

Dr Marina Papadopoulou

COMPUTATIONAL BIOLOGIST · POSTDOCTORAL RESEARCHER · SHE/HER

Nationality: Greek | Date of Birth: 5/1/1994

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Academic Employment

Max Planck Institute for Human Development

HUMBOLDT RESEARCH FELLOW

Berlin, Germany

Oct. 2025 - Present

- Host: Dr. R.H.J.M.Kurvers, *Center for Adaptive Rationality*
- Keywords: individual heterogeneity, social foraging, human groups, fish shoals, time perception, agent-based modelling.

Tuscia University, University of Pisa & University of Milan

POSTDOCTORAL RESEARCH ASSOCIATE

Florence, Italy

Sep. 2024 - Sep. 2025

- Project: *"The role of individual personality in the collective escape of homing pigeons"*
- Collaborators: Dr. C.Carere, Dr. D.Giunchi, Prof.Dr. D.Rubolini.
- Keywords: individual heterogeneity, pigeon flocks, homing, collective escape, robotic predator.

Humboldt University of Berlin & Excellence Cluster: "Science of Intelligence"

POSTDOCTORAL VISITING FELLOW

Berlin, Germany

Jan. - Apr. 2024

- Project: *"Investigating the impact of behavioural individuality and group size on leadership dynamics using genetically identical fish (Poecilia formosa) and the RoboFish"*
- Hosts: Prof. Dr. J.Krause, Dr. D.Bierbach.
- Keywords: individual heterogeneity, fish schools, Amazon molly, robotic conspecific.

Swansea University

POSTDOCTORAL RESEARCH ASSISTANT

Swansea, United Kingdom

Mar. 2022- Sep. 2024

- Project: *"2G-SWARM. Animals are not particles: a framework for second generation hetero-swarm robotics"*
- PI: Prof.Dr.A.J.King.
- Keywords: collective motion, individual heterogeneity, agent-based models, fish schools, goat herds, baboon troops, swarm robotics.

Main Education

University of Groningen

PHD, SELF-ORGANIZATION OF SOCIAL SYSTEMS

Groningen, Netherlands

Oct. 2017 - Nov. 2022

- Thesis: *"Self-organized collective escape in bird flocks."*
- Promotor & supervisor: Prof.Dr. C.K.Hemelrijk. Co-supervisor: Dr. H.Hildenbrandt.
- Keywords: collective escape, computational models, bird flocks, homing pigeons, European starlings, predation, self-organization

Imperial College London

M.Sc., COMPUTATIONAL METHODS IN ECOLOGY AND EVOLUTION

London, UK

Oct. 2016 - Sep. 2017

- Dissertation: *"The Cultural Evolution of Evolution"*.
- Supervisors: Dr. J.Rosindell, Prof.Dr. A.M.Leroi, Prof.Dr. T.Barracough.
- First-Class Honor, Distinction.
- Keywords: science of science, machine learning, natural language processing, cultural evolution

Aristotle University of Thessaloniki

B.Sc., BIOLOGY

Thessaloniki, Greece

Sep. 2011 - Mar. 2016

- Dissertation: *"Habitat suitability of the sea turtle *Caretta caretta* in the Mediterranean region"*.
- Supervisor: Dr. A.Mazaris.
- 8.32/10
- Keywords: species-distribution modeling, sea turtles, migratory routes, maximum entropy

Affiliated Research Projects

Mapping the social lives of the Cretan Ibis

2026-Present, *Project Co-I*, with Dr.D.Papageorgiou (Humboldt University of Berlin), Dr.D.Georgopoulou (Hellenic Centre for Marine Research), Dr.N.Smit (University of Turku), Dr.A.Vezirakis (Gent University), and F.Darmis (Max-Planck Institute for Evolutionary Biology).

Ice-fishing as a model system for studying human social foraging in the wild

2025-Present, *Collaborator*, with Dr.R.H.J.M.Kurvers & Dr.A.Schakowski (Max-Planck Institute for Human Development).

