

Paul Robert Armsworth

Curriculum vitae
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EDUCATION

2007 P.G.C.H.E., Sheffield, Biological Sciences.
2003 Ph.D., Stanford, Biological Sciences.
2000 Ph.D. (Cum Laude), James Cook, Mathematics.
1997 P.G.C.E., Cambridge, Mathematics.
1996 B.A. Hons., Oxford, Mathematics.

PROFESSIONAL APPOINTMENTS

2015-present Professor, Department of Ecology and Evolutionary Biology, University of Tennessee, Knoxville.
2015-2016 Associate Head, Department of Ecology and Evolutionary Biology, University of Tennessee, Knoxville.
2014-2016 Associate Director for Postdoctoral Activities, National Institute for Mathematical and Biological Synthesis, University of Tennessee, Knoxville.
2013-2015 Associate Professor, Department of Ecology and Evolutionary Biology, University of Tennessee, Knoxville.
2009-2013 Assistant Professor, Department of Ecology and Evolutionary Biology, University of Tennessee, Knoxville.
2004-2009 Lecturer [equivalent to Assistant Professor] in Population & Community Ecology, Department of Animal & Plant Sciences, University of Sheffield, UK.
2003-2004 Post-doctoral Fellow, Center for Conservation Biology, Department of Biological Sciences, Stanford University.

ACADEMIC HONORS AND AWARDS

2022 Success in Multidisciplinary Research Award, University of Tennessee.
2020 Outreach Service Award, College of Arts & Sciences, University of Tennessee.
2015-2020 James R. Cox Professorship, University of Tennessee.
2015 Alumni Outstanding Teacher Award, University of Tennessee.
2015-present Fellow, Howard H. Baker Center for Public Policy, University of Tennessee.
2013 Professional Promise in Research and Creative Achievement, Chancellor's Award, University of Tennessee.
2010 Runner-up, Lloyd's of London, Science of Risk prize.
2006 Exceptional Contribution Award, University of Sheffield.
2002 Norman K. Wessells Award for Teaching Excellence, Stanford University.
2000-2004 UK-US Fulbright Scholar.
1998-2000 Northcote Scholar (Britain-Australia Society).
1998 Doctoral Merit Research Award, James Cook University.
1996 Plumbtre Scholar, University College, University of Oxford.

PUBLICATIONS

Using ISI, PRA has an h-factor of 42 and 6400 career citations coming from scientists in over 150 countries (h-factor = 50 and 11,700 citations by google scholar). He has published in interdisciplinary journals, as well as leading disciplinary journals in ecology, evolution, conservation, mathematics, economics and land use policy.

Authorship usually follows the ecological convention with the first author being the lead author and the last author being the senior author / PI.

1. **Armsworth, P.R.**, Dilkina, B., Fargione, J., Fisher, M., Fovargue, R., Harris, J., Jackson, H.B., Le Bouille, D., Nolte, C., Richards C. 2023. Multiplying the impact of biodiversity conservation funding using spatial exchange rates. *Frontiers in Ecology and the Environment*, in press.
2. Bicknell, J.E., O'Hanley, J.R., **Armsworth, P.R.**, Slade, E.M., Deere, N.J., Mitchell, S.L., Hemprich-Bennett, D., Kemp, V., Rossiter, S.J., Lewis, O.T., Coomes, D.A., Agama, A.L., Reynolds, G., Struebig, M.J., Davies, Z.G. 2023. Enhancing the ecological value of oil palm agriculture through set-asides. *Nature Sustainability*, <https://doi.org/10.1038/s41893-022-01049-6>
3. Simpson, K., **Armsworth, P.R.**, Dallimer, M., Nthambi, M., de Vries, F., Hanley, N. 2023. Improving the ecological and economic performance of agri-environment schemes: payment by modelled results versus payment for actions. *Land Use Policy*, in press.
4. Sims, C., **Armsworth, P.R.**, Blackwood, J., Fitzpatrick, B., Kling, D.M., Lenhart, S., Neubert, M., Papes, M., Sanchirico, J., Shea, K., Springborn, M. 2023. Leveraging federalism for flexible and robust management of social-ecological systems. *People and Nature*, <https://doi.org/10.1002/pan3.10458>.
5. Zhu, G., Giam, X., **Armsworth, P.R.**, Papeş, M. 2023. Biodiversity conservation adaptation to climate change: protecting the actors or the stage. *Ecological Applications*, **33**, e2765.
6. Chang, C.H., **Armsworth, P.R.**, Masuda, Y.J. 2022. Environmental discourse exhibits consistency and variation across spatial scales on Twitter. *BioScience*, **72**, 789-797.
7. Chang, C.H., **Armsworth, P.R.**, Masuda, Y.J. 2022. Twitter data reveal six distinct environmental personas. *Frontiers in Ecology and the Environment*, **20**, 481-487.
8. Courtney, S., Hyman, A.A., McNeal, K.S., Maudlin, L.C., **Armsworth, P.R.** 2022. Development of a survey instrument to assess individual and organizational use of climate adaptation science. *Environmental Science and Policy*, **137**, 271-279.
9. Dumoulin, C.E., **Armsworth, P.R.** 2022. Environmental stochasticity increases extinction risk to a greater degree in pollination specialists than in generalists. *Oikos*, **11**, e09214.
10. Fovargue, R., Fargione, J.E., Roth, S., **Armsworth, P.R.** 2022. Running on debt: financing land protection with loans. *Conservation Science and Practice*, **4**, e12763.
11. Hyman, A.A., Le Bouille, D., Zhu, G., **Armsworth, P.R.** 2022. Variation in preferences describing how to value the future among conservation practitioners and its implications for today's protection priorities. *Biological Conservation*, **271**, 109585.
12. Hyman, A.A., Courtney, S.L., McNeal, K., Bialic-Murphy, L, Furiness, C., Eaton, M.J., **Armsworth, P.R.** 2022. Distinct pathways to stakeholder use versus scientific impact in climate adaptation research. *Conservation Letters*, **15**, e12892.
13. Le Bouille, D., Fargione, J., **Armsworth, P.R.** 2022. Spatio-temporal variation in the costs of managing protected areas. *Conservation Science and Practice*, **4**, e12697.
14. Liu, X., Cho, S.-H., Chen, G., Hayes, D., English, B., **Armsworth, P.R.** 2022. Does a trade-off exist between economic and environmental impacts of forest carbon payment programs? *Sustainability Science*, **17**, 2031-2047.
15. Rhodes, J.R., **Armsworth, P.R.**, Iacona, G., Shah, P., Gordon, A., Wilson, K., Runting, R., Bryan, B.A. 2022. Flexible conservation decisions for climate adaptation. *One Earth*, **5**, 622-634.

