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Gahan Professor & Department Chair of Entomology
University of Maryland, College Park

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EDUCATION

2009 Ph.D. University of Texas at Austin. *Ecology, Evolution, & Behavior*.

2002 B.S. University of Arizona. *Ecology & Evolutionary Biology*.

APPOINTMENTS

University of Maryland, College Park

2024-present James B. Gahan and Margaret H. Gahan Professor
Department Chair
Department of Entomology

Okinawa Institute of Science and Technology Graduate University

2023 - 2024 Dean of Faculty Affairs
2019 - 2022 Associate Ombudsperson

Principal Investigator of the *Biodiversity and Biocomplexity Unit*

2024- present Adjunct Professor
2020 - 2024 Professor
2012 - 2020 Assistant Professor
2011 - 2012 Visiting Assistant Professor

Harvard University

2021 - 2022 Mary I. Bunting Fellow, Radcliffe Institute for Advanced Study

University of Michigan

2012 - 2017 Visiting Assistant Prof., Dept. of Ecology and Evolutionary Bio., Museum of Zoology
2009 - 2012 Postdoctoral Fellow - Michigan Society of Fellows
Assistant Prof. (non tenure-track)- Dept. of Ecology and Evolutionary Biology

PUBLICATIONS

Book

Sarnat, E., **Economo, E.P.** (2012) *The Ants of Fiji*. University of California Press.

Preprints

Brannoch, S.K., Katzke, J., Taylor, D.S., **Economo, E.P.**, Ogawa, Y., Narendra, A., Svenson, G.J., Martin, J. (2024) A new leaf sensing organ in a predatory insect group, the praying mantises. *bioRxiv*.

Eliash, N. Tetsuya, E., Johnston, S.J., Techer, M.A., Holmes, V.R., Rangel, J., **Economo, E.P.**, Mikheyev, A.S. (2024) Varroa mites escape the evolutionary trap of haplodiploidy. *bioRxiv*.

Warren, D.L., Kass, J.M., **Economo, E.P.** (2022) Randomization analyses in niche and distribution modeling. *EcoEvoRxiv*.

Warren, D.L., Kass, J.M., Casadei-Ferreira, A., **Economo, E.P.** (2022) Incorporating sampling bias into permutation tests for niche and distribution models. *bioRxiv*.

Published | In Press

146. Casadei-Ferreira A., Camacho, G.P., Franco, W., Lattke, J.E., Feitosa, R.M., **Economo, E.P.** (*In Press*) Evolution and functional implications of stinger shape in ants. *Evolution*.
145. Ambakina, H., Gomez, K., Guénard, B., **Economo, E.P.**, Monzenga, J., Dekoninck, W. (*In Press*) Overview of myrmecological studies and a checklist of the ants (Hymenoptera: Formicidae) of the Democratic Republic of Congo. *Biodiversity Data Journal*.
144. Hita Garcia, F., Gomez, K., Keller, R.A., Schurian, B., **Economo, E.P.** (*In Press*). There and back again: an updated 3D cyber-taxonomic revision of the ant genus *Zasphinctus* Wheeler (Hymenoptera, Formicidae, Dorylinae) for the Afrotropical region. *Zookeys*.
143. Kalarikkal, R.K., Park, H., Georgiadis, C., Guénard, B., **Economo, E.P.**, Kim, Y. (2024) Current and future distribution of the *Cataglyphis* ant genus in the Middle East and North Africa. *Diversity* 16: 563.
142. Gautam, S., McKenzie, S., Katzke, J., Hita Garcia, F., Yamamoto, S., **Economo, E.P.** (2024) Evolution of odorant receptor number across major Hymenopteran lineages is not driven by eusociality. *Proceedings of the Royal Society Series B* 291: 20241280.
141. Liu, D., Essl, F., Lenzner, B., Moser, D., Semenchuk, P., Blackburn, T.M., Cassey, P., Biancolini, D., Capinha, C., Dawson, W., Dyer, E., Guénard, B., **Economo, E.P.**, Kreft, H., Pergl, J., Pyšek, P., van Kleunen, M., Nentwig, W., Rondinini, C., Seebens, H., Weigelt, P., Winter, M., Purvis, A., Newbold, T., Dullinger, S. (2024) Regional invasion history and land use shape the prevalence of non-native species in local assemblages. *Global Change Biology* 30: e17426.

140. Opher, M., Loeb, A., Zucker, C., Goodman, A., Konietzka, R., Alves, J., Worden, A., **Economo, E.P.**, Miller, J., Kornbleuth, M., Peek, J. (2024) The passage of solar system through the local bubble. *The Astrophysical Journal* 972: 201.
139. Andrade-Silva, J., Baccaro, F.B., Prado, L.P., Guénard, B., Kass, J.M., Warren, D.L., **Economo, E.P.**, Silva, R.R. (2024) Common ant species take morphospace: unraveling the morphological diversity in the Brazilian Amazon Basin. *Ecography*: e07121.
138. Wang, R., Chaudhary, C., Kass, J.M., **Economo, E.P.**, Guénard, B. (2024) Global phylogenetic regions of ants reveal the strong congruence between zoogeographic and phytogeographic structure. *Nature Communications* 15: 5641.
137. Frank, E., Buffat, D., Liberti, J., Aibekova, L., **Economo, E.P.**, Keller, L. (2024) Wound-dependent leg amputations to combat infections in an ant society. *Current Biology* 34: 3273-3278.
136. Suzuki, Y., **Economo, E.P.** (2024) The stability of competitive metacommunities is insensitive to dispersal connectivity in a fluctuating environment. *The American Naturalist* 203: 668-680.
135. Ross, S.R.P.J., Friedman, N.R., Dudley, K.L., Yoshida, T., Yoshimura, M., **Economo, E.P.**, Armitage, D.W., Donohue, I. (2024) Divergent ecological responses to typhoon disturbance revealed via landscape-scale acoustic monitoring. *Global Change Biology* 30: e17067.
134. Frank, E.T., Kesner, L., Liberti, J., Helleu, Q., LeBoeuf, A., Dascalu, A., Milutinovic, B., Azuma, F., **Economo, E.P.**, Waridel, P., Engel, P., Schmitt, T., Keller, L. (2023) Infection signaling and antimicrobial wound care in a predatory ant. *Nature Communications* 14: 8446.
133. Griebenow, Z., Richter, A., Fischer, G., van de Kamp, T., **Economo, E.P.**, Lieberman, Z. (2023) Comparative morphology of male genital skeletomusculature in the Leptanillinae (Hymenoptera: Formicidae), with a standardized muscular terminology for the male genitalia of Hymenoptera. *Arthropod Systematics and Phylogeny* 81: 945-1018.
132. Demetriou, J., Georgiadis, C., Martinou, A.F., Roy, H., Wetterer, J.K., Borowiec, L., **Economo, E.P.**, Triantis, K., Salata, S. (2023) Running rampant: the alien ants (Hymenoptera: Formicidae) of Cyprus. *Neobiota* 88: 17-73.
131. Kass, J.M., Yoshimura, M., Ogasawara, M., Suwabe, M., Hita Garcia, F., Fischer, G. Dudley, K.L., Donohue, I., **Economo, E.P.** (2023) Breakdown of ant community seasonal patterns over a land cover gradient. *Proceedings of the Royal Society B* 290: 20231185
130. Richter, A., **Economo, E.P.** (2023) The feeding apparatus of ants: An overview of structure and function. *Philosophical Transactions of the Royal Society B* 378: 20220556.
129. Toulkeridou, E., Gutierrez, C. E., Baum, D., Doya, K.*, **Economo, E.P.*** (2023) Automated segmentation of insect anatomy from micro-CT images using deep learning. *Natural Sciences* 3: e20230010 *joint last author
128. Nathan, P, **Economo, E.P.**, Guénard, B.P, Simonsen, A., Fredrickson, M.E. (2023) Generalized mutualisms promote range expansion in both plant and ant partners. *Proceedings of the Royal Society B* 290: 20231083.
127. Luo, Y., Taylor, A., Weigelt, P., Guénard, B., **Economo, E.P.**, Nowak, A. Inderjit, Kreft, H. (2023) Climate and ant diversity explain the global distribution of ant-plant mutualisms. *Ecography* 11: e06841.