- **FALCOROBOT: Collective and individual responses of avian flocks to robotic predators**
2025-Present, *Collaborator*, with Prof.Dr.D.Rubolini (University of Milan), Dr.D.Giunchi (University of Pisa), and Dr.C.Carere (Tuscia University).
- **Comparative Analysis and Modelling of Collective Behaviour in Natural and Artificial Systems**
2024-Present, *Project Co-I*, with Prof.Dr.A.J.King., Dr.W.Allen (Swansea University), Dr.R.Heathcote (University of Oxford), and Dr.A.Reina (University of Konstanz).
- **Developing RoboFalcon to deter bird flocks**
2017-2022, *PhD researcher*, supervised by Prof.Dr.C.K.Hemelrijk & Dr.H.Hildenbrandt, in collaboration with Dr.C.Carere & Prof.Dr.S.Verhulst (University of Groningen).
- **BiasWatchEvol: Gender bias in Evolutionary Biology**
2017-2018, *PI, pre-doctorate* (Imperial College London).
- **Determinants of sea turtle nesting patterns & spatial asymmetries at the global scale**
2015, *Undergraduate research internship*, supervised by Dr. S.Spatharis and Prof.Dr. J.Matthiopoulos (University of Glasgow).
- **Monitoring of reproduction activities of the loggerhead sea turtles (*Caretta caretta*) in Zakynthos rookery**
2014, *Undergraduate research assistant*, supervised by Dr. A.Mazaris (National Marine Park of Zakynthos & the Aristotle University of Thessaloniki).

Publications

18. **Evolutionary spandrels in collective animal behaviour**
2026, *Trends in Ecology and Evolution*, *In press*. <https://doi.org/10.1016/j.tree.2026.07.011>
King A.J., Henry E., Garnier S., Allen W.L., Heathcote R.J.P., Fele M., **Papadopoulou M.**, Sankey D.W.E., Fürtbauer I.
17. **A mechanistic understanding of collective escape in starling flocks**
2026, *Communications Biology*, *In Press*. <https://doi.org/10.1038/s42003-026-10173-4>
Papadopoulou M., Hildenbrandt H., Storms R., Carere C., Verhulst S., Hemelrijk C.K.
16. **The scientific impact of gender in behaviour, ecology, and evolution: authorship and citation performance**
2026, *Animal Behaviour*, 236: 123563. <https://doi.org/10.1016/j.anbehav.2026.123563>
Papadopoulou M. & Afruni A.
15. **Dominant baboons experience more interrupted and less rest at night**
2026, *Current Biology*, 36 (1), 209-216 <https://doi.org/10.1016/j.cub.2025.10.028>
Fele M., Christensen C., Bracken A. M., O’Riain M. J., Lurgi M., **Papadopoulou M.**, Fürtbauer I., King A. J.
14. **A data-inspired framework to simulate collective behaviour of predator-prey systems**
2025, *Adaptive Behaviour*: 10597123251364750. doi:10.1177/10597123251364750
Papadopoulou M., Hildenbrandt H., Hemelrijk C.K.
13. **Active interactions between animals and technology: biohybrid approaches for animal behaviour research**
2025, *Animal Behaviour*, p.123160. doi:10.1016/j.anbehav.2025.123160
Papadopoulou M., Ball M., Bartashevich P., Burns A.L.J., Chiara V., Clark M.A., Costelloe B.R., Fele M., French F., Hauert S., Heinrich M.K., Herbert-Read J.E., Hoitt J., Ioannou C.C., Landgraf T., Matchette S.R., Polverino G., Sankey D., Scott M.D., Sridhar V. H., Strömbom D., Trianni V., Vo-Doan T.T., King A. J.
12. **Baboon travel progressions as a ‘social spandrel’ in collective animal behaviour**
2025, *Behavioral Ecology*, 36 (4): araf022. doi:10.1093/beheco/ara022
Fele M., Fürtbauer I., Lurgi M., **Papadopoulou M.**, Bracken A. M., Christensen C., O’Riain M.J., King, A.J.
11. **swaRmverse: an R package for the comparative analysis of collective motion**
2024, *Methods in Ecology and Evolution*. doi:10.1111/2041-210X.14460
Papadopoulou M., Garnier S., King A.J.
10. **Linking energy availability, movement, and sociality in a wild primate (*Papio ursinus*)**
2024, *Philosophical Transactions of the Royal Society B*, 379:20220466. doi:10.1098/rstb.2022.0466
Fürtbauer I., Shergold C., Christensen C., Bracken A.M., Heistermann M., **Papadopoulou M.**, O’Riain J., King A.J.
9. **DaNCES: a framework for data-inspired agent-based models of collective escape**
2024, In: Brock, O., Krichmar, J. (eds) *From Animals to Animats 17*. SAB 2024. Lecture Notes in Computer Science, vol 14993, pp 194–207. Springer, Cham. doi:10.1007/978-3-031-71533-4_15
Papadopoulou M., Hildenbrandt H., Hemelrijk C.K.
8. **Diffusion during collective turns in bird flocks under predation**
2023, *Frontiers in Ecology and Evolution*, 11: 1198248. doi:10.3389/fevo.2023.1198248
Papadopoulou M., Hildenbrandt H., Hemelrijk C.K.