16. Simpson, K., de Vries, F., Dallimer, M., **Armsworth, P.R.**, Hanley, N. 2022. Ecological and economic implications of alternative metrics in biodiversity offset markets. *Conservation Biology*, **36**, e13906.
17. Stachowiak, C., Crain, B.J., Kroetz, K., Sanchirico, J.N., **Armsworth, P.R.** 2022. The impact of recreational use and access on biotic and abiotic disturbances on areas protected by local communities and a state conservation agency. *Journal for Nature Conservation*, **68**, 126216.
18. Vijay, V., Fisher, J.R.B., **Armsworth, P.R.** 2022. Co-benefits for terrestrial biodiversity and ecosystem services available from contrasting land protection policies in the contiguous United States. *Conservation Letters*, **15**, e12907.
19. Yoon, H.S., **Armsworth, P.R.** 2022. Timing land protection to exploit favorable market conditions. *Biological Conservation*, **270**, 109566.
20. Yoon, H.S., Vijay, V., **Armsworth, P.R.** 2022. Accounting for spatial heterogeneity in the added conservation value of land protection when prioritizing protected areas. *Conservation Biology*, **36**, e13960.
21. Zhu, G., Papeş, M., **Armsworth, P.R.**, Giam X. 2022. Climate change vulnerability of terrestrial vertebrates in a major refuge and dispersal corridor in North America. *Diversity and Distributions*, **28**, 1227-1241.
22. Crain, B.J., Stachowiak, C., McKenzie, P.F., Sanchirico, J.N., Kroetz, K., **Armsworth, P.R.** 2021. Citizens of local jurisdictions enhance plant community preservation through ballot initiatives and voter-driven conservation efforts. *Ambio*, **50**, 1237-1247.
23. Gammans, M. Sanchirico, J.N., Kroetz, K., **Armsworth, P.R.**, Swiedler, E.W. 2021. Are simultaneously-decided referenda substitutable? Evidence from municipal land use ballot measures. *Land Economics* **97**, 577-587.
24. Hyman, A., Gaoue, O., Tamou, C., **Armsworth, P.R.** 2021. How pastoralists weight future environmental benefits when managing natural resources. *Conservation Letters* **14**, e12770.
25. Jackson, H.B., Kroetz, K., Sanchirico, J., Thompson, A., **Armsworth, P.R.** 2021. Protected area, easement, and rental contract data reveal five communities of land protection in the United States. *Ecological Applications*, **31**, e02322.
 - a. Related photo gallery: *Bulletin of the Ecological Society of America* 102, e01888. <https://doi.org/10.1002/bes2.1888>
26. Liu, X., Cho, S.-H., **Armsworth, P.R.**, Hayes, D. 2021. Where and when carbon storage can be bought cost effectively from private forest-owners. *Environmental Management* **67**, 930-948.
27. McKenzie, P., Iacona, G., Larson, E., **Armsworth, P.R.** 2021. Partitioning tree diversity patterns to prioritize conservation investments. *Environmental Conservation*, **48**, 75-83.
28. Pinnschmidt, A., Hoogstra, M., Fovargue, R., Le Bouille, A., Fisher, M., Harris, J., **Armsworth P.R.** 2021. Land trust investments in land protection may increase philanthropic giving to conservation. *Ecological Economics*, **185**, 107040.
29. Simpson, K., Dallimer, M., De Vries, F., **Armsworth P.R.**, Hanley, N. 2021. Understanding the performance of biodiversity offset markets: Evidence from an integrated ecological – economic model. *Land Economics*, **97**, 836-857.
30. Simpson, K., Hanley, N., Armsworth, P., de Vries, F., Dallimer, M. 2021. Incentivising biodiversity net gain with an offset market. *Q Open* **1**, qoab004.
31. Stachowiak, C., Crain, B.J., Kroetz, K., Sanchirico, J.N., **Armsworth, P.R.** 2021. Protected areas established by local communities through direct democracy encompass habitat for species as effectively as protected areas planned over large spatial scales. *Environmental Management* **67**, 242-250.
32. Vijay, V., **Armsworth, P.R.** 2021. Pervasive cropland in protected areas highlight trade-offs between conservation and food security. *Proceedings of the National Academy of the Sciences, USA*, **118**, , e2010121118.
33. Zhu, G., Papes, M., Giam, X., Cho, S.H., **Armsworth, P.R.** 2021. Will current protected areas serve as major climate refugia and dispersal corridors in the United States? *Biological Conservation* **255**, 108982.

34. **Armsworth, P.R.**, Benefield, A. Dilkina, B. Fovargue, R., Jackson, H., Le Bouille, D. Nolte, C. 2020. Allocating resources for land protection using continuous optimization: an application to US biodiversity conservation. *Ecological Applications* **30**, e02118.
35. Crain, B.J., Sanchirico, J.N., Kroetz, K., Benefield, A., **Armsworth, P.R.** 2020. Species protection in areas conserved through community-driven direct democracy as compared with a large private land trust in California. *Environmental Conservation*, **47**, 30-38.
36. Segovia, A.R., Romano, D. & **Armsworth, P.R.** 2020. Who studies where? Boosting tropical conservation research where it is most needed. *Frontiers in Ecology and the Environment*, **18**, 159-166
37. Briggs, H.M., Ayers, C.A., **Armsworth, P.R.**, Brosi, B.J. 2019. Testing how antagonistic interactions impact the robustness of plant-pollinator networks. *Journal of Pollination Ecology*, **25**, 69-77.
38. Cho, S.-H., Thiel, K.M.S., **Armsworth, P.R.**, Sharma, B.P. 2019. Effects of protected area size on conservation return on investment. *Environmental Management*, **63**, 777-788.
39. Daniels, M. Iacona, G.D., **Armsworth, P.R.** Larson, E.R. 2019. Do road or stream networks explain plant invasions in forested protected areas? *Biological Invasions*, **21**, 3121-3134.
40. Fovargue, R., Fisher, M., Harris, J., **Armsworth, P.R.** 2019. A landscape of conservation philanthropy for US land trusts. *Conservation Biology*, **33**, 176-184.
41. Liu, X., Cho, S.-H., Hayes, D., **Armsworth, P.R.** 2019 Potential efficiency gains in payment programs from resolving spatial and temporal heterogeneity in the cost of supplying forest carbon. *Journal of Environmental Management*, **250**, 109421.
42. Simpson, K., de Vries, F., **Armsworth, P.R.**, Hanley, N. 2019. Designing markets for biodiversity offsets: lessons from tradable pollution permits. *J. Applied Ecology*, **56**, 1429-1435.
43. **Armsworth, P.R.** 2018. Time discounting and the decision to protect areas that are near and threatened or remote and cheap to acquire. *Conservation Biology*, **32**, 1063-1073.
44. **Armsworth, P.R.**, Jackson, H.B., Cho, S.H., Clark, M., Fargione, J.E., Iacona, G.D., Kim, T., Larson, E.R., Minney, T., Sutton, N. 2018. Is conservation right to go big? protected area size and conservation return-on-investment. *Biological Conservation*, **225**, 229-236.
45. Ayers, C., **Armsworth, P.R.**, Brosi, B. 2018. Statistically testing the role of individual learning and decision-making in trapline foraging. *Behavioral Ecology*, **29**, 885-893.
46. Cho, S.H., Lee, J., Roberts, R.K., English, B.C., Yu, T.E., Kim, T. Y., **Armsworth, P.R.** 2018. Impact of market conditions on the effectiveness of payments for forest-based carbon sequestration. *Forest Policy & Economics*, **92**, 33-42.
47. Fovargue, R., Bode, M., **Armsworth, P.R.** 2018. Size and spacing rules can balance conservation and fishery management objectives for marine protected areas. *Journal of Applied Ecology*, **55**, 1050-1059.
48. Iacona, G.D., Sutherland, W., Mappin, B., Adams, V., **Armsworth, P.R.**, Coleshaw, T., Cook, C., Craigie, I., Dicks, L., Fitzsimons, J.A., McGowan, J., Plumptre, A., Polak, T., Pullin, A., Ringma, J., Rushworth, I., Santangeli, A., Stewart, A., Tulloch, A., Walsh, J., Possingham, H.P. 2018. Standardized accounting of the costs of management interventions for biodiversity conservation. *Conservation Biology*, **32**, 979-988.
49. **Armsworth, P.R.**, Jackson, H.B., Cho, S.H., Clark, M., Fargione, J.E., Iacona, G.D., Kim, T., Larson, E.R., Minney, T., Sutton, N. A. 2017. Factoring economic costs into conservation planning may not improve agreement over priorities for protection. *Nature communications*, **8**, 1-10.
50. Baker, C.M., **Armsworth, P.R.**, Lenhart, S. 2017. Handling overheads: optimal multi-method invasive species control. *Theoretical Ecology*, **10**, 493-501.
51. Cho, S.H., Lee, J., Roberts, R.K., English, B.C., Yu, T.E., **Armsworth, P.R.** 2017. Evaluating a county-level tax-based subsidy approach for forest carbon sequestration. *Environmental Conservation*, **44**, 234-243.
52. Cho, S.H., Kim, T., Larson, E.R., **Armsworth, P.R.** 2017. Economies of scale in costs of land acquisition for nature conservation. *Forest Policy & Economics*, **75**, 73-82.