126. 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., Staniczenko, P., Hickerson, M.J. (2023) Global determinants of the distribution of insect mitochondrial diversity. *Nature Communications* 15: 5276.
125. Li, Z., Azuma, F., Bachmann, V., Frank, E., Oliveira-Honorato, T., Parker, D.J., **Economo, E.P.**, Ulrich, Y. (2023) Behavioural individuality determines infection risk in clonal ant colonies. *Nature Communications* 14: 5233.
124. Aibekova, L., Keller, R., Katzke, J., Allman, D.M., Hita-Garcia, F., Labonte, D., Narendra, A **Economo, E.P.** (2023) Parallel and divergent morphological adaptations for jumping in ants. *Integrative Organismal Biology* 5: obad026.
123. Khalife, A., Billen, J., **Economo, E.P.** (2023) Evidence of a thoracic crop in workers, soldiers and queens of *Carebara perpussilla* ants (Formicidae: Myrmicinae). *The Science of Nature* 110: 36
122. Dinets, V., Friedman, N.R., Ogasawara, M., Yoshimura, M., Preble, J.H., and **Economo, E.P.** (2023) Impacts on bats by a supertyphoon vs. ordinary typhoons along a habitat urbanization gradient. *Research in Ecology* 5: 14-27.
121. Wang, C., Chung, F., Lin, C., Katzke, J., **Economo, E.P.**, Billen, J. (2023) Morphology of the metapleural gland and its associated novel atrial cone gland in *Strumigenys* ants. *Micron* 171: 103463
120. Liu, D., Essl, F., Lenzner, B., Moser, D., Blackburn, T.M., Cassey, P., Biancolini, D., Capinha, C., Dawson, W., Dyer, E.E., Guénard, B., **Economo, E.P.**, Krefl, H., Pergl, J., Pyšek, P., van Kleunen, M., Nentwig, W., Rondinini, C., Seebens, H., Semenchuk, P., Weigelt, P., Winter, M., Dullinger, S. (2023) The impact of land use on alien species incidence and richness in local assemblages worldwide. *Nature Communications* 14: 2090.
119. Wong, M., **Economo, E.P.**, Guénard, B.G. (2023) The global spread and invasion capacities of alien ants. *Current Biology* 33: 566-571.
118. Liu, C., **Economo, E.P.**, Guénard, B.G. (2023) GABI-I: The global ant biodiversity informatics-island database. *Ecology* 104: e3969.
117. Richter, A., Boudinot, B., Hita Garcia, F., Billen, J., **Economo, E.P.**, Beutel, R.G. (2023) Wonderfully weird: The head anatomy of the armadillo ant *Tatuidris tatusia* (Formicidae: Agroecomyrmecinae). *Myrmecological News* 33: 35-75.
116. Wang, R., Kass, J.M., Galkowski, C., Garcia, F., Hamer, M.T., Radchenko, A., Salata, S.D., Schifani, E., Yusupov, Z.M., **Economo, E.P.**, Guénard, B. (2023) Geographic and climatic constraints on bioregionalization of European ants. *J. of Biogeography* 503-514.
115. Overcast, I., Achaz, G., Aguilée, R., Andújar, C., Arribas, P., Creedy, T.J., **Economo E.P.**, Etienne, R., Gillespie, R., Jacquet, C., Jay, F., Kennedy, S., Krehenwinkel, H., Lambert A., Meramveliotakis E., Nogueras, V., Perez-Lamarque, B., Roderick, G., Rogers, H., Ruffley, M., Sanmartin, I., Vogler, A.P., Papadopoulou, A., Emerson, B.C., Morlon, H. (2022) Genetic Theory of Island Biogeography: Inferring Processes from Multi-Dimensional Community-Scale Data. *Global Ecology and Biogeography* 32: 4-23.

114. Emerson, B.C., Borges, P.A.V., Cardoso, P., Convey, P., deWaard, J.R., **Economo, E.P.**, Gillespie, R., Kennedy, S., Krehenwinkel, H., Meier, R., Roderick, G., Strasberg, D., Thébaud, C., Traveset, A., Creedy, T.J., Meramveliotakis, E., Noguerales, V., Overcast, I., Morlon, H., Papadopoulou, A., Vogler, A.P., Arribas, P., Andújar, C. (2022) Collective and harmonised high-throughput barcoding of insular arthropod biodiversity: toward a Genomic Observatories Network for islands. *Molecular Ecology*.
113. Liu, C., Fischer, G., Liu, Q., Peng, Y.Q., **Economo, E.P.**, Guénard, B. (2022) Updating the taxonomy of the ant genus *Myrmecina* (Hymenoptera, Formicidae) in China with descriptions of four new species. *Zootaxa* 5182: 152-164.
112. Wepfer, P., Nakajima, Y., **Economo, E.P.**[†], Mitarai, S.[†] (2022) The oceanographic isolation of the Ogasawara Islands and genetic divergence in a reef-building coral. *J. of Biogeography* 49: 1978-1990. [†]joint last authors
111. Wang, W., Soh, E.J.Y., Yong, G.W.J., Wong, M.K.L., Guénard, B.G., **Economo, E.P.**, Yamane, S. (2022) Remarkable diversity in a little red dot: a comprehensive checklist of known ant species in Singapore (Hymenoptera: Formicidae) with notes on ecology and taxonomy. *Asian Myrmecology* 15: 015006.
110. Kennedy, S., Calaor, J. Hans, J., Zurápiti, Y., Yoshimura, M., Choo, J., Andersen, J., Callagan, J., Roderick, G.K., Krehenwinkel, H.[†], Rogers, H.[†], Gillespie[†], R.G., **Economo, E.P.**[†] (2022) Richness and resilience in the Pacific: DNA metabarcoding enables parallelized evaluation of biogeographic patterns. *Molecular Ecology*. [†]joint last authors
109. Kass, J.*., Guénard, B., Dudley, K., Jenkins, C.N., Azuma, F., Fisher, B.L., Parr, C.L., Gibb, H., Longino, J.T., Ward, P.S., Chao, A., Lubertazzi, D., Weiser, M., Jetz, W., Guralnick, R., Blatrix, R., Des Lauriers, J., Donoso, D., Georgiadis, C., Gomez, K., Hawkes, P., Johnson, R.A., Lattke, J., MacGown, J.A., Mackay, W., Robson, S., Sanders, N., Dunn, R.R., **Economo, E.P.*** (2022) The global distribution of known and undiscovered ant biodiversity. *Science Advances* 8: eabp9908. *corresponding
108. Arribas, P. Andújar, C., Bohmann, K., deWaard, J., **Economo, E.P.**, Elbrecht, V., Geisen, S., Goberna, M., Krehenwinkel, H., Novotny, V., Zinger, L., Creedy, T.J., Emmanouil Meramveliotakis, E., Noguerales, V., Overcast, I., Morlon, H., Papadopoulou, A., Vogler, A.P., Emerson, B.C. (2022) Toward global integration of biodiversity big data: a harmonised metabarcode data generation module for terrestrial arthropods. *GigaScience* 11: 1-12.
107. Parker, E., Jones, C., **Economo, E.P.**, Zapfe, K.L. Federman, S., Near, T.J. Dornburg, A. (2022) Periodic environmental disturbance drives repeated ecomorphological diversification in an adaptive radiation of Antarctic fishes. *The American Naturalist*.
106. Khalife, A., Peeters, C., **Economo, E.P.** (2022) Minute workers and large soldiers in the subterranean ant *Carebara perpusilla*: functional consequences of muscle allometry in the thorax. *Arthropod Structure & Development* 69: 101188.
105. Andrade-Silva, J., Baccaro, F.B., Prado, L.P., Warren, D.L., Kass, J., Guenard, B., **Economo, E.P.**, Silva, R.R. (2022) A large-scale assessment of ant diversity across the Brazilian Amazon Basin: integrating geographic, ecological, and morphological drivers of sampling bias. *Ecography* 16: e0695.