7. **Dynamics of collective motion across time and species**
2023, *Philosophical Transactions of the Royal Society B*, 378: 20220068. doi:10.1098/rstb.2022.0068
Papadopoulou M., Fürtbauer I., O'Bryan L., Garnier S., Georgopoulou D., Bracken A., Christensen C., King A.J.
6. **Biologically inspired herding of animal groups by robots**
2023, *Methods in Ecology and Evolution*. doi:10.1111/2041-210X.14049
King A.J., Portugal S.J., Strömbom D., Mann R., Carrillo J.A., Kalise D., de Croon G., Barnett H., Scerri P., Gross R., Chadwick D., **Papadopoulou M.**
5. **Animals are not particles: towards a second generation of 'hetero-swarm' robotics**
2022, *Swarm Intelligence: 13th International Conference*, ANTS 2022, Malaga, Spain, November 2–4, Proceedings. Vol. 13491. Springer Natures. doi:10.1007/978-3-031-20176-9
Papadopoulou M., Fürtbauer I., King A.J.
4. **Emergence of splits and collective turns in pigeon flocks under predation**
2022, *Royal Society Open Science*, 9:211898. doi:10.1098/rsos.211898
Papadopoulou M., Hildenbrandt H., Sankey D.W.E., Portugal S.J., Hemelrijk C.K.
3. **Self-organization of collective escape in pigeon flocks**
2022, *PLoS Computational Biology*, 18(1): e1009772. doi: 10.1371/journal.pcbi.1009772
Papadopoulou M., Hildenbrandt H., Sankey D.W.E., Portugal S.J., Hemelrijk C.K.
2. **Relationship between conservation biology and ecology shown through machine reading of 32,000 articles**
2020, *Conservation Biology*, 34 (3), 721-732. doi: 10.1111/cobi.13435
Hintzen R., **Papadopoulou M.**, Mounce R., Banks-Leite C., Holt R., Mills M., Knight A., Leroi A., Rosindell J.
1. **On Revolutions**
2020, *Palgrave Communications*, 6 (1), 1-11. doi: 10.1057/s41599-019-0371-1
Leroi A., Lambert B., Mauch M., **Papadopoulou M.**, Ananiadou S., Lindberg S., Lindenfors P.

Book chapters

- **Group movement.** In: P Oldroyd, B (eds.), *Encyclopedia of Animal Behavior*. 2026, 3rd Edition. vol. 1, pp. 594-604. UK: Elsevier. doi:10.1016/B978-0-443-29068-8.00219-1
Couzin I.D., **Papadopoulou M.**, King A.J.

Fellowships and Research Grants

2026	Long-term Research Group Grant , Center for Interdisciplinary Research (ZiF) (Co-I, €200.000)	Germany
2025	Humboldt Research Fellowship , Alexander von Humboldt Foundation (PI, €80.000)	Germany
2023	Postdoctoral International Travelling Fellowships (PITF) , International Society for Fish Biology - FSBI (PI, £20.000)	United Kingdom
2017	Equal Opportunities Initiative Fund , European Society of Evolutionary Biology (PI, £1.000)	United Kingdom
2016	Erasmus+ Research Internship Grant , European Commission (PI, ≈€2.000)	United Kingdom