53. Lennox, GD, Fargione, JM, Spector, S, Williams, G, **Armsworth, P.R.** 2017. The value of flexibility in conservation financing. *Conservation Biology*, **31**, 666-674.
54. Milt, A.W., **Armsworth, P.R.** 2017. Performance of a cap and trade system for managing environmental impacts of shale gas surface infrastructure. *Ecological Economics*, **131**, 399-406.
55. Rieb, J.T., Chaplin-Kramer, R., Daily, G.C., **Armsworth, P.R.**, Böhning-Gaese, K., Bonn, A., Cumming, G.S., Eigenbrod, F., Grimm, V., Jackson, B.M., Marques, A., Pattanayak, S.K., Pereira, H.M., Peterson, G.D., Ricketts, T.H., Robinson, B.E., Schröter, M., Schulte, L.A., Seppelt, R., Turner, M.G., & Bennett, E.M. 2017. When, where, and how nature matters for ecosystem services: Challenges for the next generation of ecosystem service models. *BioScience*, **67**, 820-833.
 - a. Related correspondence: Rieb et al. [inc. PRA] 2018 *BioScience*, **68**, Pages 167–168.
56. Ryan, D., Sanchirico, J.N., Toews, C., **Armsworth P.R.** 2017. Implications of policy adjustment costs for fisheries management. *Natural Resources Modeling*, **30**, 74-90.
57. Bode, M., Sanchirico, J.N., **Armsworth, P.R.** 2016. Returns from matching management resolution to ecological variation in a coral reef fishery. *Proc R Soc Lond B*, **283**, 20152828.
58. Boettiger C., Bode M., Sanchirico J., LaRiviere J., Hastings A., **Armsworth P.R.** 2016. Optimal management of a stochastically varying population when policy adjustment is costly. *Ecological Applications*, **26**, 808-817.
59. Iacona, GD, Bode, M, **Armsworth, P.R.** 2016. Limitations of outsourcing on-the-ground biodiversity conservation. *Conservation Biology*, **30**, 1245-1254.
60. Iacona, G., Price, F.D., **Armsworth, P.R.** 2016. Predicting the presence and cover of management relevant invasive plant species on protected areas. *Journal of Environmental Management*, **166**, 537-543.
61. Larson E.R., Howell S., Kareiva P., **Armsworth P.R.** 2016. Constraints of philanthropy on determining the distribution of biodiversity conservation funding. *Conservation Biology*, **30**, 206-215.
62. Milt, A.W., Gagnolet, T., **Armsworth, P.R.** 2016. Synergies and tradeoffs among environmental impacts under conservation planning of shale gas surface infrastructure. *Environmental Management*, **57**, 21-30.
63. Milt, A.W., Gagnolet, T.D., **Armsworth, P.R.** 2016. The costs of avoiding environmental impacts from shale gas surface infrastructure. *Conservation Biology*, **30**, 1151-1158.
64. Sutton, N.J., Cho, S., **Armsworth, P.R.** 2016. A reliance on agricultural land values in conservation planning alters the spatial distribution of priorities and overestimates the acquisition costs of protected areas. *Biological Conservation*, **194**, 2-10.
65. **Armsworth, P.R.**, Larson, E.R., Jackson, S.T., Sax, D.F., Simonin, P., Blossey, B., Green, N., Klein, M.L., Lester, L., Ricketts, T.H., Runge, M.C., Shaw, M.R. 2015. Are conservation organizations configured for effective adaptation to global change? *Frontiers in Ecology and the Environment*, **13**, 163-169.
66. Ayers, C., **Armsworth, P.R.**, Brosi, B. 2015. Determinism as a statistical metric for ecologically important recurrent behaviors with trapline foraging as a case study. *Behavioral Ecology and Sociobiology*, **69**, 1395-1404.
67. Dallimer, M., Davies, Z.G., Diaz-Porras, D.F., Irvine, K.N., Maltby, L., Warren, P.H., **Armsworth, P.R.**, Gaston, K.J. 2015. Historical influences on the current provision of multiple ecosystem services: is there a legacy of past landcover? *Global Environmental Change*, **31**, 307-317.
68. Preston, M.D., Forister, M.L., Pitchford, J.W., **Armsworth, P.R.** 2015. Impact of individual movement and changing resource availability on male-female encounter rates in an herbivorous insect. *Ecological Complexity*, **24**, 1-13.
69. **Armsworth, P.R.** 2014. Inclusion of costs in conservation planning depends on limited datasets and hopeful assumptions. *Annals of the New York Academy of the Sciences: Year in Ecology and Conservation Biology 2014*, 1322, 61-76.

70. Dallimer, M., Davies, Z.G., Irvine, K.N., Maltby, L., Warren, P.H., Gaston, K.J., **Armsworth, P.R.** 2014. What personal and environmental factors determine frequency of urban greenspace use? *International Journal of Environmental Research and Public Health*, **11**, 7977-7992.
71. Dallimer, M., Tinch, D., Hanley, N., Irvine, K.N., Rouquette, J.R., Warren, P.H., Maltby, L., Gaston, K.J., **Armsworth, P.R.** 2014. Quantifying preferences for the natural world using monetary and non-monetary assessments of value. *Conservation Biology*, **28**, 404-413.
72. Dumoulin, C., McMillan, T., Stoneman, R., **Armsworth P.R.** 2014 Locating human resources to reduce the cost of managing networks of protected areas. *Conservation Letters*, **7**, 553-560.
73. Hughes, M.J., Johnson, E.G., **Armsworth P.R.** 2014. Optimal spatial management of an invasive plant using a model with above- and below-ground components. *Biological Invasions*, **16**, 1009-1020.
74. Iacona, G.D., Price, F.D., **Armsworth, P.R.** 2014. Predicting the invadedness of protected areas. *Diversity and Distributions*, **20**, 430-439.
75. Kim, T., Cho, S., Larson, E.R., **Armsworth, P.R.** 2014. Protected are acquisition costs show economies of scale with area. *Ecological Economics*, **107**, 122-132.
76. Kroetz, K., Sanchirico, J.N., **Armsworth P.R.**, Banzhaf, H.S. 2014. Benefits of the ballot box for species conservation. *Ecology Letters*, **17**, 294-302.
77. Larson, E., Boyer, A., **Armsworth, P.R.** 2014. A lack of response of the financial behaviors of biodiversity conservation nonprofits to changing economic conditions. *Ecology and Evolution*, **4**, 4429-443.
78. Milt, A., Palmer, S. & **Armsworth P.R.** 2014. Updating conservation priorities over 111 years of species observations. *Journal of Applied Ecology*, **51**, 1515-1524.
79. Sutton N.J., **Armsworth P.R.** 2014 The grain of spatially referenced economic cost and biodiversity benefit data and the effectiveness of a cost targeting strategy. *Conservation Biology*, **28**, 1451-1461.
80. **Armsworth, P.R.**, Cantu-Salazar, L., Parnell, M., Booth, J.E., Davies, Z.G., Stoneman, R. 2013. Opportunities for cost-sharing in conservation: variation in volunteering effort across protected areas. *PLoS One*, **8**, e55395.
81. Bewick, S., Brosi, B., **Armsworth, P.R.** 2013. Predicting the effect of competition on secondary plant extinctions in plant-pollinator networks. *Oikos*, **122**, 1710-1719.
82. Fishburn, I.S., Boyer, A., Kareiva, P., Gaston, K.J., **Armsworth, P.R.** 2013. Changing spatial patterns of conservation investment by a major land trust. *Biological Conservation*, **161**, 223-229.
83. Lennox, G.D., **Armsworth, P.R.** 2013 The ability of landowners and their cooperatives to leverage payments greater than opportunity costs from conservation contracts. *Conservation Biology*, **27**, 625-634.
84. Lennox, G.D., Gaston, K.J., Acs, S., Dallimer, M., Hanley, N., **Armsworth P.R.** 2013. Continuous conservation investments and the ability of landowners to gain surplus from conservation contracts. *Ecological Economics*, **93**, 69-78.
85. Rouquette, J.R., Dallimer, M., Maltby, L., **Armsworth, P.R.**, Gaston, K.J. & Warren, P.H. 2013. Species turnover and geographic distance in an urban river network. *Diversity and Distributions*, **19**, 1429-1439.
86. Thomas, C.D., Anderson, B.J., Moilanen, A., Eigenbrod, F., Heinemeyer, A., Quaiife, T., Roy, D.B., Gillings, S., **Armsworth, P.R.**, Gaston, K.J. 2013. Reconciling biodiversity and carbon conservation. *Ecology Letters*, **16**, 39-47.
87. **Armsworth, P.R.**, Acs, S., Dallimer, M., Gaston, K.J., Hanley, N.D., Wilson, P. 2012. The cost of policy simplification in conservation incentive programs. *Ecology Letters*, **15**, 406-414.
88. **Armsworth, P.R.**, Fishburn, I.S., Davies, Z.G., Gilbert, J., Leaver, N., Gaston, K.J. 2012. The size, concentration and growth of biodiversity conservation nonprofits. *BioScience*, **62**, 271-281.

