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|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| <b>RESEARCH</b>         | I develop novel mathematical and computational methods for modelling the effects of anthropogenic change on species interactions and ecosystem services                                                                                                                                                                                             |                                                                 |
| <b>EDUCATION</b>        | <b>DPhil Doctorate in Condensed Matter Physics</b>                                                                                                                                                                                                                                                                                                  | University of Oxford                                            |
| 2007–2010               | Department of Physics and Wolfson College<br>Thesis title: Structure, dynamics, and robustness of ecological networks<br>Examiners: Sir Professor Charles Godfray and Professor Roger Guimerà<br>Supervisors: Professor Felix Reed-Tsochas, Dr Nick S. Jones, Professor Neil F. Johnson<br>All conditions satisfied in 2011, degree awarded in 2013 |                                                                 |
| 2003–2007               | <b>MPhys Undergraduate Master of Physics</b>                                                                                                                                                                                                                                                                                                        | University of Oxford                                            |
|                         | First Class Honours, St. Anne's College                                                                                                                                                                                                                                                                                                             |                                                                 |
| <b>POSITIONS</b>        | <b>Assistant Professor</b>                                                                                                                                                                                                                                                                                                                          | Department of Biology City University of New York (CUNY)        |
| 2019–PRESENT            | Brooklyn College and The Graduate Center, PhD Subprogram in Ecology, Evolutionary Biology, and Behavior (EEB); Affiliated Faculty, Science and Resilience Institute at Jamaica Bay (since 2022); Research Associate, Division of Invertebrate Zoology, American Museum of Natural History (since 2024)                                              |                                                                 |
| 2016–2018               | <b>Research Fellow</b>                                                                                                                                                                                                                                                                                                                              | Social-Ecological Networks University of Maryland, College Park |
|                         | National Socio-Environmental Synthesis Center, with Professor Margaret Palmer                                                                                                                                                                                                                                                                       |                                                                 |
| 2016                    | <b>Postdoctoral Researcher</b>                                                                                                                                                                                                                                                                                                                      | Microbial invasion University of Maryland, College Park         |
|                         | Department of Biology, with Professor Bill Fagan                                                                                                                                                                                                                                                                                                    |                                                                 |
| 2013–2015               | <b>Research Fellow</b>                                                                                                                                                                                                                                                                                                                              | Environmental Risk University College London                    |
|                         | Centre for Biodiversity and Environment Research, with Dame Professor Georgina Mace                                                                                                                                                                                                                                                                 |                                                                 |
| 2013                    | <b>Consultant Scientist</b>                                                                                                                                                                                                                                                                                                                         | Urban Pollinators Project University of Bristol                 |
|                         | School of Biological Sciences, with Professor Jane Memmott                                                                                                                                                                                                                                                                                          |                                                                 |
| 2011–2013               | <b>Postdoctoral Researcher</b>                                                                                                                                                                                                                                                                                                                      | Ecological Networks University of Chicago                       |
|                         | Department of Ecology & Evolution, with Professor Stefano Allesina                                                                                                                                                                                                                                                                                  |                                                                 |
| <b>PUBLICATIONS</b>     | 26. Romeijnders, M., van Boven, M., Corman, F., Modes, C.D., <b>Staniczenko, P.P.A.</b> & Panja, D. (2026). Event-based spatiotemporal networks for modelling emergent phenomena in complex systems. <a href="#">Nature Communications</a> , <i>in press</i>                                                                                        |                                                                 |
| <u>MENTORED</u>         |                                                                                                                                                                                                                                                                                                                                                     |                                                                 |
| <u>STUDENTS</u>         |                                                                                                                                                                                                                                                                                                                                                     |                                                                 |
| <sup>‡</sup> LAB MEMBER |                                                                                                                                                                                                                                                                                                                                                     |                                                                 |
| 2025                    | 25. Jarzyna*, M.A., Ohyama*, L., Economo, E.P., Gill, J., Hickerson, M.J., Mascarenhas, R., Okie, J.G., Qin, C., Rabosky, D.L., <b>Staniczenko, P.P.A.</b> & McGill, B.J. (2025). *Joint first authors. Emergence and dynamics of regional species pools. <a href="#">Global Ecology and Biogeography</a> , 34, e70046                              |                                                                 |
| 2024                    | 24. Anderson, C.R., Curtsdotter, A.R.K., <b>Staniczenko, P.P.A.</b> , Valdovinos, F.S. & Brosi, B.J. (2024). The interplay of binary and quantitative structure on the stability of mutualistic networks. <a href="#">Integrative and Comparative Biology</a> , 64, 827–840                                                                         |                                                                 |
| 2023                    | 23. <b>Staniczenko, P.P.A.</b> & Panja, D. (2023). Temporal origin of nestedness in interaction networks. <a href="#">PNAS Nexus</a> , 2, pgad412                                                                                                                                                                                                   |                                                                 |
|                         | 22. French, C.M., Bertola, L.D., Carnaval, A.C., Economo, E.P., Kass, J.M., Lohman, D.J., Marske, K.A., Meier, R., Overcast, I., Rominger, A.J., <b>Staniczenko, P.P.A.</b> & Hickerson, M.J. (2023). Global determinants of insect mitochondrial genetic diversity. <a href="#">Nature Communications</a> , 14, 5276                               |                                                                 |