104. Gómez, K., Kouakou, L., Fischer, G., Hita-García, F., Katzke, J., **Economo, E.P.** (2022) *Pheidole klaman* sp. n.: A new addition from Ivory Coast to the Afrotropical *pulchella* species group (Hymenoptera: Formicidae: Myrmicinae). *Zookeys* 1104: 129-157.
103. Aibekova, L., Boudinot, B. E., Beutel, R.G., Richter, A., Keller, R.A., Hita Garcia, F., **Economo, E.P.** (2022) The skeletomuscular system of workers of the generalized ant genus *Formica* (Formicidae). *Insect Systematics and Diversity* 6: 2.
102. La Richelière, F., Dunn, R., **Economo, E.P.**, Guénard, B., Sanders, N., Weiser, M., Abouheif, E., Lessard, J.P. (2022) Warm and arid regions of the world are hotspots of social complexity. *Proceedings of the Royal Society: B*. 289: 20211899.
101. Katzke, J. Puchenkov, P., Stark, H., **Economo, E.P.** (2022) A roadmap to reconstructing muscle architecture from CT data. *Integrative Organismal Biology* 4: obac001.
100. Takashina, N., Jenkins, C., Planck, M., **Economo, E.P.** (2022) Species-range size distributions: integrating the effects of speciation, transformation, and extinction. *Ecology and Evolution* 12: e8341.
99. Boudinot, B., Richter, A., Katzke, J., Keller, R., **Economo, E.P.**, Beutel, R., Yamamoto, S. (2022) Evidence for the evolution of eusociality in stem ants and a systematic revision of †*Gerontofornica* (Hymenoptera, Formicidae). *Zoological Journal of the Linnean Society* 195: 1355-1389.
98. Beutel, R., Friedrich, F., **Economo, E.P.** (2022) Patterns of morphological simplification and innovation in the megadiverse Holometabola (Insecta). *Cladistics* 38: 227-245.
97. Silva, R....(203 authors including **Economo, E.P.**)...Ribiero, M.A. (2021) ATLANTIC ANTS: a dataset of ants in Atlantic Forests of South America. *Ecology* 103: e03580.
96. Klunk, C.L., Argenta, M.A., Casadei-Ferreira, A., **Economo, E.P.**, Pie, M.R. (2021) Mandibular morphology, task specialization, and bite mechanics in *Pheidole* ants (Hymenoptera: Formicidae). *Journal of the Royal Society Interface* 18: 20210318.
95. Richter, A., Keller, R. A., Hita Garcia, F., Billen, J., Katzke, J., Boudinot, B. E., **Economo, E.P.***, Beutel, R.G.* (2021) Head anatomy of *Protanilla lini* (Leptanillinae, Formicidae, Hymenoptera) and a hypothesis of their mandibular movement. *Myrmecological News* 31: 85-114. *joint supervision
94. Casadei-Ferreira, A., Friedman, N.R., **Economo, E.P.**, Pie, M.R., Feitosa, R.M. (2021) Head and mandible shapes are highly integrated yet represent two distinct modules within and among worker sub-castes of the ant genus *Pheidole*. *Ecology & Evolution* 11: 6104-6118.
93. Booher, D., Gibson, J., Liu, C., Longino, J.T., Fisher, B.L., Janda, M., Narula, N., Toulkeridou, E., Mikheyev, A.S., Suarez, A., **Economo, E.P.** (2021) Functional innovation promotes diversification of form in the evolution of an ultrafast trap-jaw mechanism in ants. *PLoS Biology* 19: e3001031.
92. Suzuki, Y., **Economo, E.P.** (2021) Dispersal network topology and spatial environmental autocorrelation mediate the balance of species sorting and mass effects in metacommunities. *Ecography* 44: 1-12.