89. Bode, M., **Armsworth, P.R.**, Fox, H.E., Bode, L. 2012. Surrogates for reef fish connectivity when designing marine protected area networks. *Marine Ecology Progress Series*, **466**, 155-166.
90. Dallimer, M., Skinner, A.M.J., Davies, Z.G., **Armsworth, P.R.**, Gaston, K.J. 2012. Multiple habitat associations: the role of offsite habitat in determining onsite avian density and species richness. *Ecography*, **35**, 134-145.
91. Dallimer, M., Irvine, K., Skinner, A., Rouquette, J., Davies, Z.G, **Armsworth P.R.**, Maltby, L.M., Warren, P., Gaston, K.J. 2012. Biodiversity and the feel-good factor: understanding associations between self-reported human well-being and species richness. *BioScience*, **62**, 47-55.
92. Dallimer, M., Rouquette, J., Skinner, A., **Armsworth, P.R.**, Maltby, L., Warren, P. & Gaston, K.J. 2012. Contrasting patterns in species richness of birds, butterflies and plants along riparian corridors in an urban landscape. *Diversity and Distributions* **18**, 742-753.
93. Fuller, R.A., Irvine, K.N., Davies, Z.G., **Armsworth, P.R.** & Gaston, K.J. 2012. Interactions between people and birds in urban landscapes. *Studies in Avian Biology*, **45**, 249-266.
94. Hanley, N., Acs, S., Dallimer, M., Gaston, K.J., Graves, A., Morris, J., **Armsworth, P.R.** 2012. Farm-scale ecological and economic impacts of agricultural change in the uplands. *Land Use Policy*, **29**, 587-597.
95. Hanley, N., Banerjee, S., Lennox, G.D., **Armsworth, P.R.** 2012. How should we incentivize private landowners to “produce” more biodiversity? *Oxford Review of Economic Policy*. , **28**, 93-113.
96. Lennox, G., Dallimer, M., **Armsworth, P.R.** 2012. Landowner’s ability to leverage in negotiations over habitat conservation. *Theoretical Ecology*, **5**, 115-128.
97. **Armsworth, P.R.**, Block, B., Eagle, J., Roughgarden, J.E. 2011. The role of discounting and dynamics in determining the economic efficiency of time-area closures for managing fishery bycatch. *Theoretical Ecology*, **4**, 513-526.
98. **Armsworth, P.R.**, Cantu-Salazar, L., Parnell, M., Davies, Z.G., Stoneman, R. 2011. Management costs for small protected areas and economies of scale in habitat conservation. *Biological Conservation*, **141**, 423-429.
99. Bode, M., Bode, L. & **Armsworth, P.R.** 2011. Different dispersal abilities allow reef fish to coexist. *Proceedings of the National Academy of the Sciences, USA*. **108**, 16317-16321.
100. Booth, J., Gaston, K.J., Evans, K.L., **Armsworth, P.R.** 2011. The value of species rarity in biodiversity recreation: a birdwatching example. *Biological Conservation*, **144**, 2728–2732.
101. Eigenbrod, F., Bell, V., Davies, H., Heinemeyer, A., **Armsworth, P.R.**, Gaston, K.J. 2011. The impact of projected increases in urbanization on ecosystem services. *Proceedings of the Royal Society of London, B*, **278**:3201-3208.
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143. **Armsworth, P.R.** & Roughgarden, J.E. 2003. The economic value of ecological stability. *Proceedings of the National Academy of the Sciences, USA* **100**, 7147-7151.
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148. **Armsworth, P.R.** 2001. Directed motion in the sea: efficient swimming by reef fish larvae. *Journal of Theoretical Biology* **210**, 81-91.
149. **Armsworth, P.R.** 2001. Effects of fishing on a protogynous hermaphrodite. *Canadian Journal of Fisheries and Aquatic Sciences* **58**, 568-578.
150. **Armsworth, P.R.** 2000. Modelling the swimming response of late stage larval reef fish to different stimuli. *Marine Ecology Progress Series* **195**, 231-247.

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Book Chapters

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153. Hanley, N., Banerjee, S., Lennox, G.D., **Armsworth, P.R.** 2014. How should we incentivize private landowners to “produce” more biodiversity? In: *Biodiversity: Economics and Policy*. Eds. Helm, D., Hepburn, C. Oxford University Press, UK, pp. 315-240.
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156. **Armsworth, P.R.**, Kappel, C.V., Micheli, F. & Bjorkstedt, E.P. 2006. Marine species. In: *The Endangered Species Act at Thirty, Vol. 1: Renewing the Conservation Promise*. Goble, D.D., S., J.M. & Davis, F.W. (eds.) Island Press, Washington, DC, pp. 36-44.
157. **Armsworth, P.R.**, Kappel, C.V., Micheli, F. & Bjorkstedt, E.P. 2006. Working seascapes. In: *The Endangered Species Act at Thirty, Vol. 2: Conserving Biodiversity in Human Dominated Landscapes*. S., J.M., Goble, D.D. & Davis, F.W. (eds.) Island Press, Washington, DC, pp. 244-255.
158. Roughgarden, J. & **Armsworth, P.R.** 2001. Ecological economic theory for managing ecosystem services. In: *Ecology: Achievement and Challenge*. Press, M.C., Huntly, N., & Levin, S. (eds.) Blackwell Science, Oxford, UK, pp. 337-356.

Other notable publications

159. Davies, Z.G., & **Armsworth, P.R.** 2008. Corporate Aviation Travel and Climate Change: Opportunities and Challenges for the Corporate Travel Industry. ACTE Global Centre for Research and Education Industry White Paper. Alexandria, VA. [Board Reviewed]
160. Millennium Ecosystem Assessment, Business and Industry Synthesis Panel [inc. **PRA**] 2005. *Ecosystems and Human Well-being: Opportunities and Challenges for Business and Industry*. World Resources Institute, Washington, DC. [Peer and Board Reviewed]

EXTERNAL RESEARCH GRANTS

PRA has received grant funding from NSF, USDA and USGS in the US, from several research councils in the UK, from charities and foundations in both countries, and from the private sector.

Lead investigator

2022-2024	USGS SouthEast Climate Science Center	\$ 381 k
2021-2023	Pew Charitable Trusts	\$ 237 k
2021-2022	NSF-REPS Supplement	\$ 35 k
2021-2024	NSF – USA Dynamics Integrated Socio-Environmental Systems	\$ 731 k
2020-2021	USGS SouthEast Climate Science Center	\$ 150 k
2020-2021	Pew Charitable Trusts	\$ 95 k
2015-2018	NSF – USA Coupled Natural and Human Systems	\$ 230 k
2013-2015	The Nature Conservancy & Mellon Foundation	\$ 53 k
2013	The Nature Conservancy & ColCom Foundation	\$ 37 k
2012-2015	NSF – USA Coupled Natural and Human Systems	\$ 250 k

2008-2009	NERC – UK PopNet, Knowledge Exchange	\$ 19 k
2008-2009	NERC – UK PopNet, Knowledge Exchange	\$ 12 k
2007-2009	ACTE-IBM	\$ 27 k
2006-2009	ESRC-NERC-BBSRC Rural Economy and Land Use	\$ 536 k
2005-2006	British Ecological Society, Early Career Project Grant	\$ 38 k
2005-2006	Nuffield Foundation, Newly Appointed Lecturers	\$ 8 k

Coinvestigator

2022-2023	Department of Energy	Responsibility \$ 43 k
2022-2025	USDA-AFRI	Total \$ 650 k
		Responsibility \$ 250 k
2022-2023	NSF – SRS	Total \$ 146 k
		Responsibility \$ 7 k
2018-2020	USDA-AFRI	Total \$ 500 k
		Responsibility \$ 179 k
2017-2021	USGS SouthEast Climate Science Center	Total \$ 5.4 M
		Responsibility \$ 115 k
2017-2020	USDA-AFRI	Total \$ 500 k
		Responsibility \$ 44 k
2013-2017	USDA-AFRI	Total \$ 500 k
		Responsibility \$ 117 k
2008-2010	NERC – UK PopNet	\$ 117 k
	<i>(Awarded as lead investigator but changed to coinvestigator status because of move to US.)</i>	
2008-2011	NERC Sustainable Marine Bioresources	Total \$ 305 k
		Responsibility \$ 20 k
2007-2012	EPSRC Sustainable Urban Environments	Total \$ 4.0 M
		Responsibility \$ 182 k
2007-2009	NERC - UK PopNet	Total \$ 198 k
		Responsibility \$ 99 k
2007-2009	Lenfest Ocean Program	Total \$ 396 k
		Responsibility \$ 47 k

INTERNAL RESEARCH GRANTS**Lead investigator**

2022	UT ORII	\$ 9 k
2014-2015	Haines-Morris Endowment award	\$ 2 k
2012-2014	Haines-Morris Endowment award	\$ 4 k
2007-2008	Knowledge Transfer Opportunities Fund, U. Sheffield	\$ 14 k
2005-2007	Divisional Directors Award, U. Sheffield	\$ 5 k

RESEARCH SUPERVISION**Post-docs**

2022-2023	Dr. Seoghyun Kim (now Assistant Prof, Kangwon U, South Korea).
2022-present	Dr. Narayani Barve
2020-2022	Dr. Varsha Vijay (now Technical Director, Science-Based Targets Network)
2018-2019	Dr. Gengping Zhu (now post-doctoral fellow, Washington State U)
2016-2017	Dr. Xiangping Liu (now Assist. Prof., Texas State U).
2015-2016	Dr. Heather Jackson (now Senior Instructor, Colorado State U)
2015-2016	Dr. Benjamin Crain (now Researcher, Smithsonian Institution).
2012-2014	Dr. Eric Larson (now Assoc. Prof., U. Illinois, Urbana-Champaign).
2011-2012	Dr. Sharon Bewick (now Assist. Prof, Clemson U.).
2011	Dr. Alison Boyer (now Research Associate, Oak Ridge National Lab).
2008-2009	Dr. Felix Eigenbrod (U. Sheffield; now Professor, U. Southampton).
2006-2009	Dr. Martin Dallimer (U. Sheffield; now Professor, U. Leeds).
2006-2008	Dr. Zoe Davies (U. Sheffield; now Professor, U. Kent).

