

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 - Nov. 2027

- Project: "Time is relative: the effect of individual timescales on collective behaviour"
- Host: Dr. R.H.J.M. Kurvers
- 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: "FALCOROBOT: Collective and individual responses of avian flocks to robotic predators"
- 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."
- Supervision: Prof. Dr. C. K. Hemelrijk, 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".
- Supervision: Dr. J. Rosindell, Prof. Dr. A. M. Leroi, Prof. Dr. T. Barraclough.
- 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".
- Supervision: Dr. A. Mazaris.
- 8.32/10
- Keywords: species-distribution modeling, sea turtles, migratory routes, maximum entropy

Publications

- Dominant baboons experience more interrupted and less rest at night**
2025, *Current Biology*, Accepted doi:10.1101/2025.01.06.629345
Fele M., Christensen C., Bracken A. M., O'Riain M. J., Lurgi M., **Papadopoulou M.**, Fürtbauer I., King A. J.
- 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/araf022
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.

Manuscripts under review

- **The scientific impact of gender in animal behaviour: authorship and citation performance**
Under review
Papadopoulou M., Afruni A.
- **Revealing mechanisms underlying the collective escape of starling flocks**
Under review, bioRxiv doi:10.1101/2025.01.06.629345
Papadopoulou M., Hildenbrandt H., Storms R., Carere C., Verhulst S., Hemelrijk C.K.

Software

- **rDaNCES: an R package for running agent-based models based on the DaCNES framework**
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 at github.com/marinapapa/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.

Fellowships, Grants, and Scholarships

2025	Conference Attendance Grant , Association for the Study of Animal Behaviour	India
2025	Humboldt Research Fellowship , Alexander von Humboldt Foundation	Germany
2023	Postdoctoral International Travelling Fellowships (PITF) , FSBI, International Society for Fish Biology	United Kingdom
2022	Symposium Grant , Dutch Society for theoretical biology	Netherlands
2017	Equal Opportunities Initiative Fund , European Society of Evolutionary Biology	United Kingdom
2016	Erasmus+ Internship Grant , European Commission	United Kingdom
2015	Travel Grant , International Sea Turtle Society	Turkey
2014	Contributory scholarship , Aristotle University of Thessaloniki	Greece
2011	Excellence Scholarship for National Admission Exams in Biology , Hellenic State Scholarships Foundation	Greece

Affiliated Research Projects

- **Comparative Analysis and Modelling of Collective Behaviour in Natural and Artificial Systems**
2025-Present, Project co-developer and partner, 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 RoboFalcons to deter bird flocks**
2017-2022, *University of Groningen*, PhD researcher, supervised by Prof.Dr.C.K.Hemelrijk.
- **BiasWatchEvol: Gender bias in Evolutionary Biology**
2017-2018, *Imperial College London*, Independent affiliated research.
- **Determinants of sea turtle nesting patterns & spatial asymmetries at the global scale**
2015, *University of Glasgow*, Undergraduate research internship supervised by Dr. S.Spatharis and Prof.Dr. J.Matthiopoulos.
- **Monitoring of reproduction activities of the loggerhead sea turtles (*Caretta caretta*) in Zakynthos rookery**
2014, *National Marine Park of Zakynthos & Aristotle University of Thessaloniki*. Undergraduate research assistant supervised by Dr. A.Mazaris.

Teaching & Supervision Experience

TU Berlin

GUEST LECTURE

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

Berlin, GE

28 Apr. 2025

Swansea University

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

- 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

Swansea, UK

Sep. 2022 - Sep. 2024

- 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)

Current Doctorate Projects Supervision

- Christopher Yates (Swansea University, 2025-), “**Comparative analysis and modelling 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).