- 2023 21. Graham, N.R., Krehenwinkel, H., Lim, J.Y., **Staniczenko, P.P.A.**, Callaghan, J., Andersen, J.C., Gruner, D.S. & Gillespie, R.G. (2023). Ecological network structure in response to community assembly processes over evolutionary time. [Molecular Ecology](#), 32, 6489–6506
20. Lue<sup>‡</sup>, C.-H., Abram, P.K., Hrcek, J., Buffington, M.L. & **Staniczenko, P.P.A.** (2023). Metabarcoding and applied ecology with hyper-diverse organisms: recommendations for biological control research. [Molecular Ecology](#), 32, 6461–6473
- 2022 19. Fagan, W.F., Swain, A., Banerjee, A., Ranade, H., Thompson, P.R., **Staniczenko, P.P.A.**, Barrett, F., Hungerford, J. & Hurwitz, S. (2022). Quantifying interdependencies in geyser eruptions at the Upper Geyser Basin, Yellowstone National Park. [Journal of Geophysical Research: Solid Earth](#), 127, e2021JB023749
18. Zambrano, J., Arellano, G., Swenson, N.G., **Staniczenko, P.P.A.**, Thompson, J., & Fagan, W.F. (2022). Analyses of three-dimensional species associations reveal departures from neutrality in a tropical forest. [Ecology](#), 103, e3681
- 2021 17. Lue<sup>‡</sup>, C.-H., Buffington, M.L., Scheffer, S., Lewis, M., Elliott, T.A., Lindsey, A.I.R., Driskell, A., Jandova, A., Kimura, M.T., Carton, Y., Kula, R.R., Schlenke, T.A., Mateos, M., Govind, S., Varaldi, J., Guerrieri, E., Giorgini, M., Wang, X., Hoelmer, K., Daane, K.M., Abram, P.K., Pardikes, N.A., Brown, J.J., Thierry, M., Poirié, M., Goldstein, P., Miller, S.E., Tracey, W.D., Davis, J.S., Jiggins, F.M., Wertheim, B., Lewis, O.T., Leips, J., **Staniczenko, P.P.A.** & Hrcek, J. (2021). DROP: Molecular voucher database for identification of *Drosophila* parasitoids. [Molecular Ecology Resources](#), 21, 2437–2454
16. Guy\*, T.J., Hutchinson\*, M.C., Baldock, K.C.R., Kayser, E., Baiser, B., **Staniczenko, P.P.A.**, Goheen, J.R., Pringle, R.M. & Palmer, T.M. (2021). \*Joint first authors. Large herbivores transform plant-pollinator networks in an African savanna. [Current Biology](#), 31, 2964–2971
15. Losapio, G., Schöb, C., **Staniczenko, P.P.A.**, Carrara, F., Palamara, G.M., De Moraes, C.M., Mescher, M.C., Brooker, R.W., Butterfield, B.J., Callaway, R.M., Cavieres, L.A., Kikvidze, Z., Lortie, C.J., Michalet, R., Pugnaire, F.I. & Bascompte, J. (2021). Network motifs involving both competition and facilitation predict biodiversity in alpine plant communities. [Proceedings of the National Academy of Sciences USA](#), 118, e2005759118
- 2020 14. Timm, C.M., Loomis, K., Stone, W., Mehoke, T., Brensinger, B., Pellicore, M., **Staniczenko, P.P.A.**, Charles, C., Nayak, S. & Karig, D. (2020). Isolation and characterization of diverse microbial representatives from the human skin microbiome. [Microbiome](#), 8, 58
13. Thompson, P.R., Fagan, W.F. & **Staniczenko, P.P.A.** (2020). Predictor species: Improving assessments of rare species occurrence by modeling environmental co-responses. [Ecology & Evolution](#), 10, 3293–3304
12. Alexander\*, S.M., **Staniczenko\*, P.P.A.** & Bodin, Ö. (2020). \*Joint first authors. Social ties explain catch portfolios of small-scale fishers in the Caribbean. [Fish & Fisheries](#), 21, 120–131
- 2019 11. Baldock, K.C.R., Goddard, M.A., Hicks, D.M., Kunin, W.E., Mitschunas, N., Morse, H., Osgathorpe, L.M., Potts, S.G., Robertson, K.M., Scott, A.V., **Staniczenko, P.P.A.**, Stone, G.N., Vaughan, I.P. & Memmott, J. (2019). A systems approach reveals urban pollinator hotspots and conservation opportunities. [Nature Ecology & Evolution](#), 3, 363–373
- 2018 10. **Staniczenko, P.P.A.**, Suttle, K.B. & Pearson, R.G. (2018). Negative biotic interactions drive predictions of distributions for species from a grassland community. [Biology Letters](#), 14, 20180426