Other Grants and Scholarships

2026	Travel Grant , Women in Evolutionary Biology (€120)	Germany
2026	Scientific Meeting Grant , The Company of Biologists (£2.500)	Greece
2025	Conference Attendance Grant , Association for the Study of Animal Behaviour (£1.300)	India
2022	Symposium Grant , Dutch Society for theoretical biology (€500)	Netherlands
2015	Travel Grant , International Sea Turtle Society (Full Conference Expenses)	Turkey
2014	Contributory scholarship , Aristotle University of Thessaloniki (≈€1.200)	Greece
2011	Excellence Scholarship for National Admission Exams in Biology , Hellenic State Scholarships Foundation (≈€1.000)	Greece

Software

- **StarEscape: an agent-based model of starling murmurations (3D)**
2026, *C++*, Available on GitHub: [marinapapa/StarEscape-model](https://github.com/marinapapa/StarEscape-model)
Papadopoulou M., Hildenbrandt H.
- **rDaNCES: an R package for running agent-based models based on the DaCNES framewrok**
2025, *R*, Available at marinapapa.github.io/rDaNCES/
Papadopoulou M.

- **swaRmverse: an R package for the analysis of collective motion**
2024, R, Available on CRAN and at marinapapa.github.io/swaRmverse/
Papadopoulou M., Garnier S.
- **DaNCES: a data-inspired modeling framework for agent-based simulations of collective escape (3D)**
2024, C++, Available on GitHub: [marinapapa/DaNCES_framework](https://marinapapa.github.io/DaNCES_framework)
Papadopoulou M., Hildenbrandt H.
- **ColT: an agent-based model of collective turning in birds (2D)**
2023, C++, doi:10.5281/zenodo.10782467.
Papadopoulou M., Hildenbrandt H.
- **HoPE: an agent-based model of collective escape in pigeons (2D)**
2022, C++, doi:10.5281/zenodo.5889123
Papadopoulou M., Hildenbrandt H.

Current Doctorate Students

- Christopher Yates (Swansea University, 2025-2028), “**Comparative analysis of collective behaviour in natural and artificial systems**”. Co-supervision with Andrew J. King (Swansea University), Will Allen (Swansea University), Rob Heathcote (Oxford University), Andreagiovanni Reina (University of Konstanz).

Teaching & Supervision Experience

Humboldt University of Berlin

Berlin, GE

COURSE CO-ORGANIZER

2026-2027

- Course: *Computational modelling of collective behaviour and cognition* (MSc)
- Organization of course, lectures, and computer practicals.

Max Planck Institute for Human Development

Berlin, GE

PROJECT CO-SUPERVISION

2026-2027

- Co-supervision of BSc, MSc students and research interns.

TU Berlin

Berlin, GE

GUEST LECTURE

28 Apr. 2025

- Course: *Introduction to Modeling Collective Behavior*
- Lecture on data-inspired agent-based models of animal collectives on the move.

Swansea University

Swansea, UK

GUEST LECTURER, RESEARCH TRAINING, & PROJECT CO-SUPERVISOR IN BIOSCIENCES

Sep. 2022 - Sep. 2024

- Guest lecturer in course: *Animal Behavior* (BSc)
- Design and delivery of bi-annual workshop on: *Data Visualization for research (fundamentals and R practical)*
- Co-supervision of research project of PhD (2) and BSc (3) students
- Interviewer for PhD vacancies (3) in the SHOAL group

National Institute for Mathematical and Biological Synthesis (NIMBioS)

USA (Online)

INVESTIGATIVE WORKSHOP PARTICIPANT

1-3 Dec. 2020

- Practical Workshop on Quantitative Education in Life Science Graduate Programs
- Discussions and presentations on designing quantitative education programs for life science students

University of Groningen

Groningen, NL

TEACHING ASSISTANT & PROJECT CO-SUPERVISOR IN THEORETICAL BIOLOGY

Oct. 2017 - Feb. 2022

- Courses: *Biological modelling and model analysis* (BSc), *Modelling in life sciences* (BSc), *Practical modelling for biologists* (MSc), *Self-organization of ecological and social systems* (BSc), *Advanced self-organization of social systems* (MSc)
- Tasks: computer practicals (coordination, preparation and tutoring), lectures, projects supervision (BSc, MSc)