91. Rosas-Mejia, M. Guénard, B. Aguilar-Méndez, M.J., Ghilardi, A., Vásquez-Bolaños, M., **Economo, E.P.**, Janda, M. (2021) Introduced ants (Formicidae: Hymenoptera) in Mexico – the first database of records. *Biological Invasions* 23: 1669-1680.
90. Ross, S.R.P.-J., Friedman, N.R., Yoshimura, M., Yoshida, T., Donohue, I., **Economo, E.P.** (2021) Utility of acoustic indices for ecological monitoring in complex sonic environments. *Ecological Indicators* 121: 107114.
89. Takashina, N., **Economo, E.P.** (2020) Developing generalized sampling schemes with known error properties: the case of a moving observer. *Ecography* 43: 1-14.
88. Casadei-Ferreira, A., **Economo, E.P.**, Feitosa, R.M. (2020) Revisions to the *Pheidole* (Hymenoptera, Formicidae) fauna of the Brazilian southern grasslands. *Revista Brasileira de Entomologia* 64: e20200068.
87. Peeters, C., Keller, R.A., Fischer, G., Khalife, A., **Economo, E.P.** (2020) The evolutionary loss of flight enabled the remarkable strength of ant workers. *Frontiers in Zoology* 17: 33.
86. Liu, C., Fischer, G., Hita Garcia, F., Yamane, S., Liu, Q., Peng, Y.Q., **Economo, E.P.**, Guénard, B., Pierce, N. E. (2020) Ants of the Hengduan mountains: a new altitudinal survey and updated checklist for Yunnan Province highlight an understudied insect biodiversity hotspot. *ZooKeys* 978: 1-171.
85. Dias, R.K.S., Guénard, B., **Economo, E.P.**, Akbar, S.A., Udayakantha, W.S., Wachkoo, A.A.A. (2020). The Ants (Hymenoptera: Formicidae) of Sri Lanka: A taxonomic research summary and updated checklist. *ZooKeys* 967: 1-142.
84. Dinets, V., Friedman, N., Yoshimura, M., Ogasawara, M., **Economo, E.P.** (2020) Acoustic detection of an unknown bat species in Okinawa. *Mammal Study* 45: 1-4.
83. Casadei-Ferreira, A., Fischer, G., **Economo, E.P.** (2020) Evidence for a thoracic crop in the workers of some *Pheidole* species (Formicidae: Myrmicinae). *Arthropod Structure & Development* 59: 100977.
82. Fischer, G., Friedman, N.R., Huang, J.P., Knowles, L.L., Mikheyev, A.S., Fisher, B.L., **Economo, E.P.** (2020) Socially parasitic ants evolve a mosaic of host-matching and parasitic morphological traits. *Current Biology* 30: 1-8.
81. Wepfer, P., Nakajima, Y., Radice, V., Toonen, R., Richards, Z., Ang, P., Sutthacheep, M., Chen, A., Sudek, M., Fujimura, A., Mikheyev, A.S., **Economo, E.P.***, Mitarai, S.* (2020) Evolutionary biogeography of the coral genus *Galaxea* across the Indo-Pacific ocean. *Molecular Phylogenetics and Evolution* 151: 106905. *co-last author
80. Friedman, N.R., Lecroq-Bennett, B., Fischer, G., Sarnat, E.M., Huang, J.P., Knowles, L.L., **Economo, E.P.** (2020) Macroevolutionary integration and modularity of phenotypes within and across ant worker castes. *Ecology and Evolution* 10: 9371-9383.
79. Aoyama, Y., Yoshimura, M., Ogasawara, M., Suwabe M., **Economo E.P.** (2020) Potential economic impacts of invasion of the red imported fire ant in Okinawa, Japan. *Japanese Journal of Ecology* 70: 3-14. DOI: https://doi.org/10.18960/seitai.70.1_3 [in Japanese, original citation: 青山 夕貴子, 吉村 正志, 小笠原 昌子, 諏訪部 真友子, エコノモ P. エヴァン (2020) 沖縄県におけるヒアリの侵入・蔓延時に推定される経済的損失. 日本生態学会誌 70: 3-14.]