Ph.D. students

2022-present	Guilherme Silva.
2019-present	Hyun Seok Yoon (DoE GATE fellow).
2018-2022	Amanda Hyman (now Foreign Species Biologist, US FWS).
2014-2020	Diane le Bouille (now post-doctoral fellow, Texas Tech).
2011-2017	Rachel Fovargue (NSF GRFP & NSF ScaleIt IGERT Fellow, now Researcher, Environmental Protection Agency).
2011-2012	Tara Kemfort (NIH PEER IMSD Fellow, now Software Developer at Securities Service Network, Inc.).
2010-2016	Christine Dumoulin (NSF NIMBioS Fellow & NSF ScaleIt IGERT Fellow, now researcher, USGS).
2010-2015	Austin Milt (NSF NIMBioS Fellow & NSF ScaleIt IGERT Fellow, now senior software engineer, Pandora).
2010-2014	Gwenllian Iacona (NSF NIMBioS Fellow; now Assist. Research Prof., Arizona State U).
2008-2014	Gareth Lennox (U. Sheffield; now Senior Research Associate, U. Lancaster).
2005-2009	Josephine Booth (U. Sheffield; now Senior Research Fellow at Sheffield Hallam U.).
2005-2009	Isla Fishburn (U. Sheffield; now Director, Kachina Canine Communication).

Masters students

2018-2019	Arne Pinneschmidt (U. Wageningen, now PhD, U. Freiburg).
2015-2016	Ana Reboredo Segovia (Tropimundo, ERASMUS, UNIFI, now PhD Boston U.).
2015-2018	Chad Stachowiak (now District Wildlife Biologist, Monongahela National Forest)
2012-2015	Shelby Ward (now Director of Sustainable Tennessee and Staff Attorney, Tennessee Environmental Council).
2012-2014	Nate Sutton (now data scientist, MedAmerica).
2008-2009	Phillippa Gullett (U. Sheffield; now Conservation Scientist, RSPB).
2008-2009	Emily Hounslow (U. Sheffield; now post-doc, U. Sheffield).
2007-2008	Natasha Leaver (U. Sheffield; now school teacher).
2005-2006	Rebecca Weeks (U. Sheffield; now post-doc, James Cook U).

Post-baccalaureate Researchers

2021-2022	Sarah Roth (NSF REPS, now PhD, U. Maryland).
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Thesis committees - internal

2023-present	Brian Oye (PhD, Ecology and Evolutionary Biology)
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- 2022-present Sebastian Espinoza (PhD, Ecology and Evolutionary Biology)
 2021-present Nadejda Sero (PhD, Ecology and Evolutionary Biology)
 2021-2022 Nawon Kang (M.Sc., Agricultural and Resource Economics, now PhD student, Texas A&M).
 2020-present Guido Herrera (PhD, Ecology and Evolutionary Biology)
 2018-2022 Taylor Woods (PhD, Ecology and Evolutionary Biology, now)
 2018-2020 YoungGwan Lee (M.Sc., Agricultural and Resource Economics, now PhD student, U West Virginia).
 2018-2019 Jessica Beck (PhD, Ecology and Evolutionary Biology, now Ophthalmic Technician at Mid Atlantic Retina)
 2018-2022 Kendall Beale (PhD, Ecology and Evolutionary Biology, now post-doc San Diego State U)
 2015-2016 Kristen Thiel (M.Sc., Agricultural and Resource Economics, now Survey Statistician, US Census Bureau).
 2015-2016 Ben Levy (Ph.D. Mathematics, now Assoc. Prof. Fitchburg State U.)
 2014-2015 Matthew McMahan (Ph.D., Economics, now Assist. Prof., U. Arkansas, Little Rock).
 2014-2015 JuHee Lee (M.Sc., Agricultural and Resource Economics, now PhD student, U. Kansas).
 2012-2015 Amanda Janicki (Ph.D., EEB, now Conservation Police Officer at Virginia Department of Wildlife Resources).
 2010-2014 Michael "Joe" Hughes (Ph.D., EEB; now machine learning engineer, Earthshot Labs.).
 2010-2011 Marco Martinez (Ph.D., Mathematics, now Assoc. Prof., N. Central College).
 2010-2013 Chris Lituma (Ph.D., Forestry Wildlife and Fisheries; now Assist. Prof. West Virginia U.).
 2010-2012 Jennifer Krauel (Ph.D., EEB, now Adjunct Assist Prof at South Dakota State U.).
 2010-2012 Adam Sullivan (Ph.D., Mechanical, Aeronautical and Biomedical Engineering, now Strategic Director of Artificial Intelligence at LabCorp).

Thesis committees - external

- 2014-2016 Carolyn Ayers (Ph.D., PBEE, Emory University, now co-founder of Hello SciCom.).
 2001-2005 Berry Brosi (Ph.D., Biology, Stanford U., now Assoc. Prof., U. Washington).
 2003 Klaas Hartman (B.A. Hons., Mathematics, James Cook U., now Senior Research Fellow, U. Tasmania).
 2002 Michael Bode (B.A. Hons., Mathematics, James Cook U., now Professor, Queensland U Tech.).

MEETINGS, WORKSHOPS, AND PRESENTATIONS**Meeting Organizer**

- 2022 Breakout session, Evaluation of actionable science. Southeast Climate Adaptation Science Center, Regional Science Symposium, Gulf Shores, AL (Sep. 2022)
 2019 Breakout session, Evaluation of adaptation science and management. Southeast Climate Adaptation Science Center, Regional Science Symposium, New Orleans, LA (Nov. 2019)
 2019 Organized Oral Session, Ecological Society of America, History, Current status, and future of biodiversity in the Southeast, a center of biodiversity in the United States. Ecological Society of America, 104th Annual Meeting, Louisville, KY (Aug. 2019).
 2019 Organized Oral Session, Ecological Society of America, Managing Ecological Systems at Multiple Scales: The Role of Institutions and Stakeholder Interactions. Ecological Society of America, 104th Annual Meeting, Louisville, KY (Aug. 2019).

- 2017-2019 Hierarchies in Conservation Planning, National Institute for Mathematical and Biological Synthesis, Knoxville, TN (May 2019, January 2019, May 2018, Nov. 2017). This Working Group brings together ecologists, mathematicians, computer scientists and economists to determine how accounting for hierarchical institutional structures changes spatial prioritization approaches in conservation.
- 2017 Delivering the research policy-makers & practitioners need in Tennessee & the Southern Appalachians, South East Climate Adaptation Science -NIMBioS Working Group in Knoxville, TN (December 2017). This Working Group brought together ecologists and economists with policy-makers and practitioners from both public agencies and NGOs working in the Southern Appalachian region.
- 2017 NIMBioS Research Incubator Roundtable, Conservation and Natural Resource Management (March 2017). Research scoping discussion between interdisciplinary scientists and regional conservation and natural resource managers.
- 2015 Symposium, Poster Session & Special Session, Coupled Natural and Human Systems & Conservation Science, Ecological Society of America, 100th Annual Meeting, Baltimore, MD (Aug. 2015). This suite of thematically-linked activities explored what kinds of ecological science held most promise for addressing pressing societal problems in the face of global change, focusing in particular on the potential of coupled human and natural systems science approaches.
- 2014 Symposium, Pretty Darn Good Control of Noisy, Uncertain and Dynamic Ecological Systems, Ecological Society of America, 99th Annual Meeting, Sacramento, CA (Aug. 2014). This ESA symposium showcased application of new optimization approaches to questions from life history theory and natural resource management.
- 2013 Sustainability and Complex Systems, Mathematical Biosciences Institute, Columbus, OH (Oct. 2013). This workshop brought together 50 researchers from mathematics, ecology and economics and from five different countries to discuss future directions for using modeling to inform sustainable ecosystem management.
- 2011-2015 Pretty Darn Good Control, National Institute for Mathematical and Biological Synthesis, Knoxville, TN (Jan. 2015, Jan. 2013, Mar. 2012, & Sep. 2011). This Working Group brings together ecologists, mathematicians, control engineers and economists to examine the suitability of alternative approaches to optimal control for application in ecology.
- 2009 Identifying the Ecological Research Priorities of Business, the Royal Society, London, UK (Feb. 2009). The meeting brought together leading UK ecologists, research funders, and representatives from multinational companies drawn from three different sectors (including Sibelco, Imerys, Rolls Royce, IBM, BAE Systems, Willis Re, and Lloyds) to discuss how to discuss questions and delivery models for making ecological research relevant to businesses.
- 2007 Modeling Farm Production Systems and their Ecological Impacts, University of Sheffield, UK (Oct. 2007). A technical workshop on using models to bridge the interdisciplinary interface between economics and ecology that brought together 18 UK and international academics from 8 different research institutions.
- 2006 Research in the Uplands, Castleton, UK (jointly with K. Hubacek & A. Bonn; Feb. 2006). The meeting was attended by 80 delegates representing 25 different stakeholder organizations and 10 different research institutions with an interest in science and policy in the Peak District.
- 2003 Goldman Symposium on Conservation Finance, Stanford University, CA (jointly with G. C. Daily; May 2003). This meeting brought together representatives drawn from the private sector (e.g., EPRI, Beartooth Capital), international NGOs (TNC, WWF, EDF), and academics from six different disciplines including a Nobel Laureate, Crafoord Prize Winner and two former members of President Clinton's Council of Economic Advisors to discuss new solutions for financing conservation.

