

Postdoctoral researcher

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Department of Collective behavior
Max Planck Institute for Animal Behavior

Konstanz University
Universitätsstrasse 10, 78464 Konstanz, Germany

Academic experience

2021 - present: Postdoctoral researcher

Department of collective behavior, Max Planck Institute for Animal Behavior, Konstanz, DE

2016 – 2020: Graduate student

Calcium imaging and behaviour of zebrafish, Laboratoire Jean Perrin, CNRS/Sorbonne Université, Paris, FR

2016: Research intern (3 months)

Dynamic Neuronal Imaging unit, Institut Pasteur, Paris, FR

2015: Assistant engineer (5 months)

Laboratory of Applied Microbiology, Kobe University, JP

2014: Research intern (5 months)

Microglia in Brain tumor biology, Johannes Gutenberg University, Mainz, DE

2014: Research intern (2 months)

Laboratory of Genetics and physiopathology of neurodevelopmental diseases, Cochin Institute, Paris, FR

Education

2020: Ph.D. Neuroscience (Frontiers of Life Sciences)

Thesis: *Light-seeking navigation in zebrafish larva: from behaviour to neural circuits.*

Supervision : **G. Debrégeas**

Université Paris Sciences Lettres (PSL research University)

2016: M.Sc. Biology

Centre for Research and Interdisciplinarity, Universités Paris V Descartes/Paris VII Diderot

2016: M.Sc. Life Sciences & Engineering

AgroParisTech, Paris Institute of Technology for Life, Food and Environmental Sciences, Université Paris Saclay

2012: B.Sc. equivalent preparatory classwork in Biology, Chemistry, Physics and Earth Sciences

Lycée Janson de Sailly, Université Pierre et Marie Curie, Paris VI

Publications

- *Thermal modulation of Zebrafish exploratory statistics reveals constraints on individual behavioral variability*, BMC Biol (2021). G. Le Goc, J. Lafaye, **S. Karpenko**, V. Bormuth, R. Candelier, G. Debrégeas.
DOI: [10.1186/s12915-021-01126-w](https://doi.org/10.1186/s12915-021-01126-w)
- *From behaviour to circuit modelling of light-seeking navigation in zebrafish larvae*, Elife (2020). **S. Karpenko**, S. Wolf, J. Lafaye, G. Le Goc, T. Panier, V. Bormuth, R. Candelier, G. Debrégeas.
DOI: [10.7554/eLife.52882](https://doi.org/10.7554/eLife.52882)
- *Sensorimotor computation underlying phototaxis in zebrafish*, Nature Communication (2017) S. Wolf, A. Dubreuil, T. Bertoni, U.L. Böhm, V. Bormuth, R. Candelier, **S. Karpenko**, D.G.C. Hildebrand, I. H. Bianco, R. Monasson, G. Debrégeas.
DOI: [10.1038/s41467-017-00310-3](https://doi.org/10.1038/s41467-017-00310-3)

From former thematics :

- *A bacterial cell factory converting glucose into scyllo-inositol, a therapeutic agent for Alzheimer's disease*, Communications Biology (2020). C. Michon, CM. Kang, **S. Karpenko**, K. Tanaka, S. Ishikawa & Ken-ichi Yoshida.
DOI: [10.1038/s42003-020-0814-7](https://doi.org/10.1038/s42003-020-0814-7)

Teaching & outreach

2022 - 2023: Ecology course for civil engineering students

HTWG — Hochschule Technik, Wirtschaft und Gestaltung, Konstanz, DE

| preparation and teaching for half a semester (~12h)

2019 – 2020: Secondary-grade students **tutoring for a science project** on sustainable development

Les Savanturiers, Centre for Research and Interdisciplinarity, Paris, FR

| Facilitation and supervision of small-group workshops on air pollution (~15h)

2017 – 2018: **Scientific mediation** on sustainable development

Centre for Research and Interdisciplinarity, Paris, FR

| Adaptation and translation of a Massive Online Open Course (MOOC) for secondary school teachers

2013 – 2017: Secondary-grade students **tutoring**

Côté Cours, Paris, FR

| in Biology, Physics, Mathematics and foreign Languages

Skills

Languages:

- French
- Russian (bilingual)
- English (fluent)
- German (working knowledge)

Computer skills:

- Python & Matlab (+++)
- basics in R & SAS statistical computing languages
- LaTeX, Markdown, Office Pack

Interests:

Music practice (singing & saxophone)
Taekwondo and Kickboxing
Bouldering
Cycling, Bike-packing