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76. Beutel, R.G., Richter, A., Keller, R., Hita Garcia, F., Matsumura, Y., **Economo, E.P.**, Gorb, S.N. (2020). Distal leg structures of the Aculeata (Hymenoptera): a comparative evolutionary study of *Sceliphron* (Sphecidae) and *Formica* (Formicidae). *Journal of Morphology* 281: 737-753.
75. Liu, C., Sarnat, E.M., Friedman, N., Hita Garcia, F., Booher, D., Mikheyev, A., **Economo, E.P.** (2020). Colonize, radiate, decline: unraveling the dynamics of island community assembly with Fijian trap-jaw ants. *Evolution* 74: 1082-1097.
74. Yoshimura, M., Suwabe, M., Ikeda, T., Ogasawara, M., **Economo, E.P.** (2020) Development and Implementation of a workshop on alien species and Red Imported Fire Ants (RIFA) for elementary school students. *Japanese Journal of Science Communication* 26: 39-56. (in Japanese, original citation: 吉村正志, 諏訪部真友子, 池田貴子, 小笠原昌子, エヴァン・エコノモ (2020) 小学生向け外来種&ヒアリ学習ワークショップの開発と実践. 科学技術コミュニケーション, 26: 39-56.)
73. Cicconardi, F., Gamisch, A., Krapf, P., Wagner, H. C., Nguyen, A. D., **Economo, E.P.**, Mikheyev, A. S., Guénard, B., Arthofer, W., Steiner, F.M., Schlick-Steiner, B.C. (2020) Strong diversifying and relaxed purifying selection are shifting the evolutionary equilibrium of the alpine ant *Tetramorium alpestre* (Insecta: Hymenoptera) genome. *Molecular Biology and Evolution* 37: 2211-2227.
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71. Darwell, C., Fischer, G., Sarnat, E.M., Friedman, N., Liu, C., Baiao, G., Mikheyev, A.S., **Economo, E.P.** (2020) Genomic and phenomic analysis of island ant community assembly. *Molecular Ecology* 29: 1611-1627.
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69. Wepfer, P., Nakajima, S., Hui, F., Mitarai, S.*, **Economo, E.P.*** (2020) The metacommunity ecology of coral-hosted symbionts (*Symbiodinaceae*). *Marine Ecology Progress Series* 633: 71-87. *joint last author
68. Choo, J., Gill, B., Zuur, A., Zent, E., **Economo, E.P.** (2020) Impacts of an indigenous settlement on taxonomic and functional dung beetle diversity in the Venezuelan Amazon. *Biodiversity and Conservation* 29: 207-228.
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- morphology, with consequences for song evolution. *Proceedings of the Royal Society: Series B* 286: 20192474. *joint last author
66. Hita Garcia, F., Lieberman, Z., Audisio, T., Liu, C., **Economo, E.P.** (2019) Revision of the cryptic and highly specialized ant genus *Discothyrea* (Hymenoptera: Formicidae) in the s with X-Ray microtomography and 3D cybertaxonomy. *Insect Systematics and Diversity* 3: 5.
 65. Sarnat, E. M., Liu, C., Hita Garcia, F., Dudley, K., **Economo, E.P.** (2019) Ready Species One: exploring the use of augmented reality for biodiversity discovery with a technology-enhanced revision of Fijian *Strumigenys*. *Insect Systematics and Diversity* 3: 6.
 64. Sharaf, M.R., Aldawood, A.S., **Economo, E.P.**, Wachkoo, A.A., Hita Garcia, F. (2019) Taxonomy of Arabian *Temnothorax* Mayr (Formicidae: Myrmicinae) with description of a new species enhanced by micro-CT next-generation morphology. *Scientific Reports* 9: 11009.
 63. Friedman, N.R., Remes, V.R., **Economo, E.P.** (2019) A morphological integration perspective on the evolution of dimorphism in sexes and social insect castes. *Integrative and Comparative Biology* 59: 410-419.
 62. Ross, S.R. Friedman, N.R., Janicki, J., **Economo, E.P.** (2019) A test of trophic and functional theories of island biogeography using the avifauna of a continental archipelago. *Journal of Animal Ecology* 88: 1392-1405.
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 60. **Economo, E.P.**, Huang, J.P., Fischer, G., Sarnat, E.M. Janda, M., Narula, N., Guénard, B., Longino, J., Knowles, L.L. (2019) Evolution of the latitudinal diversity gradient in the hyperdiverse ant genus *Pheidole*. *Global Ecology and Biogeography* 28: 456-470.
 59. Takashina, N., Kusumoto, B., Kubota, Y., **Economo, E.P.** (2019) A geometric approach to scaling individual distributions to macroecological patterns. *Journal of Theoretical Biology* 461: 170-188.
 58. Agavekar, G., Agashe, D., **Economo, E.P.** (2019) Dimensions of ant biodiversity on a tropical island. *Insect Conservation and Diversity* 12: 161-171.
 57. Mao, Y. *, **Economo, E.P.** *, Satoh, N. * (2018) The roles of introgression and climate change in the diversification and rise to dominance of *Acropora* corals. *Current Biology* 28: 3373-3382. *corresponding
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- Young, P., Graham, N. (2018) The future of hyperdiverse tropical ecosystems. *Nature* 559: 517-526.
53. Iglesias, T.L., Warren, D.L., Dornburg, A., Wainwright, P.C., Schmitz, L., **Economo, E.P.** (2018) Eyes wide shut: The impact of dim-light vision on neural investment in marine teleosts. *Journal of Evolutionary Biology* 31: 1082-1092.
52. Staab, M., Hita Garcia, F., Liu, C., Xu, Z.H., **Economo, E.P.** (2018) Systematics of the ant genus *Proceratium* Roger (Hymenoptera, Formicidae, Proceratiinae) in China - with descriptions of three new species based on micro-CT enhanced next-generation morphology. *Zookeys* 770: 137-192.
51. **Economo, E.P.***, Narula, N., Friedman, N., Weiser, M., Guénard, B.* (2018) Macroecology and macroevolution of the latitudinal diversity gradient in ants. *Nature Communications* 9: 1778. **equal contribution*
50. Matos-Maravi, P. Clouse, R. M., Sarnat, E. M., **Economo, E. P.**, LaPolla, J. S., Borovanska, M., Rabeling, C., Czekanski-Moir, J., Latumahina, F., Wilson, E. O., Janda, M. (2018) An ant genus-group (*Prenolepis*) illuminates the drivers of insect diversification in the Indo-Pacific. *Molecular Phylogenetics and Evolution* 123:16-25.
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47. Ross, S., Friedman, N.R., Dudley, K., Yoshimura, M., **Economo, E.P.** (2018) Listening to ecosystems: data-rich acoustic monitoring through landscape-scale sensor networks. *Ecological Research* 33: 135-147.
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- hotspots and correlates of alien species richness across taxonomic groups. *Nature Ecology and Evolution* 1: 0186.
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 35. Fischer, G., Sarnat, E.M., **Economo, E.P.** (2016) Revision and microtomography of the *Pheidole knowlesi* group, an endemic ant radiation from Fiji (Hymenoptera, Formicidae, Myrmicinae). *PLoS ONE* 11(7): e0158544.
 34. Sarnat, E.M., Fischer, G., **Economo, E.P.** (2016) Inordinate spinescence: taxonomic revision and microtomography of the *Pheidole cervicornis* group (Hymenoptera: Formicidae). *PLoS ONE* 11(7): e0156709.
 33. Sukumaran, J., **Economo, E. P.**, Knowles, L.L. (2016) Machine learning biogeographic processes from biotic pattern: a trait-driven dispersal and diversification model with model-choice by simulation-trained discriminant analysis of Principal Components Classification. *Systematic Biology* 65: 525-545.
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 30. **Economo, E.P.**, Hong, L., Page, S.E.* (2016) Social structure, endogenous diversity, and collective accuracy. *Journal of Economic Behavior and Organization* 125: 212-231. (*corresponding)
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27. Sarnat, E.M., Fischer, G., Guénard, B., **Economo, E.P.** (2015) Introduced *Pheidole* of the world: taxonomy, distribution, and biology. *ZooKeys* 543: 1-109.
26. Liu, C., Fischer, G., **Economo, E.P.** (2015) A rare ant on Samoa: first record of the cryptic subfamily Proceratiinae (Hymenoptera, Formicidae) and description of a new *Proceratium* Roger species. *Journal of Hymenoptera Research*, 46: 35-44.
25. Guénard, B., & **Economo, E.P.** (2015) Additions to the checklist of the ants (Hymenoptera: Formicidae) of Peru. *Zootaxa* 4040 (2): 225-235.
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23. Guénard, B., Perrichiot, V., **Economo, E.P.** (2015) Integration of global fossil and modern biodiversity data reveals dynamism and stasis in ant macroecological patterns. *Journal of Biogeography*. 42: 2302-2312.
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21. Triantis, K.* **Economo, E.P.***, Guilhammon, F., Ricklefs, R. (2015) Diversity regulation at the macro-scales: the case of Oceanic archipelagoes. *Global Ecology & Biogeography* 24: 594-605. *equally contributing corresponding authors
20. Liu, C., Hita Garcia, F., Peng, Y., **Economo, E.P.** (2015) *Aenictus yangi* sp. n. – a new species of the *A. ceylonicus* species group (Hymenoptera: Formicidae: Dorylinae) from Yunnan, China. *Journal of Hymenoptera Research*. 42: 33-45.
19. Liu, C., Guénard, B., Hita Garcia, F., Yamane, S., Blanchard, B., Yang, D.R., **Economo, E.P.** (2015) New records of ant species from Yunnan, China. *ZooKeys* 477: 17-78.
18. Hita Garcia, F., Sarnat, E.M., **Economo, E.P.** (2015) Revision of the ant genus *Proceratium* Roger (Hymenoptera, Proceratiinae) in Fiji. *ZooKeys* 475: 97-112.
17. **Economo, E.P.**, Klimov, P., Sarnat, E., Guénard, B., Weiser, M.D., Lecroq, B., Knowles, L.L. (2015) Global phylogenetic structure of the hyperdiverse ant genus *Pheidole* reveals the repeated evolution of macroecological patterns. *Proceedings of the Royal Society of London Series B: Biological Sciences* 282: 20141416.
16. Clouse, R. M., Janda, M., Blanchard, B., Sharma, P., Hoffmann, B.D., Andersen, A.N., Czekanski-Moir, J.E., Krushelnycky, P., Rabeling, C., Wilson, E.O., **Economo, E.P.**, Sarnat, E.M., General, D.M., Alpert, G.D., Wheeler, W.C. (2015) Molecular phylogeny of Indo-Pacific carpenter ants (Hymenoptera: Formicidae, *Camponotus*) reveals waves of dispersal and colonization from diverse source areas. *Cladistics*. 31(4): 424–437