Invited Professional Workshop Participation

- 2022 Conservation Science, Management and Decision-making: Guest Lecture Series. Nov. 2022. Serrapilheira/ICTP-SAIFR Training Program in Quantitative Biology and Ecology. Sao Paulo, Brazil.
- 2022 Roundtable on Benefits Transfer. Oct. 2022. White House Office of Science and Technology Policy Roundtable. Virtual.
- 2018 Extending the theory of sustainability, December 2018. NIMBioS, Knoxville, TN, USA.
- 2018 Ecological economic modeling of mitigation banking for biodiversity. May 2018. Glasgow, UK.
- 2018 Assessing habitat condition for the conterminous US. March 2018. Environmental Defense, Washington, DC, USA.
- 2018 Ecosystem federalism Working Group. January 2018, December 2018. NIMBioS, Knoxville, TN, USA.
- 2016 Moving ecosystem service models to human benefits. May 2016. Burlington, VT, USA.
- 2015 Ecology and society: Biodiversity and global change. June 2015. Cote Summer School, University of Bordeaux, France.
- 2015 Next Generation Models for Ecosystem Services and Biodiversity. Apr. 2015. German Centre for Integrative Biodiversity Research (iDiv), Halle-Jena-Leipzig, Germany.
- 2013 TNC All Science. Dec. 2013. The Nature Conservancy, San Jose, CA, USA.
- 2013 Spatial Management of Biodiversity. Mathematics of Bio-Economics. Mar. 2013. Institut Henri Poincare, Paris, France.
- 2011 US FWS Appalachian Landscape Scale Cooperative. Dec. 2011. US Fish and Wildlife Service, Blacksburg, VA, USA.
- 2011 NIMBioS Investigative Workshop: Coral Reef Ecosystems. Jul. 2011. National Institute for Mathematical and Biological Synthesis, Knoxville, TN, USA.
- 2009 Optimal control tutorial. Dec. 2009. National Institute for Mathematical and Biological Synthesis, Knoxville, TN, USA.
- 2009 The Economics of Ecosystems and Biodiversity (TEEB). Apr. 2009. CPB, London, UK.
- 2008 Linking Ecological and Economic Systems. Nov. 2008. Grantham Institute/CPB, London, UK.
- 2008 Natural England Board Workshop: Ecosystem Services. Delivery Mechanisms: Operationalising the Concept in England. Jun. 2008. Natural England, Sheffield, UK.
- 2008 Pollination Services in a Changing World. May 2008. Leeds, UK.
- 2008 Biodiversity Offsets. May 2008. Natural England, London, UK.
- 2007 ACTE European Education Conference. Oct. 2007. ACTE, Munich, Germany.
- 2006 Kathryn Fuller Science for Nature Symposium on Ecosystem Services. Nov. 2006. WWF US, Washington, DC, USA.
- 2006 Birds of the Peak District. Oct. 2006. Edale, UK.
- 2006 Sustainable Development and Well-being. Jun. 2006. DEFRA, Sheffield, UK.
- 2006 Ecosystem Services and Biodiversity Function. Feb. 2006. NCEAS, Santa Barbara, CA, USA.
- 2005 Effectiveness of Protected Areas. Nov. 2005. UK PopNet, Peterborough, UK.
- 2005 Ecosystem Services. Sep. 2005. NCEAS, Santa Barbara, CA, USA.
- 2005 Conservation Incentives. May 2005. Stanford University, Stanford, CA, USA.
- 2005 Free Market Environmentalism in Theory and Practice. Mar. 2005. Cambridge, UK.
- 2005 UK Policy Questions for Ecology. Feb. 2005. Norwich, UK.
- 2005 Millennium Ecosystem Assessment: Business and Industry Synthesis Panel. Jan. 2005. MEA, Scheveningen, The Netherlands.
- 2004 Effectiveness of Protected Areas, Nov. 2004. Castleton, UK.
- 2004 Millennium Ecosystem Assessment: Business and Industry Synthesis Panel. Aug. 2004. MEA, Portland, OR, USA.
- 2003 Katoomba Group. Oct. 2003. Zurich, Switzerland.
- 2003 Market-based Approaches to Biodiversity Conservation. May 2003. New York, NY, USA.
- 2002 Measuring Conservation Progress. Dec. 2002. The Nature Conservancy, Islamorada, FL, USA.

- 2002 Population Connectivity in Marine Systems. Nov 2002. Durango, CO, USA.
- 2002 Endangered Species Act at 30. Nov. 2002. Santa Barbara, CA, USA.
- 2002 Modeling of Larval Dispersal. Jan 2002. Santa Barbara, CA, USA.
- 2001 Economics of Biodiversity. May 2001. NCEAS, Santa Barbara, CA, USA.
- 2000 Ecosystem Services. Nov. 2000. Stanford, CA, USA.
- 1999 Theoretical Issues in Ecological Economics. Jan. 1999. NCEAS, Santa Barbara, CA, USA.

Invited Seminars and Presentations

- 2023 Supporting SE states with 2025 SWAP revisions: Vulnerability assessment methods. Jan 2023. NE CASC, Northeast Climate Change Working Group. Webinar.
- 2022 Accounting for institutional structure in systematic conservation planning. Nov 2022 Environment and climate working group, Mechanism Design for Social Good. Webinar.
- 2018 The ecological benefits and economic costs of protected areas. May 2018. Glasgow U., UK.
- 2017 The ecological benefits and economic costs of protected areas. Sep. 2017. U. Illinois, USA.
- 2017 The ecological benefits and economic costs of protected areas. Jun. 2017. James Cook U., Australia.
- 2017 The ecological benefits and economic costs of protected areas. Jun. 2017. U. Melbourne, Australia.
- 2017 Designing cost effective investments in biodiversity conservation. Jul. 2017 Royal Melbourne Institute of Technology, Australia.
- 2017 Ecological systems vary in space and time, but how much of that variation should policy recommendations respond to? Jul. 2017 Queensland University of Technology, Australia.
- 2017 The ecological benefits and economic costs of protected areas. Jun. 2017. U. Queensland, Australia.
- 2017 The ecological benefits and economic costs of protected areas. Apr. 2017. U. Washington, US.
- 2017 The ecological benefits and economic costs of protected areas. Jan. 2017. North Carolina State U, US.
- 2016 The ecological benefits and economic costs of protected areas. Nov. 2016. University of Minnesota, US.
- 2016 The ecological benefits and economic costs of protected areas. Sep. 2016. Duke University, US.
- 2016 The ecological benefits and economic costs of protected areas. Jul. 2016. University of Aberdeen, UK.
- 2016 Ecological systems vary in space and time, but how much of that variation should policy recommendations respond to? Jul. 2016. University of Stirling, UK.
- 2016 The ecological benefits and economic costs of protected areas. Jun. 2016 University of Stirling, UK.
- 2016 Designing cost effective investments in biodiversity conservation. Apr. 2016 Arizona State University, Tempe, AZ.
- 2015 Are conservation organizations configured for effective adaptation to global change? Sep. 2015. Webinar, US Fish and Wildlife Service, National Conservation Training Center, Shepherdstown, VA, USA.
- 2015 Designing cost effective investments in biodiversity conservation. Jun. 2015. Keynote, World Conference on Natural Resource Modeling RMA 2015, Bordeaux, France.
- 2015 Are conservation organizations configured for effective adaptation to global change? May 2015. Webinar, NE Climate Science Center, Amherst, MA, USA.
- 2015 Designing cost effective investments in biodiversity conservation. Apr. 2015. University of Florida, Gainesville, FL, USA.
- 2014 Designing cost effective investments in biodiversity conservation. Dec. 2014 Brown University.
- 2014 Designing cost effective investments in biodiversity conservation. Dec. 2014 Yale University.