2017 9. **Staniczenko, P.P.A.**, Lewis, O.T., Tylianakis, J.M., Albrecht, M., Coudrain, V., Klein, A.-M. & Reed-Tsochas, F. Predicting the effect of habitat modification on networks of interacting species. (2017). [Nature Communications](#), 8, 792

8. **Staniczenko, P.P.A.**, Sivasubramaniam, P., Suttle, K.B. & Pearson, R.G. (2017). Linking macroecology and community ecology: Refining predictions of species distributions using biotic interaction networks. [Ecology Letters](#), 20, 693–707

7. Bewick\*, S., **Staniczenko\***, **P.P.A.**, Li, B., Karig, D. & Fagan, W.F. (2017). **\*Joint first authors.** Invasion speeds in microbial systems with toxin production and quorum sensing. [Journal of Theoretical Biology](#), 420, 290–303

2016 6. Caravelli†\*, F. & **Staniczenko\***, **P.P.A.** (2016). **\*Joint first authors.** Bounds on transient instability for complex ecosystems. [PLOS ONE](#), 11, e0157876

2014 5. **Staniczenko, P.P.A.**, Smith, M.J. & Allesina, S. (2014). Selecting food web models using normalized maximum likelihood. [Methods in Ecology & Evolution](#), 5, 551–562

2013 4. **Staniczenko, P.P.A.**, Kopp, J.C. & Allesina, S. (2013). The ghost of nestedness in ecological networks. [Nature Communications](#), 4, 1931

2012 3. De Sassi, C., **Staniczenko, P.P.A.** & Tylianakis, J.M. (2012). Warming and nitrogen affect size structuring and density dependence in a host-parasitoid food web. [Philosophical Transactions of the Royal Society B](#), 367, 3033–3041

2010 2. **Staniczenko, P.P.A.**, Lewis, O.T., Jones, N.S. & Reed-Tsochas, F. (2010). Structural dynamics and robustness of food webs. [Ecology Letters](#), 13, 891–899

2009 1. **Staniczenko, P.P.A.**, Lee, C.-F. & Jones, N.S. (2009). Rapidly detecting disorder in rhythmic biological signals: A spectral entropy measure to identify cardiac arrhythmias. [Physical Review E](#), 79:011915

  

**GRANTS**

2025–2026 **Hudson River Park x Research in the Classroom Grant** PI, \$20k  
Microplastics, microbes, and water waves: Nanopore sequencing and urban environmental sensors for place-based applied ecological research

2025–2027 **National Parks Service Grant** co-PI, \$69k  
Horseshoe Cove Marsh Loss Investigation

2024–2025 **Hudson River Park CUNY Visiting Scholars Award** PI, \$10k  
Wave exposure at Gansevoort Peninsula and implications for the restoration success of the eastern oyster (*Crassostrea virginica*)

**PSC-CUNY Research Award Cycle 55** PI, \$6k  
Measuring the effects of wind-driven waves on wetland erosion and the implications for smooth cordgrass (*Spartina alterniflora*) restoration in Jamaica Bay, NYC

**Tow Research and Creativity Grant** PI, \$2,600  
Phenology and the local stability of plant-pollinator interaction networks

2018 **Santa Fe Institute Working Group** PI, \$20k  
Next-generation ecological network theory and application

2016–2018 **National Socio-Environmental Synthesis Center Fellowship** PI, \$215k  
Predicting the effect of socioeconomic and environmental change on the structure of biotic interactions and the provision of ecosystem services (International Competition)

2014–2015 **British Ecological Society Large Grant** PI, £20k  
How do food webs respond to bottom-up changes driven by habitat modification?

2013–2015 **AXA Postdoctoral Fellowship** PI, €120k  
How accurately can we predict species extinction and reintroduction? Embracing ecological complexity to assess risk in ecosystems (International Competition)

2007–2010 **Doctoral Fellowship** Awarded by the Helsinki University of Technology PI, \$80k  
Computational Complex Systems and Networks Research (International Competition)