Invited Talks

Emerging Scientist Series, Max Planck Institute for Biological Intelligence

Seewiesen, GE

INVITED SEMINAR SPEAKER

6 May 2025

Cognitive rules underlying the self-organization of animal collectives

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

Pisa, IT

INVITED SEMINAR SPEAKER

28 Apr. 2025

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

Science of Intelligence Excellence Cluster

Berlin, GE

INVITED SEMINAR SPEAKER

13 Feb. 2025

Behavioural rules underlying self-organized animal collectives

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

London, UK

INVITED SPEAKER

6 Feb. 2025

‘Biohybrid systems for understanding and managing animal collectives’

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

Exeter, UK

INVITED SEMINAR SPEAKER

20 Nov. 2024

Self-organized collective behaviour in vertebrates

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

Plön, GE

INVITED KEYNOTE SPEAKER

12 - 14 Nov. 2024

Social interactions underlying collective behaviour across vertebrates.

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

Viterbo, IT

INVITED SEMINAR SPEAKER

26 Jun. 2024

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

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

Corsica, FR

INVITED KEYNOTE SPEAKER

27 - 31 May 2024

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

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

Berlin, GE

INVITED SEMINAR SPEAKER

16 Feb. 2024

‘The role of behavioural individuality in collective animal behaviour’

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

Zurich, SWITZ

INVITED KEYNOTE SPEAKER

17 - 19 Jan. 2024

‘Self-organized collective behaviour in social systems’

Centre for Biomathematics, Swansea University

Swansea, UK

INVITED SEMINAR SPEAKER

4 Oct. 2023

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

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

Professional Services

Reviewing & Editing

International

SCIENTIFIC PUBLISHING & SOFTWARE

2018 - Present

- **Reviewer** for journals: *Nature Communications*, *Proceedings of the National Academy of Sciences (PNAS)*, *Science Advances*, *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*, *Adaptive Behaviour*, *Plos One*, *Physical Biology*, *New Journal of Physics*, *Advanced Intelligent Systems*, *IET Cyber-Systems and Robotics* (for a full list see Web of Science, Researcher ID GQP-2573-2022)
- **Guest Editor**: special issue of ‘*Animal Behaviour*’ entitled “Biohybrid Systems in Animal Behaviour” (2023-2024), special issue of ‘*BMC Zoology*’ entitled “From cooperation to collective action: social behavior in zoology” (2025-2026).
- **Software reviewer** for R-OpenSci: ‘nlrx’ R package.

Scientific Societies

International

MEMBERSHIP & COMMUNITY IMPACT

2016 - Present

- Founding member of SEMF - Society for Multidisciplinary and Fundamental Research (semf.org.es)
- Member of: 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).

Equality, Diversity & Inclusion

International

BOARDS MEMBERSHIP & RESEARCH

2017-Present

- 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)

Event Organization

Berlin, Germany

ASAB WINTER - GERMANY HUBLET

Dec. 2025

- Co-organizer of local Hublet for the Association for the Study of Animal Behavior (ASAB)
- Number of participants: TBD

Event Organization

Swansea, UK

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

Sep. 2023

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

Event Organization

Groningen, NL

PHD DAY GRONINGEN

Oct. 2018 - Sep. 2019

- 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 €

Wildlife Rehabilitation

Thessaloniki, GR

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

Mar. 2012 - Sep. 2016

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

Conference Contributions

Alma Dal Co School on Collective Behaviour

Venice, IT

PAPADOPOULOU M.

29 Sep. - 4 Oct. 2025

The role of behavioural individuality in the collective behaviour of vertebrates (Poster presentation)

Computational Biology Symposium

Lausanne, SWTZ

PAPADOPOULOU M.

17-18 Sep. 2025

Data-inspired simulations of collective escape: the case of starling murmurations (Oral presentation)

XXXVIII International Ethological Congress - Behaviour 2025

Kolkata, IN

PAPADOPOULOU M.

25-30 Aug. 2025

- 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)

16th International Congress on the Zoogeography and Ecology of Greece and Adjacent Regions (ICZEGAR)

Athens, GR

PAPAGEORGIOU D., NIKOLAOS SMIT N., DARMIS F., VEZYRAKIS A., PAPADOPOULOU M., GEORGIOPOULOU D.G.

3-6 Jul. 2025

Round table: "Social Behaviour" – More is different; understanding and managing animal collectives through biohybrid systems (Oral presentation and panelist)

Collective Behaviour Seminar Series

Online

PAPADOPOULOU M.