- 2014 Management and acquisition costs of terrestrial protected areas. Oct. 2014. Webinar, Conservation Biology Institute, Corvallis, OR, USA.
- 2014 Inclusion of costs in conservation planning depends on limited datasets and hopeful assumptions. Mar. 2014. Webinar, Natural Capital Project, Stanford University, Stanford, CA, USA.
- 2013 What shapes TNC's land acquisition strategy? And does the size of an acquisition matter? Oct. 2013. The Nature Conservancy, Arlington, VA, USA.
- 2013 The design of incentive payment programs for biodiversity conservation. Sep. 2013. Murray State University, Murray, KY, USA.
- 2013 The influence of the size of protected areas on their ecological and economic effectiveness. Jul. 2013. Oak Ridge National Laboratory, Oak Ridge, TN, USA.
- 2013 Designing cost effective conservation payment programs. Mar. 2013. Institut Henri Poincare, Paris, France.
- 2012 The design of incentive payment programs for biodiversity conservation. Sep. 2012. Seminar, Graduate Program in Population Biology, Ecology and Evolution, Emory University, Atlanta, GA, USA.
- 2012 The design of incentive payment programs for biodiversity conservation. Sep. 2012. Department Seminar, Ecology and Evolutionary Biology, University of Tennessee, Knoxville, TN, USA.
- 2012 Lessons for ecosystem service mapping from Britain. Sep. 2012. Webinar, Natural Capital Project, Stanford University, Stanford, CA, USA.
- 2011 Lessons for ecosystem service mapping from Britain. Jun. 2011. Seminar, World Wildlife Fund US, Washington, DC, USA.
- 2010 The optimal design of investments in biodiversity conservation. Mar. 2010. Department Seminar, Forestry, Wildlife and Fisheries, University of Tennessee, Knoxville, TN, USA.
- 2009 Optimal spatial management of marine fisheries - a case study example. Oct. 2009. Seminar, National Institute for Mathematical and Biological Synthesis, Knoxville, TN, USA.
- 2009 The design of investments in biodiversity conservation. Feb. 2009. Department seminar, Department of Zoology, University of Wyoming, Laramie, WY, USA.
- 2009 The design of investments in biodiversity conservation. Feb. 2009. Department seminar, Department of Ecology and Evolutionary Biology, University of Tennessee, Knoxville, TN, USA.
- 2009 The design of investments in biodiversity conservation. Feb. 2009. Department seminar, Department of Ecology and Evolution, University of Michigan, Ann Arbor, MI, USA.
- 2009 The design of investments in biodiversity conservation. Jan. 2009. School seminar, School of Public and Environmental Affairs, Indiana University, Bloomington, IN, USA.
- 2008 Ecological economic theory for protected area design. Apr. 2008. Department Seminar, Biological Sciences and Environmental Sciences, University of East Anglia, UK.
- 2008 Ecological economic theory for protected area design. Apr. 2008. School Seminar, Environment and Natural Resources and Biological Sciences, Bangor University, UK.
- 2007 Ecological economic theory for protected area design. Jul. 2007. Seminar, Center for Systems Integration and Sustainability, Michigan State University, East Lansing, MI, USA.
- 2007 Ecological economic theory for protected area design. Jul. 2007. Seminar, Biological Sciences, Notre Dame University, Notre Dame, IN, USA.
- 2006 Ecological economic theory for protected area design. Mar. 2006. Department Seminar, Environment, University of York, UK.
- 2006 Land market feedbacks can undermine biodiversity conservation. Jan. 2006. World Wildlife Fund US Science Seminar, Washington, DC, USA.
- 2005 Ecological economic theory for protected area design. Oct. 2005. Department Seminar, Biology, University of St. Andrews, UK.
- 2005 Directed movement and advection: The neglected components of dispersal. Oct. 2005. Seminar, Centre for Research into Ecological and Environmental Modelling, University of St. Andrews, UK.

- 2004 The ecological and evolutionary implications of directed movement and advection: The neglected components of dispersal. Nov. 2004. Seminar, Evolution and Behaviour Group, Animal & Plant Sciences, University of Sheffield, UK.
- 2004 The design of conservation investments. Oct. 2004. Department Seminar, Animal & Plant Sciences, University of Sheffield, UK.
- 2003 Ecological economic theory for protected area design. Dec. 2003. Department of Biology, Leicester University, UK.
- 2003 Ecological economic theory for protected area design. Dec. 2003. Department Seminar, Animal & Plant Sciences, University of Sheffield, UK.
- 2003 Ecological economic theory for protected area design. Oct. 2003. Stanford University, Stanford, CA, USA.
- 2003 Ecological economic theory for protected area design. May 2003. Department Seminar, Biology, Glasgow University, UK.
- 2003 Ecological economic theory and applications. May 2003. Department Seminar, Mathematics, University of Edinburgh, UK.
- 2003 Ecological economic theory and applications. May 2003. Department Seminar, Mathematics, University of Bath, UK.
- 2002 Ecological economic theory for protected area design. Sep. 2002. Seminar, Institute of Zoology, London, UK.
- 2002 Ecological economic theory for protected area design. Sep. 2002. Department of Zoology, Cambridge University, UK.
- 2002 Managing fisheries on highly migratory species: A time-area closure to protect spawning bluefin tuna + The economic value of ecological stability. Jun. 2002. Natural Resources Forum, Stanford University, Stanford, CA, USA.
- 2001 Physical and behavioral models of reef fish larval dispersal. Nov. 2001. Long Marine Lab Seminar, University of California, Santa Cruz, CA, USA.
- 2000 Modelling the early life history of reef fishes. Mar. 2000. Department Seminar, Mathematics, James Cook University, Australia.

Papers Presented at Professional Meetings

- 2022 Giam, X., **Armsworth P.**, Papes, M., Roth, S., Jackson, H., Richards, C., Barve, N., Kim, S. Oct 2022. Assessing the vulnerability of species to climate change: a comparison of niche models and index-based approaches. Southeast Association of Fish and Wildlife Agencies Annual Conference. Charleston, WV.
- 2022 Peterson, M.N., Tiffany, K., Larson, L.R., Stevenson, K., Seekamp, E., Martin, M., Vaughn, L., **Armsworth, P.R.**, Oct. 2022. Improving collaborative conservation efforts in the SEAFWA region using insights from wildlife conservation professionals. Southeast Association of Fish and Wildlife Agencies Annual Conference. Charleston, WV.
- 2022 Courtney, S., Hyman, A., McNeal, K., Armsworth, P., Maudlin, L., Oct. 2022. Research evaluation for better climate adaptation. National Adaptation Forum, Washington DC.
- 2022 Hyman, A.A., Courtney, S.L., McNeal, K., Bialic-Murphy, L., Furiness, C., Eaton, M.J., **Armsworth, P.R.**, Sep. 2022. Evaluating actionable science projects in the SE CASC. SE CASC, Regional Science Symposium, Gulf Shores, AL.
- 2022 Simpson, K., Nthambi, M., de Vries, F., **Armsworth, P.R.**, Dallimer, M. Hanley, N., Sep. 2022. Comparing ecological and economic outcomes under a payment for results compared to a payment for actions agri-environment scheme. Biodiversity and Economics for Conservation Conference. Exeter, U.K.. Contributed Oral Presentation.
- 2022 Chang, C., **Armsworth, P.R.**, Masuda, Y., Jul. 2022. “Environmental twitter personas and issue concerns converge and diverge across countries”. North American Congress on Conservation Biology. Reno, NV. Contributed oral presentation.
- 2022 Le Bouille, D., Fargione, J., **Armsworth, P.R.**, Jul 2022. “The cost of buying land for protected areas in the U.S.” North American Congress on Conservation Biology. Reno, NV. Contributed oral presentation.

