Burak Gür

Postdoctoral researcher on memory and time Felsenberg lab, Friedrich Miescher Institute (FMI) Basel, Switzerland

Education

Advisor: Prof. Dr. Marion Silies

Johannes-Gutenberg-University of Mainz, Germany

Ph.D. in Neurosciences International Max Planck Research School (IMPRS) for Neurosciences Grade: <i>summa cum laude</i> Thesis: Molecular and circuit analysis of stable contrast processing in the visual s Advisor: Prof. Dr. Marion Silies Georg-August University, Göttingen, Germany	Aug 2022
M.Sc. in Neurosciences International Max Planck Research School (IMPRS) for Neurosciences Grade: 1.3, sehr gut (German grading system) Georg-August University, Göttingen, Germany	2017
B.Sc. in Molecular Biology, Genetics and Bioengineering Sabanci University, Istanbul, Turkey	2015
Courses	
CAJAL Course in Computational Neuroscience Project: Uncertainty in Reinforcement Learning Supervisor: Joe Paton Champalimaud Centre for the Unknown, Lisbon, Portugal	2022
13 th Advanced Scientific Programming in Python (ASPP Summer School) University of Bordeaux, Bordeaux, France	2021
RIKEN CBS Summer Program RIKEN Center for Brain Sciences (CBS), Wako-shi, Saitama, Japan	2017
Research experience	
Post-doctoral researcher Learning and memory Advisor: Dr. Johannes Felsenberg Friedrich Miescher Institute for Biomedical Research (FMI), Basel, Switzerland	Since May 2024
Post-doctoral researcher Visual processing	2022 Aug-2024 Apr

 Ph.D. student Visual processing Implementation of stable contrast processing in the early visual system Development of genetic tools aimed for disrupting synapses between specific neur Advisor: Prof. Dr. Marion Silies European Neuroscience Institute Göttingen and Johannes-Gutenberg-University of Mainz, 	2017-2022 Tons Germany
 Research intern Laboratory of circuit mechanisms of sensory perception Effects of non-associative learning in the Drosophila olfactory system Supervisor: Dr. Hokto Kazama RIKEN Brain Science Institute (CBS), Wako-shi, Saitama, Japan 	2017
 M.Sc. student Visual processing Molecular mechanisms that regulate the physiological properties of first-order intertible the fly visual system. Supervisor: Prof. Dr. Marion Silies European Neuroscience Institute, Göttingen, Germany 	2016-2017 erneurons in
 Rotation student Sleep & waking lab in vivo two-photon imaging and optogenetics for investigating sleep inducing neur C.elegans Supervisor: Prof. Dr. Henrik Bringmann Max Planck Institute for Biophysical Chemistry, Göttingen, Germany 	2016 ons in
 Rotation student Cognitive neurophysiology lab Auditory midbrain coding of predictability in context-sound associations Supervisor: Dr. Livia de Hoz Max Planck Institute for Experimental Medicine, Göttingen, Germany 	2016
Research intern Neuromuscular Division JHU Supervisor: Ahmet Hoke MD, PhD Johns Hopkins University, Baltimore, MD/USA	2014
Research assistant Sayers lab Supervisor: Prof. Dr. Zehra Sayers Sabanci University, Istanbul, Turkey	2013-2015

Peer-reviewed publications

J. Cornean*, S. Molina-Obando*, **B. Gür**, A. Bast, G. Ramos-Traslosheros, J. Chojetzki, L. Lörsch, M. Ioannidou, R. Taneja, C. Schnaitmann, M. Silies. Heterogeneity of synaptic connectivity in the fly visual system. *Nature Communications* (2024) - <u>link</u>

M.D. Ketkar*, **B. Gür***, S. Molina-Obando*, M. Ioannidou, C. Martelli, M.Silies. First-order visual interneurons distribute distinct contrast and luminance information across ON and OFF pathways to achieve stable behavior. *eLife* (2022) - <u>link</u>

M. Henning, G. Ramos-Traslosheros, **B. Gür**, M.Silies. An optimal population code for global motion estimation in local direction-selective cells. *Science Advances* (2021) - <u>link</u>

M.D. Ketkar*, K. Sporar*, **B. Gür**, G. Ramos-Traslosheros, M. Seifert, M. Silies. Luminance information is required for the accurate estimation of contrast in rapidly changing visual contexts. *Curr. Biol.* (2020) - <u>link</u>