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|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| <b>AWARDS</b>      | <b>Tow Mentoring</b> award for undergraduate mentorship at Brooklyn College                                                                           |                                    |
| 2023               | <b>Excellence in Scholarly and Creative Achievement</b> at Brooklyn College                                                                           |                                    |
| 2022               | <b>Tow Mentoring</b> award for undergraduate mentorship at Brooklyn College                                                                           |                                    |
|                    | <b>CUNY STEM Pedagogy Institute Fellowship</b> award to develop innovative approaches to teaching computational methods, \$5k                         |                                    |
| 2021               | <b>Roberta S. Matthews Center for Teaching and Learning Course Development Fellowship</b> award to develop more inclusive undergraduate courses, \$2k |                                    |
|                    | <b>Faculty Fellowship Publication Program (FFPP)</b> award, \$4k                                                                                      |                                    |
|                    | <b>Certificate in Effective Online Teaching Practices</b> from the Association of College and University Educators (ACUE)                             |                                    |
| 2014               | <b>Top Referee in 2014</b> Proceedings of the Royal Society B                                                                                         |                                    |
| 2010               | <b>David Ryan Prize</b> for distinguished work by a graduate student in Physics                                                                       |                                    |
| 2007               | <b>Data Connection Prize</b> for the best use of software in an MPhys Thesis                                                                          |                                    |
| 2006               | <b>Clayman Scholarship</b> to work in quantitative finance in NYC, \$10k                                                                              |                                    |
| <b>SUPERVISION</b> |                                                                                                                                                       |                                    |
| 2026               | <b>Undergraduate project mentor</b> Elijah Harris                                                                                                     | Brooklyn College, CUNY             |
|                    | Staniczenko lab                                                                                                                                       |                                    |
| 2025-PRESENT       | <b>PhD committee</b> Emily Leggat                                                                                                                     | Columbia University                |
|                    | Department of Ecology, Evolution, and Environmental Biology                                                                                           |                                    |
| 2024–2026          | <b>PhD committee</b> Mwihaki John                                                                                                                     | New York Botanical Garden          |
|                    | Plant Sciences                                                                                                                                        |                                    |
| 2024-PRESENT       | <b>PhD committee</b> Jeremy Howland                                                                                                                   | New York Botanical Garden          |
|                    | Plant Sciences                                                                                                                                        |                                    |
|                    | <b>PhD committee</b> Andrew Gaier                                                                                                                     | City College, CUNY                 |
|                    | Ecology, Evolutionary Biology, and Behavior                                                                                                           |                                    |
|                    | <b>PhD committee</b> Taylor Rubin                                                                                                                     | Queens College, CUNY               |
|                    | Ecology, Evolutionary Biology, and Behavior                                                                                                           |                                    |
|                    | <b>PhD committee</b> Sulaimon Lawal                                                                                                                   | Queens College, CUNY               |
|                    | Ecology, Evolutionary Biology, and Behavior                                                                                                           |                                    |
| 2024               | <b>Undergraduate project mentor</b> Ariella Weiner                                                                                                    | Brooklyn College, CUNY             |
|                    | Staniczenko lab                                                                                                                                       |                                    |
| 2023–2025          | <b>Undergraduate project mentor</b> Adelia Honeywood                                                                                                  | Brooklyn College, CUNY             |
|                    | Staniczenko lab                                                                                                                                       |                                    |
| 2023-PRESENT       | <b>PhD supervisor</b> James Herlan                                                                                                                    | City College, CUNY                 |
|                    | Ecology, Evolutionary Biology, and Behavior                                                                                                           |                                    |
| 2023               | <b>Undergraduate project mentor</b> Alex Colasanti                                                                                                    | Brooklyn College, CUNY             |
|                    | Staniczenko lab                                                                                                                                       |                                    |
| 2023–2026          | <b>PhD committee</b> Rhema Uche-Dike                                                                                                                  | American Museum of Natural History |
|                    | Richard Gilder Graduate School                                                                                                                        |                                    |
| 2022               | <b>Undergraduate project mentor</b> Torie Robinson                                                                                                    | Brooklyn College, CUNY             |
|                    | Staniczenko lab                                                                                                                                       |                                    |
| 2021               | <b>Undergraduate project mentor</b> Mitchell Borshch                                                                                                  | Brooklyn College, CUNY             |
|                    | Brooklyn College Cancer Center                                                                                                                        |                                    |
| 2021–2024          | <b>PhD committee</b> Andriele Silva                                                                                                                   | Brooklyn College, CUNY             |
|                    | Biochemistry                                                                                                                                          |                                    |
| 2020–2025          | <b>PhD committee</b> Laura Boggess                                                                                                                    | New York Botanical Garden          |
|                    | Plant Sciences                                                                                                                                        |                                    |