Professional Services

Reviewing & Editorial Roles

International

SCIENTIFIC PUBLISHING, SOFTWARE & FUNDING

2018 - Present

- **Grant Reviewer** for: the Human Frontier Science Program (HFSP) Fellowships (2025), the German Research Foundation (DFG) Grants (2026).
- **Associate Editor**: Journal of Animal Ecology (2026-2029)
- **Guest Editor**: special issue of journal ‘*Animal Behaviour*’, entitled “Biohybrid Systems in Animal Behaviour” (2023-2024).
- **Peer-reviewer** for journals: *Nature Communications*, *Proceedings of the National Academy of Sciences (PNAS)*, *Science Advances*, *Current Biology*, *PLOS Computational Biology*, *Animal Behaviour*, *Journal of the Royal Society Interface*, *Proceedings of the Royal Society B: Biological Sciences*, *Methods in Ecology and Evolution*, *Philosophical Transactions of the Royal Society B: Biological Sciences*, *Royal Society Open Science*, *Behavioral Ecology and Sociobiology*, *Behavioral Ecology*, *Functional Ecology*, *Communications Biology*, *Ecological Modelling*, *Adaptive Behaviour*, *Behaviour*, *Plos One*, *Physical Biology*, *Physical Review E*, *Swarm Intelligence* (for a detailed list see Web of Science, Researcher ID GQP-2573-2022)
- **Software reviewer** for R-OpenSci: ‘nlrx’ R package.

Scientific Societies

MEMBERSHIP & COMMUNITY IMPACT

- Founding member of SEMF - Society for Multidisciplinary and Fundamental Research (semf.org.es)
- Member of: Ethological Society e.V. (2026-now), Association for the Study of Animal Behaviour (ASAB, 2018-now), International Fish Biology Society (FSBI, 2022-now), Complex Systems Society (2024-now), SORTEE— Society for Open, Reliable, and Transparent Ecology and Evolutionary biology (2024-now), International Society of Behavioural Ecology (2022-now), Dutch Society for Theoretical Biology (NVTB, 2018-2024), European Society for Evolutionary Biology (2016-2018), British Ecological Society (2016-2019).

International

2016 - Present

Equality, Diversity & Inclusion

BOARDS MEMBERSHIP & RESEARCH

- Member of the EDI Committee of the School of Biology, Geography and Physics of Swnasea University (2022-2024)
- Research on gender bias in scientific research (2017-now)

International

2017-Present

Event Organization

TRASE WORKSHOP (TOOLS FOR RESEARCH IN ANIMAL SOCIAL EVOLUTION)

- Co-organizer of Workshop on “Methods & Tools in Social Evolution”
- Number of participants: 40 | Budget: ~ 3.500 €.

Crete, Greece

Jul. 2026

Event Organization

ASAB WINTER - GERMANY HUBLET

- Co-organizer of local Hublet for the Association for the Study of Animal Behavior (ASAB)

Berlin, Germany

Dec. 2025

Event Organization

INTERNATIONAL WORKSHOP ON: ‘BIO-HYBRID METHODS IN ANIMAL BEHAVIOR’

- Co-organizer of interdisciplinary workshop funded by the Association for the Study of Animal Behavior (ASAB)
- Number of participants: 50 | Budget: ~ 10.000 €.

Swansea, UK

Sep. 2023

Event Organization

PHD DAY GRONINGEN

- The largest annual event for PhD students in Europe (phd-day.nl)
- Chair of the board of the organizing committee (25 members)
- Number of participants: 700 | Budget: ~ 40.000 €

Groningen, NL

Oct. 2018 - Sep. 2019

Wildlife Rehabilitation

‘ACTION FOR WILDLIFE’, ASSOCIATION FOR THE STUDY, TREATMENT AND REHABILITATION OF WILDLIFE

- Providing care to wild animals admitted in the rehabilitation center (volunteering) and analyzing their causes of morbidity (internship).