17 Jun. 2025

Dynamics of collective motion and escape in heterogeneous flocks of homing pigeons (Oral presentation)

17th International Conference on the Simulation of Adaptive Behavior (SAB 2024)

California, USA

PAPADOPOULOU M., HILDENBRANDT H., HEMELRIJK C.K.

9 - 12 Sep. 2024

DaNCES: a framework for data-inspired agent-based models of collective escape (Oral presentation)

FSBI Annual Meeting 2024

Bilbao, ES

PAPADOPOULOU M., BIERBACH D., KRAUSE J., KING A.J.

15 - 19 Jul. 2024

A tale of clones, robots, and agents: the role of behavioural individuality in the schooling dynamics of the Amazon molly (Poster presentation)

ASAB Spring 2024

Exeter, UK

PAPADOPOULOU M., BIERBACH D., KRAUSE J., KING A.J.

23 - 25 Apr. 2024

A tale of clones, robots, and agents: the role of behavioural individuality in the collective behaviour of vertebrates (Oral presentation)

Behaviour 2023

Bielefeld, GE

PAPADOPOULOU M., HILDENBRANDT H., HEMELRIJK C.K.

14 - 19 Aug. 2023

The self-organization of collective escape in starlings and pigeons (Oral presentation)

Santa Fe Institute Symposium, Collective Intelligence | Foundations + Radical Ideas

Santa Fe, USA

PAPADOPOULOU M.

19 - 23 Jun. 2023

Collective Intelligence into the Swarmverse (Poster presentation)

ASAB Spring 2023

Bangor, UK

PAPADOPOULOU M.

4 - 6 Mar. 2023

Dynamics of collective motion across species and contexts. (Oral presentation)

European Conference on Behavioural Biology (ECBB)

Groningen, NL

PAPADOPOULOU M., FÜRTBAUER I., KING A.J.

20 - 24 Jun. 2022

The role of individual heterogeneity in collective behavior across species. (Poster presentation)

European Conference on Behavioural Biology (ECBB)

Groningen, NL

PAPADOPOULOU M., HILDENBRANDT H., HEMELRIJK C.K.

20 - 24 Jun. 2022

Disentangling patterns of collective escape in starling flocks. (Poster presentation)

Collective animal behavior through time

London, UK

PAPADOPOULOU M., FÜRTBAUER I., KING A.J.

23 - 24 May. 2022

Individual heterogeneity in collective behavior across time and species. (Poster presentation)

Numerous Numerosity ECR Workshop

Online

PAPADOPOULOU M.

31 May - 2 Jun. 2021

Self-organization & numerical cognition in animal collective behavior. (Oral presentation)

Dutch Society for Theoretical Biology (NVTB) Annual Meeting

Online, NL

PAPADOPOULOU M., HILDENBRANDT H., SANKEY D.W.E., PORTUGAL S.J., HEMELRIJK C.K.

14 May 2021

Self-organization and patterns of collective escape in pigeon flocks. (Oral presentation)

Association for the Study of Animal Behaviour (ASAB) Easter Virtual Meeting

Online (Bristol), UK

PAPADOPOULOU M., HILDENBRANDT H., SANKEY D.W.E., PORTUGAL S.J., HEMELRIJK C.K.

15 Apr. 2021

Patterns of collective escape in pigeon flocks: insight from a computational model. (Oral presentation)

European Society for Evolutionary Biology (ESEB) Annual Meeting

Turku, FI

PAPADOPOULOU M.

23 Aug. 2019

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

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

Science Communication & Outreach

- 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

Professional Training

Investigative Workshop by NIMBioS (National Institute for Mathematical and Biological Synthesis) & SCMB (Southeast Center for Mathematics and Biology)

QUANTITATIVE EDUCATION IN LIFE SCIENCE GRADUATE PROGRAMS.

Online, U.S.A.

1 - 3 Dec. 2020

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

Netherlands

Greece

Computer Skills

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

Languages

English (Excellent), French (Intermediate, DELF B2), Italian (Intermediate, B2), Dutch (Basic, A2), German (Basic, 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