15. Sarnat, E.M., Rabeling, C. **Economo, E.P.**, Wilson, E.O. (2014) First record of a species from the New World *Pheidole flavens*-complex (Hymenoptera: Formicidae) introduced to the southwestern Pacific. *BioInvasions Records*. 3: 301-307.
14. Tin, M.Y., **Economo, E.P.**, Mikheyev, A.S. (2014) Sequencing degraded DNA from non-destructively sampled museum specimens for RAD-tagging and low-coverage shotgun phylogenetics. *PLoS ONE* 9(5): e96793.
13. Guénard, B., Blanchard, B.D., Liu, C., Yang, D., **Economo, E.P.** (2013) Rediscovery of the rare ant genus *Bannapone* (Hymenoptera: Formicidae: Amblyoponinae) and description of the worker caste. *Zootaxa* 3734: 371-379.
12. Sarnat, E.M., **Economo, E.P.** (2013) *Pristomyrmex tsujii* sp. n. and *P. mandibularis* Mann (Hymenoptera: Formicidae). *ZooKeys* (340): 43-61.
10. Sarnat, E.M., Blanchard, B.D., Guénard, Fasi, J., **Economo, E.P.** (2013) Checklist of the ants (Hymenoptera: Formicidae) of the Solomon Islands with new records from Makira Island. *ZooKeys* 257: 47-88.
9. **Economo, E.P.**, & Sarnat, E.M. (2012) Revisiting the ants of Melanesia and the taxon cycle: historical and human mediated invasions of a tropical archipelago. *The American Naturalist* 180 : E1-E16. (*Presidential award from ASN for best paper of 2012 in Am. Nat.*)
8. **Economo, E.P.** (2011) Biodiversity conservation in metacommunity networks: linking pattern and persistence. *The American Naturalist* 177: E167-180. (*highlighted by Faculty of 1000*)
7. Leibold, M., **Economo, E.P.**, Peres-Neto, P. (2010) Metacommunity Phylogenetics: Separating the roles of environmental filters and historical biogeography. *Ecology Letters* 13: 1290-1299.
6. **Economo, E. P.**, & Keitt, T.H. (2010) Network isolation and local diversity in neutral metacommunities. *Oikos* 119: 1355-1363.
5. Cowperthwaite, M., **Economo, E.P.**, Harcombe W., Miller, E., Meyers, L.A. (2008) The ascent of the abundant: How mutational networks constrain evolution. *PLoS Computational Biology* 4: e1000110.
4. **Economo, E. P.**, & Keitt, T.H. (2008) Species diversity in neutral metacommunities: a network approach. *Ecology Letters* 11: 52-62.
3. Enquist, B. J., Kerkhoff, A.J., Huxman, T.E., and **Economo, E.P.** (2007) Adaptive differences in plant physiology and ecosystem paradoxes: insights from metabolic scaling theory. *Global Change Biology* 13: 591-609.
2. **Economo, E.P.**, Andrew J. Kerkhoff, Brian J. Enquist. (2005) Allometric growth, life history invariants, and population energetics. *Ecology Letters* 8: 353-360.
1. Enquist, B.J., **Economo, E.P.**, Huxman, T.E., Allen, A.P., Ignace, D.D., Gillooly, J. (2003) Scaling metabolism from organisms to ecosystems. *Nature* 423: 639-642.

Non-Peer Reviewed:

Economo, E.P. (2016) Understanding western academia: Advice for job-seekers and recommendation letter-writers [published in Japanese]. *Japanese Journal of Ecology* 66, 735-742.

Website:

antmaps.org. **Economo, E.P.**, Guénard, B., Janicki, J., Ziegler, M., Narula, N. Published online July, 2015.

PRESENTATIONS

Invited Talks

2023 Japan Society for Evolutionary Studies Annual Meeting (Plenary)
2022 International Union Study of Social Insects Congress (symposium)
2022 Concordia University, Department of Biology
2022 McGill University, Department of Biology
2022 Texas A&M University, Department of Entomology
2022 University of Texas at Austin, Section of Integrative Biology
2021 City College of New York, Department of Biology
2021 UMass Lowell, Department of Biology
2021 Yale University, Department of Ecology and Evolutionary Biology
2021 EU-IUSSI annual meeting (Symposium)
2019 Sorbonne University, Institute of Ecology and Environmental Sciences
2019 University of Lausanne, Department of Ecology and Evolutionary Biology
2019 Ecological Society of Japan (Symposium)
2018 Taiwan Entomological Society (Keynote)
2018 UC-Berkeley, Department of Environmental Science, Policy, and Management
2017 Kyoto University, Asia Research Node Symposium
2016 International Colloquium on Soil Zoology (Plenary)
2016 International Congress of Entomology (Symposium)
2016 Ludwig Maximilian University Munich (Ants 2016 Symposium)
2015 University of Cambridge, Department of Zoology
2015 Society of Population Ecology Meeting (Symposium)
2014 Kyoto University, Evolutionary Community Ecology Symposium
2013 Kyoto University, Symposium in honor of E.O. Wilson and the Kyoto Prize
2013 University of the Ryukyus, Japan
2012 Ecological Society of Japan Meeting (Symposium)
2011 Society of Population Ecology Meeting (Symposium)
2011 University of Alabama
2011 Okinawa Institute of Science and Technology
2011 University of Queensland
2011 International Biogeography Society Meeting (Symposium)
2010 University of British Columbia
2010 Field Museum of Natural History

GRANTS AND FELLOWSHIPS

- 2022- Research Grant Council Hong Kong. “A stage- and trait-based approach to understand global ant invasion patterns and invasion mechanisms” (PI: B. Guénard, Co-I: E. Economo)
 - 2021-2024 Strategic Environmental Research and Development Program (\$2.9 million total) “Next Generation Biosecurity Monitoring of Invasive Alien Arthropod Species.” (~\$2.9 million total, (PI: G. Roderick, co-PI: Economo, E.)
 - 2021-2022 Radcliffe Fellowship, Radcliffe Institute of Advanced Study, Harvard University
 - 2019-2022 Japan Ministry of Environment Grant (~\$1 million), “Developing Countermeasures for Invasive Alien Species”
 - 2016-2019 Okinawa Prefectural Government Grant (~\$1.2 million), “Developing a system for fire ant surveillance, prevention, and control in Okinawa”.
 - 2017-2019 Japanese Society for the Promotion of Science, Grant-in-Aid of Research (Kakenhi, ~\$50K)
 - 2012-2017 National Science Foundation (DEB 1141989), Phylogenetic Systematics Economo, E. (PI), L. Knowles (co-PI). \$378,522. "Evolving hyperdiversity in phenotypic, ecological, and geographic networks: testing the taxon cycle and alternatives in Indo-Pacific *Pheidole*"
 - 2009-2012 Michigan Society of Fellows Postdoctoral Fellowship
 - 2009 Marion Elizabeth Eason Scholarship, University of Texas
 - 2005-2009 National Science Foundation Graduate Research Fellowship
 - 2004-2005 NSF IGERT Graduate Training Fellowship in Computational Phylogenetics
 - 2004 Santa Fe Institute Complex Systems Summer School
 - 2007 EEB Research Fellowship
 - 2006 EEB Research Fellowship
 - 2005 EEB Research Fellowship
 - 2003 University of Texas Dean's Excellence Preemptive Fellowship
 - 2004 NSF Graduate Research Fellowship Honorable Mention
 - 2001 Honors College Undergraduate Research Grant, U. of Arizona
 - 2001 Research Training Grant in the Analysis of Diversification, U. of Arizona
-

AWARDS AND HONORS

- 2024 Frontiers Planet Prize- Japan National Champion
- 2019 Ecological Research Award (for one of top papers in *Ecological Research* in 2018)
- 2017 Top ten new species for *Pheidole drogon* (given by ESF-SUNY)
- 2016 Biodiversity Action Award (to OKEON project)
- 2013 Presidential Award from American Society of Naturalists (For best paper published in *The American Naturalist* in 2012)
- 2009 Nominated for Distinguished Dissertation Award, University of Texas

- 2004 Teaching Award, School of Biological Sciences, University of Texas
-

CLASSROOM TEACHING

- 2019 B16 “Ecology & Evolution” Primary instructor, OIST, 9 students
- 2018 B16 “Ecology & Evolution” Primary instructor, OIST, 8 students
- 2018 A406, “Independent Study”, OIST, 1 student
- 2017 B16 “Ecology & Evolution” Primary instructor, OIST. 6 students
- 2016 B16 “Ecology & Evolution” Primary instructor, OIST, 5 students
- 2015 B16 “Ecology & Evolution” Primary instructor, OIST, 6 students
- 2014 A406 “Independent Study”, OIST, 1 student
- 2014 B16 “Ecology & Evolution” Primary instructor, OIST, 2 students
- 2013 A302 “Ecology & Evolution” Primary instructor, OIST, 5 students
- 2011 “EEB Senior Capstone”, primary instructor. U. of Michigan.
- 2011 “Insect Ecology & Evolution” (graduate seminar) primary instructor. U. of Michigan.
- 2010 “General Ecology”, primary instructor, U. of Michigan
- 2009 TA for “Ecology”, 2 guest lectures. U. of Texas at Austin.
- 2004 TA for “Ecology, Evolution and Society”, 3 guest lectures. U. of Texas at Austin. Won graduate teaching award from the School of Biological Sciences.