Thessaloniki, GR

Mar. 2012 - Sep. 2016

Invited Talks

Emerging Scientist Series, Max Planck Institute for Biological Intelligence

INVITED SEMINAR SPEAKER

Cognitive rules underlying the self-organization of animal collectives

Seewiesen, GE

6 May 2025

“Dialogues on Ethology and Behavioural ecology” Series, University of Pisa

INVITED SEMINAR SPEAKER

Across the Swarm-Verse: the self-organization of animal collectives on the move

Pisa, IT

28 Apr. 2025

Science of Intelligence Excellence Cluster

INVITED SEMINAR SPEAKER

Behavioural rules underlying self-organized animal collectives

Berlin, GE

13 Feb. 2025

Workshop on “New Technologies for Conservation Science”, Imperial College London

INVITED SPEAKER

‘Biohybrid systems for understanding and managing animal collectives’

London, UK

6 Feb. 2025

Centre for Research in Animal Behaviour (CRAB), University of Exeter

INVITED SEMINAR SPEAKER

Self-organized collective behaviour in vertebrates

Exeter, UK

20 Nov. 2024

Workshop on “Diverse processes in networks across biological levels”, MPI for Evolutionary Biology

INVITED KEYNOTE SPEAKER

Social interactions underlying collective behaviour across vertebrates.

Plön, GE

12 - 14 Nov. 2024

Department of Ecological and Biological Sciences (DEB), Tuscia University

INVITED SEMINAR SPEAKER

‘Collective escape in bird flocks: disentangling their emergence through data-inspired computational models’

Viterbo, IT

26 Jun. 2024

Workshop on “Collective Motion of Animals and Robots”, Cargèse

INVITED KEYNOTE SPEAKER

‘Animal groups into the Swarm-Verse: understanding collective motion across species & ecological contexts’

Corsica, FR

27 - 31 May 2024

Leibniz-Institute of Freshwater Ecology and Inland Fisheries (IGB)

INVITED SEMINAR SPEAKER

‘The role of behavioural individuality in collective animal behaviour’

Berlin, GE

16 Feb. 2024

Workshop on “Understanding self-organization in complex systems: A multidisciplinary approach”, ETH Zürich

INVITED KEYNOTE SPEAKER

‘Self-organized collective behaviour in social systems’

Zurich, SWITZ

17 - 19 Jan. 2024

Centre for Biomathematics, Swansea University

INVITED SEMINAR SPEAKER

‘Understanding the collective motion of animals through individual-based models across species and ecological contexts’

Swansea, UK

4 Oct. 2023

Workshop on “Descriptive & Normative Models of Collective Behaviour”, University of Leeds

INVITED PARTICIPANT

‘Data-inspired models of collective escape in bird flocks’

Leeds, UK

20 - 24 Jun. 2022

Science Communication & Outreach

- 2026 **Science News**, Interviewed by *Bethany Brookshire* for the article: “Seabirds weren’t fooled by a scarecrow-like buoy with rotating eyes.”
- 2025 **National Geographic**, Interviewed by *Ed Young* for the article: “What are birds doing when they fly in swarms? Scientists may now know.”
- 2024 **The New York Times**, Interviewed by *Elizabeth Preston* for the article: “Punching Octopuses Lead Fish on Hunting Parties”.
- 2023 **Oriel Science**, Outreach video as part of exhibition: “Movement and Motion”.
- 2023 **Escape Collective**, Interviewed by *Joe Lindsey* for the article: “Surfing the swarm: the surprising science behind how the peloton moves”.
- 2022 **Ukrant**, Interviewed by *Cristian Apostol* for the article: “The secret of dancing birds: how a robotic falcon is saving airplanes”.
- 2019 **International School of Groningen**, invited talk on collective behaviour to primary school students.
- 2018 **The Young Researchers (Groningen)**, invited talk on computational model for collective behaviour to children, teenagers and adults.
- 2018 **Bananageddon**, cinematographer and producer of documentary film on agricultural practices of bananas.
www.bananageddonfilm.com

Conference Contributions

International Society for Behavioural Ecology Congress

PAPADOPOULOU M.

Animal groups into the Swarm-Verse: disentangling the inter- and intra-specific variation of collective behaviour in vertebrates (Oral presentation)

Turin, IT

20 - 24 Jul. 2026

Women in Evolutionary Biology II

PAPADOPOULOU M.

The scientific impact of gender in evolutionary biology: authorship and citation performance (Concept oral presentation)

Ploen, GE

1-3 Jun. 2026

The 37th Annual Human Behaviour and Evolution Society Conference (HBES)

PAPADOPOULOU M.