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| 2020–2024       | <b>PhD committee</b> Connor French<br>Ecology, Evolutionary Biology, and Behavior                                  | City College, CUNY                 |
| 2020–PRESENT    | <b>PhD co-supervisor</b> Grégoire Proudhon<br>Department of Entomology                                             | Czech Academy of Sciences          |
| 2020–2023       | <b>PhD committee</b> Erica Johnson<br>Ecology, Evolutionary Biology, and Behavior                                  | City College, CUNY                 |
|                 | <b>PhD committee</b> Aislyn Keyes<br>Ecology and Evolutionary Biology                                              | University of Boulder Colorado     |
| 2020–2022       | <b>Postdoctoral research mentor</b> Chia-Hua Lue<br>Staniczenko lab                                                | Brooklyn College, CUNY             |
| 2020            | <b>Undergraduate project mentor</b> Chrismal Abraham<br>Department of Computer and Information Sciences            | Brooklyn College, CUNY             |
| 2019–2022       | <b>PhD committee</b> Jennifer Zhu<br>Ecology, Evolutionary Biology, and Behavior                                   | Baruch College, CUNY               |
| 2019            | <b>NSF Summer REU mentor</b> Quiana Berry<br>Brooklyn Urban Ecology and Environment (BUEE) Program                 | Brooklyn College, CUNY             |
| 2019–2023       | <b>PhD committee</b> Gonzalo Enrique Pinilla Buitrago<br>Ecology, Evolutionary Biology, and Behavior               | City College, CUNY                 |
| 2018–2022       | <b>PhD committee</b> Humberto Castillo Gonzalez<br>Department of Plant Sciences and Landscape Architecture         | University of Maryland, CP         |
| 2018            | <b>Undergraduate project mentor</b> Peter Thompson<br>Department of Statistics                                     | University of Maryland, CP         |
| 2017            | <b>Undergraduate project mentor</b> Samantha Berman<br>Department of Biology                                       | University of Maryland, CP         |
| 2015            | <b>Undergraduate research intern</b> Elise Damstra<br>Staniczenko lab                                              | University College London          |
| 2014–2015       | <b>PhD project mentor</b> Teresa Attenborough<br>Interdisciplinary Life Sciences                                   | University College London          |
| 2014            | <b>PhD project mentor</b> Andrew Maher<br>Interdisciplinary Life Sciences                                          | University College London          |
| 2013–2014       | <b>Postdoctoral research mentor</b> Francesco Caravelli<br>Staniczenko lab                                         | University College London          |
|                 | <b>Master’s project mentor</b> Sameen Khan<br>Department of Mathematics                                            | University College London          |
| <b>TEACHING</b> | <b>Organizer</b> BIOL7910G: Biology Colloquium<br>Arrange seminar series and mark student summaries of talks       | Brooklyn College, CUNY<br>14 weeks |
| 2020–PRESENT    | <b>Lecturer</b> BIOL3030W: Scientific Writing<br>Communicating science to decision-makers and the public           | Brooklyn College, CUNY<br>14 weeks |
|                 | <b>Lecturer</b> BIOL3083: Principles of Ecology<br>Fundamental Topics in Ecology                                   | Brooklyn College, CUNY<br>14 weeks |
| 2019–PRESENT    | <b>Lecturer</b> BIOL76001: Ecology<br>Fundamental and Contemporary Topics in Ecology                               | Graduate Center, CUNY<br>14 weeks  |
|                 | <b>Lecturer</b> BICM87001: Bioinformatics with practicum<br>Scientific Computing for Biologists (4-week component) | Graduate Center, CUNY<br>14 weeks  |
| 2019–2020       | <b>Lecturer</b> NSF Advanced Training Course<br>Introduction to Social and Ecological Networks Analysis            | SESYNC<br>5 full days              |