Summer School:

- 2013 Co-organized “OIST Integrative Biology Course: Big Data in Biology”
(<https://groups.oist.jp/oibc>)
-

MENTORSHIP

OIST Postdoctoral Fellows & Staff Scientists

2012-2014 Benoit Guénard	2019-2023 Jamie Kass (JSPS fellow)
2012-2014 Beatrice Lecroq-Bennett	2020-2024 Alexandre Casadei Ferreira
2013-2018 Masashi Yoshimura	2021-present Larisa Kiselva
2015-2018 Clive Darwell	2021-2022 Nurit Eliash
2014-2020 Georg Fischer	2022-2023 Joshua Gibson (JSPS fellow)
2015-2020 Nicholas Friedman	2023-2024 Adrian Richter (JSPS fellow)
2016-present Francisco Hita Garcia	2023-present Christine Sosiak (JSPS fell.)
2017-2020 Nao Takashina (JSPS Fellow)	2023-present Riou Mizuno
2018-2021 Susan Kennedy	

OIST PhD Student Thesis Supervision

2012-2018 Cong Liu	2014-2019 Yafei Mao (co-supervised)
2013-2019 Patricia Wepfer (co-supervised)	2015-2021 Yuka Suzuki

2016-2021 Evropi Toulkeridou (co-supervised)
2017-present Julian Katzke
2017-present Yazmin Zurita Gutierrez

2018-present Gaurav Agavekar
2018-present Lazzat Aibekova
2018-present Shubham Gautam

OIST PhD Rotation Students

2012 Keita Ikegami
2012 Cong Liu
2013 Han Yan
2013 Sandrine Burriel
2014 Yafei Mao
2014 Yuna Hattori
2014 Matti Krueger
2014 Margaret Brisbin
2015 Jason Ball
2015 Yuka Suzuki
2016 Menglin Wang
2016 Christopher Campbell

2017 Julian Katzke
2017 Otis Brunner
2018 Yazmin Zurita Gutierrez
2018 Shubham Gautam
2018 Lazzat Aibekova
2018 Gaurav Agavekar
2019 Mohamed Boubakour
2019 Michael Izumiyama
2020 Kota Ishikawa
2020 Masato Hirota
2022 Tom Wifling

OIST Research Interns and Visiting Research Students

2012 Sandrine Burriel
2013 Patricia Wepfer
2013 Benjamin Blanchard
2013 Guilherme Baiao
2014 Juliette Martin
2015 Brett Morgan
2015 Julia Janicki
2015 Natalie Greenhalgh
2015 Matt Ziegler
2016 Haruka Kasuga
2016 Aina Urano
2016 Kotaro Fujiyoshi
2016 Victoria McGruer
2016 Gaurav Agavekar
2016 Sam Ross
2017 Adam Khalife

2017 Tracy Audisio
2018 Zachary Lieberman
2018 Fumika Azuma
2018 Alexandre Ferreira
2019 Kelvin Chen
2019 Adrian Richter
2019 April Lamb
2022 Lily Tashiro
2023 Azumi Kudaka
2023 Arthur Matte
2023 Jordan Drapin
2023 Karen Kohama
2023 Henry Cerbone
2024 Kaylin Chong
2024 Jocelyn Wang

OIST PhD Student Mentor

(this is an advisory role for students to help plan curriculum, and get neutral advice outside their PhD lab)

Tomohito Wauke
Maki Kohata Thomas
Christine Guzman
Miles Desforges

Jekaterina Stemmere
Tracy Audisio
Stefano Pascarelli

OIST PhD Thesis Committee Membership

(not including my own PhD students, see above)

Qiong Huang

Tadashi Kazuno

Robert Campbell
Agneesh Barua
Menglin Wang

Otis Brunner
Alexsandra Blizina
Tracy Audisio

OIST-Supported Affiliated Researchers

(Off-site researchers who have worked with our lab with OIST funding support)

2012-2020 Eli Sarnat

2018 Roberto Keller

OIST Research Technicians

2012 Adam Lazarus

2013-2014 John Deyrup

2013-2014 Nitish Narula

2015-2017 Julia Janicki

2014-2020 Kenneth Dudley

2018-2023 Fumika Azuma

2019-2023 Kosmas Deligkaris

2021-present Miyuki Suenaga

2023-present Karen Kohama

2023-present Dimitrios Petsopoulos

University of Michigan (2009-2012)

Supervised eleven undergraduate research projects (6 students) for independent study credit or work study (through UROP).

University of Texas at Austin (2003-2009)

Supervised 6 undergraduate students on undergraduate research

ACADEMIC SERVICE AND LEADERSHIP

U. of Maryland Committees

2024-present | College of Computer, Mathematical, and Natural Sciences Admin. Council

I represent the Department of Entomology on the primary leadership committee for the CMNS college, chaired by the Dean and composed of Chairs, Directors, and Associate Deans.

2024-present | College of Agriculture and Natural Resources Leadership Team

I represent the Department of Entomology on the primary leadership committee for the CMNS college, chaired by the Dean and composed of Chairs, Directors, and Associate Deans.

OIST Committees

2023- 2024 | Executive Committee

This committee, chaired by the President, meets weekly to share key information, discuss issues, and support the President in deciding essential matters for the University.

2023- 2024 | Faculty Awards Committee (Chair)

I recently formed this committee to promote and facilitate faculty to apply for and receive scholarly awards. Our main focus is to break down language and other understanding barriers for applying for

awards in different countries, as well as proactively nominate and/or encourage underrepresented researchers to apply for awards.

2023- 2024 | Space Allocation Committee (Chair)

This committee makes decisions regarding space allocation among all research and administrative units on campus. In addition, I am responsible for strategic planning of space on campus.

2023- 2024 | Research Staff Appointments Committee (Chair)

This committee evaluates all non-faculty research staff for appointment, salary changes, promotions, and continuing (permanent) employment status.

2023- 2024 | Core Facilities Steering Committee

This committee advises the Provost on operation all the core facilities including operations, policies, and strategic planning.

2022-2023 | Appointments and Promotions Committee

This committee is positioned between hiring / promotion committees and executive leadership, to ensure that relevant procedures are followed and recommendations meet criteria.

2021 | Tenure Review Committee

Tenure review committee member for OIST faculty member.

2021-present | Conference and Workshop Committee

Responsible for selecting conferences and workshops to receive support from OIST and set policies for operations.

2020 | Working Group on Procurement

This is an *ad hoc* committee responsible for revising procurement regulations, particularly developing a response to some new regulatiosn from the Japan Ministry of Finance.