Trail formation in human social foraging (Oral presentation)

Rabat, MO

13-16 May 2026

Alma Dal Co School on Collective Behaviour PAPADOPOULOU M. The role of behavioural individuality in the collective behaviour of vertebrates (Poster presentation)	<i>Venice, IT</i> 29 Sep. - 4 Oct. 2025
Computational Biology Symposium PAPADOPOULOU M. Data-inspired simulations of collective escape: the case of starling murmurations (Oral presentation)	<i>Lausanne, SWITZ</i> 17-18 Sep. 2025
XXXVIII International Ethological Congress - Behaviour 2025 PAPADOPOULOU M. - The role of individual heterogeneity in the collective behaviour of bird flocks (Oral presentation) - Into the Swarm-Verse: a new R package to analyse trajectories of animals on the move (Workshop)	<i>Kolkata, IN</i> 25-30 Aug. 2025
16th International Congress on the Zoogeography and Ecology of Greece and Adjacent Regions (ICZEGAR) PAPAGEORGIOU D., NIKOLAOS SMIT N., DARMIS F., VEZYRAKIS A., PAPADOPOULOU M. , GEORGIOPOULOU D.G. Round table: "Social Behaviour" – More is different; understanding and managing animal collectives through biohybrid systems (Oral presentation and panelist)	<i>Athens, GR</i> 3-6 Jul. 2025
Collective Behaviour Seminar Series PAPADOPOULOU M. Dynamics of collective motion and escape in heterogeneous flocks of homing pigeons (Oral presentation)	<i>Online</i> 17 Jun. 2025
17th International Conference on the Simulation of Adaptive Behavior (SAB 2024) PAPADOPOULOU M. , HILDENBRANDT H., HEMELRIJK C.K. DaNCES: a framework for data-inspired agent-based models of collective escape (Oral presentation)	<i>California, USA</i> 9 - 12 Sep. 2024
FSBI Annual Meeting 2024 PAPADOPOULOU M. , BIERBACH D., KRAUSE J., KING A.J. A tale of clones, robots, and agents: the role of behavioural individuality in the schooling dynamics of the Amazon molly (Poster presentation)	<i>Bilbao, ES</i> 15 - 19 Jul. 2024
ASAB Spring 2024 PAPADOPOULOU M. , BIERBACH D., KRAUSE J., KING A.J. A tale of clones, robots, and agents: the role of behavioural individuality in the collective behaviour of vertebrates (Oral presentation)	<i>Exeter, UK</i> 23 - 25 Apr. 2024
Behaviour 2023 PAPADOPOULOU M. , HILDENBRANDT H., HEMELRIJK C.K. The self-organization of collective escape in starlings and pigeons (Oral presentation)	<i>Bielefeld, GE</i> 14 - 19 Aug. 2023
Santa Fe Institute Symposium, Collective Intelligence Foundations + Radical Ideas PAPADOPOULOU M. Collective Intelligence into the Swarmverse (Poster presentation)	<i>Santa Fe, USA</i> 19 - 23 Jun. 2023
ASAB Spring 2023 PAPADOPOULOU M. Dynamics of collective motion across species and contexts. (Oral presentation)	<i>Bangor, UK</i> 4 - 6 Mar. 2023
European Conference on Behavioural Biology (ECBB) PAPADOPOULOU M. , FÜRTBAUER I., KING A.J. The role of individual heterogeneity in collective behavior across species. (Poster presentation) PAPADOPOULOU M. , HILDENBRANDT H., HEMELRIJK C.K. Disentangling patterns of collective escape in starling flocks. (Poster presentation)	<i>Groningen, NL</i> 20 - 24 Jun. 2022 <i>Groningen, NL</i> 20 - 24 Jun. 2022
Collective animal behavior through time PAPADOPOULOU M. , FÜRTBAUER I., KING A.J. Individual heterogeneity in collective behavior across time and species. (Poster presentation)	<i>London, UK</i> 23 - 24 May. 2022
Numerous Numerosity ECR Workshop PAPADOPOULOU M. Self-organization & numerical cognition in animal collective behavior. (Oral presentation)	<i>Online</i> 31 May - 2 Jun. 2021
Dutch Society for Theoretical Biology (NVTB) Annual Meeting PAPADOPOULOU M. , HILDENBRANDT H., SANKEY D.W.E., PORTUGAL S.J., HEMELRIJK C.K. Self-organization and patterns of collective escape in pigeon flocks. (Oral presentation)	<i>Online, NL</i> 14 May 2021
Association for the Study of Animal Behaviour (ASAB) Easter Virtual Meeting PAPADOPOULOU M. , HILDENBRANDT H., SANKEY D.W.E., PORTUGAL S.J., HEMELRIJK C.K. Patterns of collective escape in pigeon flocks: insight from a computational model. (Oral presentation)	<i>Online (Bristol), UK</i> 15 Apr. 2021

European Society for Evolutionary Biology (ESEB) Annual Meeting

PAPADOPOULOU M.