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| <b>TEACHING II</b><br>2019<br>2014<br><br>2008–2010<br>2008–2009                                                                               | <b>Lecturer</b> NSF Summer REU<br>Statistics and Scientific Computing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Brooklyn College, CUNY<br>2 half days    |
|                                                                                                                                                | <b>Lecturer</b> NERC Advanced Training Short Course<br>Introduction to Ecological Modelling, Graduate level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | University College London<br>2 full days |
|                                                                                                                                                | <b>Lecturer</b> Workshop on Networks in Ecology<br>Beyond nestedness in ecological networks, Undergraduate level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Umeå University, Sweden<br>2 full days   |
|                                                                                                                                                | <b>Lecturer</b> MSc Integrative Biosciences<br>Quantitative Methods in Biology, Graduate level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | University of Oxford<br>2 full days      |
|                                                                                                                                                | <b>Demonstrator</b> MPhys Physics<br>Introduction to C programming, Undergraduate level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | University of Oxford<br>4 weeks          |
| <b>ACADEMIC<br/>SERVICE</b><br>2023–2024<br>2022–2023<br>2021<br>2020–PRESENT<br>2018–PRESENT<br>2018–2019<br>2014–PRESENT<br><br>2010–PRESENT | <b>Subject-Matter Editor</b> Editorial Board, Ecological Monographs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                          |
|                                                                                                                                                | <b>Reviewer for Ecological Society of America</b> Annual Meeting Session Proposals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                          |
|                                                                                                                                                | <b>Chair</b> (Elected) Theoretical Ecology Section, Ecological Society of America                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                          |
|                                                                                                                                                | <b>Vice-chair</b> (Elected) Theoretical Ecology Section, Ecological Society of America                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                          |
|                                                                                                                                                | <b>Guest Associate Editor</b> PLOS Computational Biology                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                          |
|                                                                                                                                                | <b>Panelist for NSF (USA)</b> Grant proposal review, Division of Environmental Biology                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                          |
|                                                                                                                                                | <b>Recommender/Journal Editor</b> Peer Community in Ecology                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                          |
|                                                                                                                                                | <b>Executive Board</b> Inclusive Ecology Section, Ecological Society of America                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                          |
|                                                                                                                                                | <b>Reviewer for NSERC (Canada)</b> Strategic Projects Program                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                          |
|                                                                                                                                                | <b>Reviewer for NSF (USA)</b> Standard Grant and CAREER Grant                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                          |
|                                                                                                                                                | <b>Reviewer for NERC (UK)</b> Standard Grant and New Investigator Scheme                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                          |
|                                                                                                                                                | <b>Reviewer for over 120 manuscripts across 50 peer-reviewed journals</b><br>Proceedings of the National Academy of Sciences USA, Nature Communications, Nature Ecology & Evolution, Nature Scientific Reports, Science Advances, PLOS Biology, PLOS Computational Biology, PLOS ONE, Proceedings of the Royal Society A, Proceedings of the Royal Society B, Biology Letters, Ecology Letters, Ecology, Ecology & Evolution, Frontiers in Ecology and Evolution, Frontiers in Plant Science, Methods in Ecology & Evolution, Environmental & Ecological Statistics, Theoretical Ecology, Ecological Modelling, Basic & Applied Ecology, Journal of Applied Ecology, Journal of Animal Ecology, Journal of Natural History, Molecular Ecology, Landscape & Urban Planning, Oikos, Global Change Biology, Ecography, Journal of Biogeography, Journal of Forestry Research, Global Ecology & Biogeography, Diversity & Distributions, Biological Conservation, Current Biology, Journal of Theoretical Biology, Theory in Biosciences, Diversity, Complexity, PeerJ, Microbiome, Computer Methods and Programs in Biomedicine, npj Systems Biology and Applications, Nonlinear Dynamics, Physical Review Letters, Physical Review Research, Physical Review E, Physical Review X, PRX Life, Journal of the Royal Society Interface |                                          |

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| <b>INSTITUTIONAL SERVICE</b> | <b>Biology Program Nominations Committee</b>                                             | Graduate Center, CUNY      |
|                              | <b>EEB and Plant Sciences Strategy Committee</b>                                         | Graduate Center, CUNY      |
|                              | <b>2019–PRESENT EEB Steering Committee</b>                                               | Graduate Center, CUNY      |
|                              | <b>2020–2023 Chair, Committee on Review of Student Records</b>                           | Brooklyn College, CUNY     |
|                              | <b>University Faculty Council</b>                                                        | Brooklyn College, CUNY     |
|                              | <b>2019–2020 Committee on Review of Student Records</b>                                  | Brooklyn College, CUNY     |
|                              | <b>University Faculty Senate</b>                                                         | CUNY                       |
|                              | <b>2019 NSF Summer REU Selection Committee</b>                                           | Brooklyn College, CUNY     |
|                              | <b>2018–2022 Special Member of the Graduate Faculty</b>                                  | University of Maryland, CP |
|                              | Department of Plant Science and Landscape Architecture                                   |                            |
|                              | <b>2017–2019 Equity, Diversity &amp; Inclusion Committee</b>                             | University of Maryland, CP |
|                              | Representative for faculty (Elected)                                                     |                            |
| <b>OUTREACH</b>              | <b>Mentoring Sub-Committee Chair</b>                                                     | University of Maryland, CP |
|                              | Designed a new Individual Development Plan for postdoctoral researchers                  |                            |
|                              | <b>University Senate</b>                                                                 | University of Maryland, CP |
|                              | Representative for postdoctoral researchers (Elected twice)                              |                            |
|                              | <b>2004–2005 Physics Joint Consultative Committee</b>                                    | University of Oxford       |
|                              | Undergraduate representative (Elected)                                                   |                            |
|                              | <b>Presenter</b> Release of the Fishes, Pier 40, Hudson River Park, NY                   | 23 October 2024            |
|                              | Staniczenko lab research stall                                                           |                            |
|                              | <b>Speaker</b> Ask-a-Scientist, Pier 57, Hudson River Park, NY                           | 3 October 2024             |
|                              | Conversation on research with the general public                                         |                            |
|                              | <b>Educational Video</b> National Socio-Environmental Synthesis Center                   | Winter 2020                |
|                              | Writer, producer, and presenter of <a href="#">“Introduction to Ecological Networks”</a> |                            |
|                              | <b>Panelist</b> Postdoctoral Research Symposium, MD                                      | 13 Sept 2019               |
|                              | Session on Transitioning to a Faculty Position                                           |                            |
|                              | <b>Panel Moderator</b> Postdoctoral Research Symposium, MD                               | 17 Sept 2018               |
|                              | Session on Transitioning to a Faculty Position                                           |                            |
|                              | <b>Planning Committee</b> Graduate Career Pathways Conference, MD                        | 20 April 2018              |
|                              | Organised session on environmental policy, NGOs, and conservation                        |                            |
|                              | <b>Judge</b> Graduate Research Appreciation Day, University of Maryland                  | 4 April 2018               |
|                              | <b>Judge</b> Graduate Research Appreciation Day, University of Maryland                  | 5 April 2017               |
|                              | <b>Exhibition Curator</b> Transforming Space, Denys Wilkinson Building                   | 7–9 May 2009               |
|                              | <b>Workshop Organiser</b> Process in Physics and Art, Oxford                             | 12 Feb 2009                |
|                              | <b>Highschool Mentor</b> Maths, ages 10–12, Cherwell School, Oxford                      | 2008                       |
|                              |                                                                                          |                            |