2019-present | OKEON Steering Committee

Advise and manage OKEON project and Environmental Science Support section.

2019 | Working Group on Travel Regulations

This was an *ad hoc* committee responsible for revising travel regulations, I was asked by the faculty council to represent faculty concerns, and this led to substantial revision of travel rules.

2018 | Perspective Council

This was an *ad hoc* committee of extremely distinguished scientists (4 of the 6 Nobel laureates, chaired by Steven Chu (former Secretary of Energy, USA) tasked with planning the scientific direction of future growth / faculty hiring at OIST. I was one of 6 individuals chosen to represent the OIST faculty on this committee, where I particularly represented the fields of Ecology/Environment/Marine Science.

2016 | Task Force on Rank and Tenure

This was an *ad hoc* committee formed by the faculty to examine policies and procedures for tenure and promotion reviews. We made recommendations to the president which led to substantial policy changes.

2016-2019 | Curriculum and Examinations Committee

Standing committee responsible for curriculum and exam related issues for our PhD program, including setting policy, overseeing curriculum, overseeing proposal exams and final thesis defenses, approving granting of degrees, etc.

2015-2021 | Human Subjects Research Review Committee (IRB)

This committee oversees and approves all human subjects research at OIST. I was included on this committee particularly as a biostatistics expert.

2013, 2014, 2018, 2019 | Faculty Search Committees

I was a member of faculty search committees for Marine Science in 2013 and 2014, and for Ecology/Environment in 2018, and have been member of a target of opportunity search committee in 2019.

2013-2022 | Gender Equality and Diversity Committee

Promoting Gender Equality and Diversity on OIST campus, including promoting family-friendly environment, advising on tenure (e.g. stop-the-clock) policies, etc. I was a founding member of this committee.

2013-present | Information Technology Service and Support Committee

This committee oversees IT issues at OIST and advises the CIO, including email systems, phone systems, privacy and security policies, etc.

2013-2015 | Faculty Council

The main governance committee for OIST faculty, elected by faculty peers.

2012-2013 | Admissions Committee

Responsible for admissions to the OIST PhD program

OIST Associate Ombudsperson (2019-present)

In my role as Associate Ombudsperson for the campus I assist OIST members with conflict resolution issues including harassment complaints, employee issues, etc. I particularly handle cases where the primary Ombudsperson or their family members have a conflict of interest.

Principal, OIST/Onna Children's School of Science (2019-present)

I am one of two Principals and the sole OIST faculty representative on the executive committee of the Children's School of Science, a yearly summer science program we run in partnership with the local community (Onna village) that has included over 800 grade-school children over the years. The operations of the school are run by the OIST community relations section.

OKEON Churamori Project & Environmental Research Support Section

Since 2015, I have led development of the Okinawa Environmental Observation Network (OKEON) Churamori Project. This project is designed to both further ecological science activities at OIST but also form partnerships with local communities in Okinawa. We established 24 long-term monitoring sites across the island, and in the process made partnerships with over 100 entities including high schools, local museums, local Universities, NGOs and government entities. In addition, we established an institutional Arthropod collection. This has been an important project for OIST's relationship with Okinawa, and generated a large amount of positive stories in the local and national media. I incubated a team in my lab that this year became a new research support section (Environmental Research Support Section) which supports any researcher in the OIST community doing field work.

Society Memberships

Ecological Society of America
Entomological Society of America
Ecological Society of Japan
Society for the Study of Evolution
American Society of Naturalists

Society of Systematic Biology
Society of Integrative & Comparative Biology
International Biogeography Society
Japan Society of Mathematical Biology
Inter. Union for the Study of Soc. Insects

Subject/Associate Editor

The American Naturalist (2021-present)
Current Research in Insect Science (2020-present)
Journal of Biogeography (2019-present)
Myrmecological News (2017-present)

Peer Reviewer

American Journal of Botany
Aquatic Ecology
The American Naturalist
Biodiversity Conservation
Biological Invasions
Biological Reviews
Biology Letters
Bulletin of Math. Biology
Conservation Letters
Current Biology
Diversity and Distributions

Ecology
Ecology Letters
Ecography
Functional Ecology
Global Ecol. & Biogeogr.
Journal of Biogeography
Journal of Ecology
J. of Environmental Manag.
J. of Theoretical Biology
Landscape Ecology
Myrmecological News

Nat. Science Found. (USA)
Nature Communications
Oikos
PLoS Biology
PLoS ONE
PLoS Comp. Biology
PNAS
Proc. Roy. Soc. B.
Science Advances
Swiss Nat. Science Found.

Symposia and Workshops Organized

- 2023 (upcoming): OIST Workshop on the Evolutionary Analysis of Morphology
- 2020: OIST Mini-symposium: Ant Biodiversity Data Synthesis- Present and Future
- 2019: SWARM2019: The 3rd International Symposium on Swarm Behavior and Bio-Inspired Robotics, co-lead organizer and local host (200 participants)
- 2018 OIST mini-symposium “Advances in imaging, quantifying, and understanding the evolution of ant phenotypes”
- 2017 OKEON Chura-Mori Project Symposium

- 2017 Ecological Society of Japan Meeting Symposium, “Big Data in Ecology and Evolution”
 - 2015 East Asia Joint Symposium (EAJS) (co-organizer)
 - 2014 Ecological Society of Japan, “Island Biogeography: Integrating Ecological and Evolutionary Perspectives”
 - 2014 IUSSI “Island Biology of Social Insects.”
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OTHER EMPLOYMENT

2002-2003 Research Technician, University of Arizona, Department of Ecology & Evolutionary Biology, lab of Brian J. Enquist.

OUTREACH

- 2019-present: co-Principal of OIST Children’s School of Science, a summer science school for local children in Okinawa
 - 2015-present: Founded and led OKEON (Okinawa Environmental Observation Network) Chura-Mori Project, a collaborative project between citizens and researchers in Okinawa (<http://okeon.unit.oist.jp>), which has involved hundreds of outreach events, media events, and museum exhibitions on biodiversity
 - 2012-present Numerous other outreach events by lab in Okinawa, Japan. List available here: <http://arilab.unit.oist.jp/category/outreach/>
 - 2015 Outreach lecture “Science Talks in English” series, Kyuyo High School, Okinawa, Japan
 - 2014 “The ways of the Ant” Outreach lecture, OIST Open Day
 - 2013 Biodiversity Exhibit Contributor, Okinawa Prefectural Museum, Japan
 - 2012 Biodiversity outreach event and lecture: Kunigami village, Okinawa
 - 2011 Contributor to “Umvelt: Subjective Worlds” art exhibition, The Gallery Project, Ann Arbor, MI.
 - 2010 Organized EEB/Biokids field trip for 80 Detroit elementary school students.
 - 2009 Outreach lecture, “The ways of the Ant”, *Science Under the Stars*.
 - 2009 Founded and organized *Science Under the Stars*, outreach lecture series, Austin, Texas. (still active: <http://scienceunderthestars.org/>)
 - 2008 Outreach Lecture: “The Ants of the Pacific.” Pacific Conf. of Theologists, Suva, Fiji
 - 2006-2008 Outreach activities on ants for schools: Matthews Elementary School, Austin, University of South Pacific open day, Hauta School, Solomon Islands.
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