The scientific impact of gender in ecology and evolutionary biology. (Poster presentation)

Turku, FI

23 Aug. 2019

PyGrunn 2019: 'Python and friends' developer conference

PAPADOPOULOU M.

Disentangling scientific fields with topic analysis in Python. (Oral presentation)

Groningen, NL

5 May 2019

37th Congress of the Greek Society of Biological Sciences

PAPADOPOULOU M., ALMPANIDOU V., GKAZINOU C., MAZARIS D. A.

Challenging the performance of species distribution models: climate and population trends of sea turtles. (Oral and Poster presentation)

Kavala, GR

26 May 2016

35th Annual Symposium on Sea Turtle Biology and Conservation

PAPADOPOULOU M., GKAZINOU C., VOKOU D., PSARALEXI M., SGARDELIS P. S., ALMPANIDOU V., MAZARIS D. A.

Evidence on a low climatic niche conservatism of distinct sea turtles populations (Poster presentation)

Dalaman, TR

18 Apr. 2015

Professional Training

ASAB 2019 Summer Conference Workshops

'MACHINE LEARNING IN THE BEHAVIOURAL SCIENCES' & 'QUANTIFYING BEHAVIOR WITH MACHINE-LEARNING' (in Python)

Konstanz, GE

26 Aug. 2019

23rd Summer School of the Greek Complex Systems Society

DYNAMICAL SYSTEMS AND COMPLEXITY

Chalkidiki, GR

27 Aug. - 3 Sep. 2016

International Summer School in Ecological Data Analysis (EcoDAR)

ECOLOGICAL DATA ANALYSIS IN R

Lesvos, GR

6 - 11 Jul. 2015

Lifelong Learning Erasmus+ Program

NATURE CONSERVATION IN DIFFERENT EUROPEAN LANDSCAPES

Daugavpils, LV

11 - 24 Apr. 2014

Honors & Awards

2021 **Best Oral Presentation Award**, Dutch Society for Theoretical Biology

Netherlands

2010 **Honor of Excellence**, National Mathematical Contest of the Greek Mathematical Society

Greece

Computer Skills

- **Programming languages:** C++, R, Python, NetLogo, Bash, MATLAB, C (familiar), Octave (familiar)
- **Software:** TREX, EthoVision XT (video tracking), Adobe Premiere Pro (video-editing), Git (version control), $\text{\LaTeX}$, Microsoft Office, Adobe Illustrator (Graphic design), ArcGIS, MaxEnt, OpenGL (computer graphics).
- **Other:** Machine learning, Natural language processing, High performance computing, Metaprogramming

Other Skills

- **Animal handling:** 5 years experience in wildlife rehabilitation at the Action for Wildlife Organization (2012-2016)
- **Driving license:** category B (European, since 2013)
- **First Aid:** certified first aider at the workplace from Swansea University (2022)
- **Lab work:** behavioural experiments on fish (2024, 2026)

Languages

English (Excellent), **French** (Intermediate, DELF B2), **Italian** (Intermediate, B2), **Dutch** (Beginner, A1), **German** (Beginner, A1), **Greek** (Native)

Extracurricular Activity

Fencing - Epee

ATHLETE, GREEK NATIONAL CHAMPION, ASSISTANT COACH, REFEREE

Greece | UK | Netherlands | Italy

2006 - Present

Photography and Cinema

WORKING EXPERIENCE AS PHOTOGRAPHER, CINEMATOGRAPHER AND CO-PRODUCER (WWW.BANANAGEDDONFILM.COM)

International

2013 - 2020

Music - Piano

STUDIES ON PIANO, MUSIC THEORY AND COMPOSITION AT THE CONTEMPORARY CONSERVATORY OF THESSALONIKI

Greece

2003 - 2013