B. Gür, K. Sporar, A. Lopez-Behling, M. Silies. Distinct expression of potassium channels regulates visual response properties of lamina neurons in Drosophila melanogaster. *J Comp Physiol A* (2019) - <u>link</u>

S. Molina-Obando, J.F. Vargas-Fique, M. Henning, **B. Gür**, T. Moritz Schladt, J. Akhtar, T.K. Berger, M. Silies. ON selectivity in the Drosophila visual system is a multisynaptic process involving both glutamatergic and GABAergic inhibition. *eLife* (2019) - <u>link</u>

H. Cruces-Solís, Z. Jing, O. Babaev, J. Rubin, **B. Gür**, D. Krueger-Burg, N. Strenzke, L. de Hoz. Auditory midbrain coding of statistical learning that results from discontinuous sensory stimulation. *PLoS Biol.* (2018) - <u>link</u>

J. Peng*, I. Santiago*, C. Ahn, **B. Gür**, C. K. Tsui, Z. Su, C. Xu, A. Karakhanyan, M. Silies, M.Y. Pecot. Drosophila Fezf coordinates laminar-specific connectivity through cell-intrinsic and cell-extrinsic mechanisms. *eLife (2018)* - <u>link</u>

Conference contributions

Poster 15th Göttingen Meeting of the German Neuroscience Society (NWG) Implementation of stable contrast computation in visual circuits. (T14-2B) Göttingen, Germany	2023
Selected Talk Neurofly 2022 Implementation of stable contrast computation in the visual circuits (T43) St. Malo, France	2022
Poster FENS Forum of Neuroscience Molecular mechanisms that shape neuronal responses in early visual processing. (f18-2302) Berlin, Germany	2018
Poster Neurizons Molecular mechanisms that shape neuronal responses in early visual processing. (13) Göttingen, Germany	2018
Organizer Neurizons Göttingen, Germany	2018
Poster RIKEN BSI Summer Program	2017
	Page 3

Molecular mechanisms that shape neuronal responses in early visual processing. Wako-shi, Saitama, Japan

Honors & Awards

Otto Creutzfeldt PhD Award	2024
CRC 1080 PhD Cooperation Program 10.000€ funding for a collaborative project within the CRC 1080	2022
GGNB Travel Grant Covering the costs of ASPP Python Summer School 2021	2021
RIKEN CBS Summer Program Stipend RIKEN Center for Brain Sciences (CBS), Wako-shi, Saitama, Japan	2017
Stipend by the Max Planck Society IMPRS for Neurosciences, Göttingen, Germany	2015-2017
B.Sc. Merit Scholarship Covering 50% tuition fee, Sabanci University, Istanbul, Turkey	2010-2015

Teaching and Volunteering

Tutor, Organizer TReND in Africa (non-profit organization)	since 2021
 Teaching assistant at the <u>TReND Course "Computational neuroscience and machi</u> <u>basics"</u> held in Accra, Ghana in June 2023 	<u>ne learning</u>
 Produced teaching material and taught parts of an online Python course for stude (<u>https://github.com/trendinafrica/python_workshop</u>) 	ents in Africa
 Organizer Neuromatch Academy (non-profit organization) Developed tools to streamline TA application processing, led TA selection efforts and supported TAs throughout the course 	since 2021 , and trained
• Executive committee member and Instruction department chair for the year 202	3
 Supervisor Silies lab Designed projects and supervised 8 rotation and 2 M.Sc. students. 	2019-2024
Teaching Assistant Neuromatch Academy (non-profit organization)	2020
 Lecturer, Organizer XLAB Göttingen Organized lectures that introduced <i>Drosophila melanogaster</i> as a model to study circuits and a workshop for investigating neural circuits with two photon calcium 	2018-2019 neural imaging.
Tutor IMPRS Göttingen	2016-2018

• Designed and taught tutorials, exercises and paper discussions for "*Drosophila* genetics and tools" and "Development of the insect nervous system" courses for graduate students.

Teaching Assistant | Sabanci University

2014-2015

Skills

 Computer & Data analysis Python, MATLAB GitHub Image analysis (ImageJ) Graphics and design (Inkscape, Adobe Illustrator, Affinity Designer) 	 Experimental in vivo two-photon calcium imaging and holographic optogenetics Immunostainings and confocal microscopy Behavioral paradigms Molecular biology and genetics 	Languages Turkish (native) English (fluent) German (C1) Japanese (JLPT4) Spanish (A2)
---	--	--