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| <b>TALKS</b>    |                                                                                                                                                                                                                                                                    |
| <b>*INVITED</b> |                                                                                                                                                                                                                                                                    |
| 2026            | 40. *Phenology, Interaction Timing and Forecasting Novel Community Dynamics. On-line presentation to entomology graduate students, 21 July 2026, University of Georgia, GA                                                                                         |
|                 | 39. *Phenology, Interaction Timing and Forecasting Novel Community Dynamics. Plenary Speaker, Gordon Research Conference on Unifying Ecology Across Scales, 15 July 2026, Stonehill College, MA                                                                    |
| 2025            | 38. *Complex networks and social-ecological systems. CUNY Climate Scholars Didactic, 10 Dec 2025, Zoom                                                                                                                                                             |
| 2024            | 37. *Time: the final frontier of ecological networks. Symposium Speaker, Physics of Life, along the Northeast Corridor, 25 Oct 2024, CUNY Graduate Center, NY                                                                                                      |
| 2023            | 36. *Ecological networks—Mapping the tangled bank. MasterClass, three two-hour lectures and two two-hour computing practicals, 5–7 June 2023, Centre for Complex Systems Studies, Utrecht University, Netherlands                                                  |
| 2022            | 35. *Integrating Empirical and Theoretical Approaches in Mutualistic Networks. Session moderator. Ecological Society of American Annual Meeting, 18 Aug 2022, Montreal, Canada                                                                                     |
|                 | 34. *Predictive community ecology: putting networks to work. Departmental Seminar, 23 March 2022, Department of Biology, Queens College, City University of New York, NY                                                                                           |
| 2021            | 33. *Decolonizing a traditional lecture-based course in ecology—my in-progress attempt. Seminar, 7 Oct 2021, Center for Teaching and Learning, Brooklyn College, City University of New York, NY                                                                   |
| 2020            | 32. *Predictive community ecology: putting networks to work. Departmental Seminar, 5 Feb 2020, Department of Ecology & Evolution, Stony Brook University, NY                                                                                                       |
| 2019            | 31. Reckless Ideas in Ecological Networks. Symposium Organiser and Speaker, 9–10 May 2019, The Center for the Study of Complex Systems, University of Michigan, MI                                                                                                 |
|                 | 30. *Predictive community ecology: putting networks to work. Departmental Seminar, 11 March 2019, Department of Biology, City College, City University of New York, NY                                                                                             |
|                 | 29. *Predictive community ecology: putting networks to work. Session on Ecology, Evolutionary Biology, and Behavior, 14 Feb 2019, American Museum of Natural History, NY                                                                                           |
| 2018            | 28. Modelling interaction frequencies and preferences in <i>Drosophila</i> -parasitoid communities using networks. Entomological Society of America Annual Meeting, 14 Nov 2018, Vancouver, Canada                                                                 |
|                 | 27. Predicting the effect of habitat modification on networks of interacting species. Ecological Society of America Annual Meeting, 8 Aug 2018, New Orleans, LA                                                                                                    |
|                 | 26. *Predicting shifts in insect feeding interactions following deforestation. Departmental Seminar, 2 March 2018, Department of Entomology, University of Maryland, College Park, MD                                                                              |
| 2017            | 25. Multilayer conjugation networks. Presentation to United States Department of Defence, 21 Nov 2017, The Johns Hopkins Applied Physics Laboratory, Laurel, MD                                                                                                    |
|                 | 24. *Predictive community ecology: putting networks to work. Departmental Seminar, 9 Nov 2017, Center for Conservation Biology, Stanford University, CA                                                                                                            |
|                 | 23. *Networks and ecology. Departmental Seminar, 1 Sept 2017, Computation and Mathematics for Biological Networks Program, University of Maryland, College Park, MD                                                                                                |
|                 | 22. *Refining predictions of species distributions using biotic interaction networks. Workshop, Novel Methods for Modelling Complex Dynamic Ecological Systems, 21 Aug 2017, Centre for Biodiversity and Conservation Science, University of Queensland, Australia |

