024 , Poster (Austria)
09/2023	European Retina Meeting 2023 , Poster (Germany)
03/2022	COSYNE 2022 , Poster (Portugal)
08/2021	Retinal Circuits Symposium , Poster (online)
09/2019	European Retina Meeting 2019 , Poster (Finland)
06/2019	Rank Prize Funds Symposium , Talk (UK)
03/2019	13th Meeting of the German Neuroscience Society , Talk (Germany)
09/2018	Bernstein Conference 2018 , Poster (Germany)
10/2017	European Retina Meeting 2017 , Poster (France)
03/2017	12th Meeting of the German Neuroscience Society , Poster (Germany)
07/2012	Protection and Restoration of the Environment XI , Talk (Greece)

SELECTED CONFERENCES, WORKSHOPS, AND RESEARCH TRAINING

06/2019	69th Lindau Nobel Laureate Meeting on Physics (Germany)
05/2016 – 06/2016	Research in theoretical neuroscience with Viola Priesemann (Germany)
10/2014	Workshop on Analysis and Models in Neurophysiology (Germany)
09/2013	11th Summer Course on Computational Neuroscience (Germany)
10/2011 – 10/2013	Research in neurophysiology with Efstratios Kosmidis (Greece)
03/2012 – 10/2012	Research in participatory sensing with Kostas Karatzas (Greece)
10/2011 – 10/2012	Research in medical informatics with Panagiotis Bamidis (Greece)

PUBLICATIONS & PREPRINTS

2025	Gantar I, Nguyen J, Karamanlis D , Ceto S, Osterop S, Rajot D, El-Boustani S, Batti L. An optimized procedure of EZ clearing protocol for high reproducibility clearing and labeling. STAR Protocols (accepted)
2025	Karamanlis D , Khani MH, Schreyer HM, Zapp SJ, Mietsch M, Gollisch T. Nonlinear receptive fields evoke redundant retinal coding of natural scenes. Nature, 637(8045):394-401.
2024	Sridhar S, Vystrcilova M, Khani MH, Karamanlis D , Schreyer HM, Ramakrishna V, Krüppel S, Zapp SJ, Mietsch M, Ecker A, Gollisch T. Modeling spatial contrast sensitivity in responses of primate retinal ganglion cells to natural movies. bioRxiv 583449v1.
2024	Zapp SJ, Khani MH, Schreyer HM, Sridhar S, Ramakrishna V, Krüppel S, Mietsch M, Protti DA, Karamanlis D , Gollisch T. Accelerated spike-triggered non-negative matrix factorization reveals coordinated ganglion cell subunit mosaics in the primate retina. eLife (Reviewed Preprint) 99945.1.
2024	Krüppel S, Khani MH, Schreyer HM, Sridhar S, Ramakrishna V, Sören J Zapp, Mietsch M, Karamanlis D , Gollisch T. Applying Super-Resolution and Tomography Concepts to Identify Receptive Field Subunits in the Retina. PLOS Computational Biology, 20(9):e1012370.
2023	Krüppel S, Khani MH, Karamanlis D , Erol YC, Zapp SJ, Mietsch M, Protti DA, Rozenblit F, Gollisch T.

- Diversity of Ganglion Cell Responses to Saccade-like Image Shifts in the Primate Retina.
Journal of Neuroscience, 43(29):5319-5339.
- 2022 **Karamanlis D**, Schreyer HM, Gollisch T.
Retinal encoding of natural scenes.
Annual Review of Vision Science, 8:171-193.
- 2022 Jian K Liu, **Karamanlis D**, Gollisch T.
Simple model for encoding natural images by retinal ganglion cells with nonlinear spatial integration.
PLOS Computational Biology, 18(3):e1009925.
- 2021 **Karamanlis D**, Gollisch T.
Nonlinear Spatial Integration Underlies the Diversity of Retinal Ganglion Cell Responses to Natural Images.
Journal of Neuroscience, 41(15):3479-3498.
- 2012 **Karamanlis D**, Tzitzis P, Bratsas C, Bamidis P.
Personal health records in the preclinical medical curriculum: modeling student responses in a simple educational environment utilizing Google Health.
BMC Medical Education, 12:88.