- 2017 21. \*Revealing the Causes and Consequences of Interaction Complexity using Gradient-Based Ecological Networks. Session moderator. Ecological Society of America Annual Meeting, 10 Aug 2017, Portland, OR
- 2016 20. Refining predictions of species distributions using biotic interaction networks. Ecological Society of America Annual Meeting, 7 Aug 2017, Portland, OR
19. \*Predicting weighted ecological networks in human-modified habitats. Departmental Seminar, 11 Nov 2016, Department of Biological Sciences, University of Maryland Baltimore County, MD
18. Invasion speeds in microbial systems. Presentation to United States Department of Defence, 1 Nov 2016, The Johns Hopkins Applied Physics Laboratory, Laurel, MD
- 2015 17. \*How will social and environmental change impact ecological communities and ecosystem services? Departmental Seminar, 18 Nov 2015, National Socio-Environmental Synthesis Center, Annapolis, MD
16. \*Predicting weighted ecological networks in human-modified habitats. Departmental Seminar, 20 Oct 2015, CABDyN Complexity Centre, Saïd Business School, University of Oxford, UK
15. Bounds on transient instability for complex ecosystems. Data Natives Meeting 2015, 15 May 2015, City University London, UK
14. \*Predicting weighted ecological networks in modified environments. Departmental Seminar, 27 March 2015, London Institute of Mathematical Sciences, UK
13. \*Reallocation of trophic interactions and the predictability of parasitoid-host food web structure in modified habitats. Departmental Seminar, 5 March 2015, School of Biological Sciences, University of Canterbury, Christchurch, New Zealand
- 2014 12. \*Food webs and bipartite networks. Workshop on Grand Challenges in Ecosystems and the Environment: Networks in Ecology and Evolution, 14 July 2014, Silwood Park, Imperial College London, UK
11. \*Ecosystem services and the limits of our predictive capability. AXA Pop Day, 21 June 2014, AXA Headquarters, Paris, France
10. \*Beyond nestedness: Using directed acyclic graphs to model bipartite matrices and networks. Workshop on Networks in Ecology, 20 May 2014, Umeå University, Sweden
9. Robustness of plant-pollinator communities in four UK cities. Meeting on Urban Pollination, 28 April 2014, Department of Biological Sciences, University of Bristol, UK
8. Ecological networks: There's method in the madness. Departmental Seminar, 3 Feb 2014, Centre for Biodiversity and Environment Research, University College London, UK
- 2013 7. \*The ghost of nestedness in ecological networks. Complexity Seminar Series, 5 Nov 2013, Keble College, University of Oxford, UK
6. \*Modelling and measuring progress in complex systems using directed acyclic graphs. Departmental Seminar, 24 Oct 2013, Institute for New Economic Thinking, University of Oxford, UK
5. \*The ghost of nestedness in ecological networks. Departmental Seminar, 25 Feb 2013, Department of Genetics, Evolution and Environment, University College London, UK
- 2011 4. A Bayesian framework for predicting quantitative food-web structure using species traits. Ecological Society of America Annual Meeting, 10 Aug 2011, Austin, TX
- 2010 3. Structural dynamics and robustness of food webs. British Ecological Society Annual Meeting 2010, 7 Sept 2010, Leeds, UK
- 2009 2. Local trophic adaptation requires a new approach to ecosystem robustness. NetSci '09 International Conference on Networks, 2 July 2009, Venice, Italy

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| 2009            | 1. An entropy-based algorithm to rapidly detect cardiac arrhythmias. Poster presentation. Houses of Parliament, 9 March 2009, London, UK |                                           |
| <b>VISITS</b>   |                                                                                                                                          |                                           |
| 2017            | Professor Berry Brosi<br>Predicting plant-pollinator networks                                                                            | Stanford University                       |
| 2015            | Professor Jason Tylianakis<br>Predicting host-parasitoid networks                                                                        | University of Canterbury, New Zealand     |
| 2009            | Professor Brian Uzzi<br>Robustness of ecological networks                                                                                | Northwestern Institute on Complex Systems |
|                 | Professor Jennifer Dunne<br>Food webs with trophic adaptation                                                                            | Santa Fe Institute                        |
| 2004            | Professor Robert Jahn<br>Financial market models                                                                                         | Princeton University                      |
| <b>INDUSTRY</b> |                                                                                                                                          |                                           |
| 2007            | <b>23red</b> Brand Communications Agency<br>Consultant on a public sector advertising project                                            | London, UK<br>One week                    |
|                 | <b>Nomura Investment Bank</b> Global Markets<br>Consultant in convertible bonds sales and research                                       | London, UK<br>Three months                |
| 2006            | <b>New Amsterdam Partners</b> Asset Management<br>Intern in quantitative research and portfolio management                               | New York City, USA<br>Three months        |
| 2005            | <b>JP Morgan Investment Bank</b> Global Markets<br>Intern in equity research, semiconductor and oil & gas industries                     | London, UK<br>Three months                |