- 2022 Yoon, H.S., Vijay, V., **Armsworth P.R.**, Jul 2022. "Spatial heterogeneity in the added value from protecting land influences protected area priorities." North American Congress on Conservation Biology. Reno, NV. Speed talk.
- 2022 Simpson, K., Hanley, N.D, **Armsworth, P.R.**, Dallimer, M. Jun 2022 "Ecological and economic implications of alternative biodiversity offsets markets". European Society for Ecological Economics Conference. Online presentation.
- 2022 Simpson, K., Hanley, N.D, **Armsworth, P.R.**, Dallimer, M., De Fries, F. Mar 2022 "Ecological and economic implications of alternative biodiversity offsets markets". Applied Environmental Economics Conference. Online presentation.
- 2022 Kang, N., **Armsworth, P.R.**, Sims, C., Zhu, G., Cho, S.-H. Feb 2022. "Identifying the downside of not accounting for the diminishing marginal return in the modern portfolio theory for conservation investments." Southern Economics Association Annual Conference. New Orleans, LA. Contributed oral presentation.
- 2021 **Armsworth, P.R.**, Zhu, G., Papes, M., Giam, X. Oct 2021. "Climate-driven changes to habitat suitability in central and southern Appalachian forests: a niche mode approach". Annual Conference of the Southeastern Association for Fish and Wildlife Agencies, Online, presentation.
- 2021 Hyman, A.A., Le Bouille, D., Giam, X., **Armsworth, P.R.**, Zhu, G., Sims, C. 2021. "Disagreements about how to value the future among conservationists affects today's protection priorities." Ecological Society of America, Online, presentation.
- 2021 Vijay, V., **Armsworth, P.R.**, Fisher, J.R.B. Aug 2021. "Understanding tradeoffs and synergies in spatial prioritization for conservation in the conterminous US". Ecological Society of America, Online, presentation.
- 2021 Simpson, K., Hanley, N. **Armsworth, P.**, de Vries, F., Dallimer, M. Jun. 2021. "Incentivising biodiversity net gain with an offset market". Annual Conference of the European Association of Environmental and Resource Economists, Online, presentation
- 2021 Courtney, S., McNeal, K., Hyman, A., **Armsworth, P.** & Maudlin, L. Apr. 2021. "Climate adaptation science to action: Measuring use of CASC-funded research." Geological Society of America Southeast Regional Meeting, Online, Presentation.
- 2021 Simpson, K., Hanley, N. **Armsworth, P.**, de Vries, F., Dallimer, M. Mar 2021. "Incentivising biodiversity net gain with an offset market". Agricultural Economics Society, Online, presentation.
- 2021 Courtney, S., McNeal, K., Hyman, A., **Armsworth, P.** & Maudlin, L. Jan. 2021. "Measuring the Use of Actionable Science for Natural and Cultural Resource Management". American Meteorological Society, Online, Presentation.
- 2020 Yoon, H.S., **Armsworth P.R.** Jul 2020. "Deciding when to acquire land for conservation." North American Congress for Conservation Biology. Online, poster.
- 2020 Needham, K., de Vries, F.P, Dallimer, M., **Armsworth, P.R.**, Hanley, N. Mar. 2020. "Investigating the Potential of Biodiversity Offset Markets in the UK". UK Network for Environmental Economics envecon2020, London, UK. Plenary presentation.
- 2020 Needham, K., de Vries, F.P, Dallimer, M., **Armsworth, P.R.**, Hanley, N. June 2020. "Can biodiversity offset markets prove to be a cost-effective conservation mechanism?" European Association of Environmental and Resource Economists Annual Conference. Online. Presentation.
- 2020 Needham, K., de Vries, F.P, Dallimer, M., **Armsworth, P.R.**, Hanley, N. Mar. 2020. "Investigating the Potential of Biodiversity Offset Markets in the UK". UK Network for Environmental Economics envecon2020, London, UK. Plenary presentation.
- 2020 Needham, K., de Vries, F.P, Dallimer, M., **Armsworth, P.R.**, Hanley, N. Mar 2020 "Can biodiversity offset markets prove to be a cost-effective conservation mechanism?" Economics of biodiversity conservation under climate change conference. Online.
- 2020 Lee, Y.G., **Armsworth, P.R.**, Zhu, G., Sharma, B.P., Clark, C.D., English, B.C., Hayes, D.J., Cho, S. Feb. 2020. "How correlations among biodiversity, ecosystem services, and socioeconomic benefits as conservation objectives affect spatial targeting and synergic or

- tradeoff relationships." Southern Agricultural Economics Association, Louisville, KY. Contributed paper presentation.
- 2019 Zhu, G., Papes, M., Giam, X., **Armsworth, P.R.** Nov. 2019. "Predicting shifts in climatically suitable conditions for vertebrate species of the central and southern Appalachian mountains." Southeast Climate Adaptation Science Center, Regional Science Symposium, New Orleans, LA. Contributed poster presentation.
- 2019 **Armsworth, P.R.**, Benefield, A., Dilkina, B., Fargione, J.E., Fisher, M., Fovargue, R., Giam, X., Harris, J., Helmstedt, K.J., Jackson, H.B., Kroetz, K., Le Bouille, D., Nolte, C., Ochoa-Ochoa, L., Papes, M., Pinnschmidt, A., Sims, C. Aug. 2019. "Accounting for institutional structure in spatial conservation planning." Ecological Society of America, Louisville, KY. Contributed oral presentation.
- 2019 Papes, M., **Armsworth, P.R.**, Giam, X., Zhu, G. Aug. 2019. "Future proofing conservation strategies for distributional shifts of biodiversity in southern Appalachia." Ecological Society of America, Louisville, KY. Contributed oral presentation.
- 2019 Vijay, V., **Armsworth, P.R.** Jul 2019. "Understanding the Phenomenon of Agricultural Cultivation Inside Protected Areas." International Congress for Conservation Biology, Kuala Lumpur, Malaysia. Contributed oral presentation.
- 2018 **Armsworth, P.R.** Aug. 2018. "Discounting determines whether near and threatened or far and cheap areas should be priorities for establishing protected areas." Ecological Society of America, New Orleans, LA. Contributed oral presentation.
- 2018 Le Bouille, D., Fargione, J., **Armsworth, P.R.** Jul. 2018. "Accurate acquisition cost prediction for optimal reserve planning." North American Congress for Conservation Biology, Toronto, Canada. Contributed poster presentation.
- 2018 Segovia, A.R., **Armsworth, P.R.** Jul. 2018 "Who studies where? Boosting tropical conservation research where it is most needed." Latin America and Caribbean Congress for Conservation Biology, St. Augustine, Trinidad and Tobago. Contributed poster presentation.
- 2018 Daniels, M.K., Larson, E.R., **Armsworth, P.R.**, Iacona, G.D. May 2018. "Comparing the effects of roads and streams on invasive plant abundance in Appalachian protected areas." Society for Freshwater Science Annual Meeting, Detroit, MI. Contributed poster presentation.
- 2017 Smith, B., **Armsworth, P.**, Crick, H., Davies, Z., MacGregor, N., Shwartz, A., Sykes, R. Jul. 2017. "Is buying or renting land the best way to develop ecological networks on private land?" International Congress of Conservation Biology, Cartagena, Colombia. Contributed oral presentation.
- 2017 Kroetz, K., Sanchirico, J.N., **Armsworth, P.R.** Jun 2017. "Competing Impacts of Local Actors on Large Scale Conservation Outcomes". Northeastern Agricultural and Resource Economics Association Annual Meeting, Arlington, Va. Contributed oral presentation.
- 2016 Stachowiak, C., Crain, B.J., Kroetz, K., Sanchirico, J.N., **Armsworth, P.R.** Aug. 2016. "Is site disturbance different between top-down and bottom-up protected areas?" Ecological Society of America, Fort Lauderdale, Fl.
- 2016 Fovargue, R., **Armsworth, P.R.**, Fisher, M., Harris, J. Aug. 2016. "Quantifying a conservation fundraising landscape and factors defining its spatial distribution." Ecological Society of America, Fort Lauderdale, Fl.
- 2016 Dumoulin, C.E., **Armsworth, P.R.** Aug. 2016. "Pathways to community collapse". Ecological Society of America, Fort Lauderdale, Fl. Ecological Society of America, Fort Lauderdale, Fl.
2016. LeBouille, **Armsworth, P.R.**, Fargione, J.E. "Describing and explaining the landscape of conservation costs across the US." Ecological Society of America, Fort Lauderdale, Fl. Ecological Society of America, Fort Lauderdale, Fl.
- 2016 Ayara, A.B., Cho, S., Clark, C., Lambert, D., **Armsworth, P.R.** Jul. 2016. "Cost Efficiency of Payment Systems for Forest Carbon Sequestration Incorporating Spatial and Temporal Heterogeneities." American Agricultural Economics Association. Boston, MA. Contributed oral presentation.

- 2016 Thiel, K., Cho, S.-H. & **Armsworth, P.** Jul. 2016. "Effects of the size of protected areas on return on investment in the presence of spatial spillovers." American Agricultural Economics Association. Boston, MA. Contributed oral presentation.
- 2016 Bode, M., Sanchirico, J.N., **Armsworth, P.R.** Jul. 2016. "Ecosystems are complex, but do we need complex institutions to manage them effectively?" Society for Conservation Biology Oceania, Brisbane, Australia. Contributed oral presentation.
- 2016 Crain, B., **Armsworth, P.R.**, Sanchirico, J.N., Kroetz, K., Klausmeyer, K., Stachowiak, C. Jul. 2016. "Local ballot measures enable citizens to make noteworthy contributions to biodiversity conservation that are comparable to statewide efforts." North American Congress for Conservation Biology. Madison, WI. Contributed oral presentation.
- 2016 Le Bouille, D., **Armsworth, P.R.** Jul. 2016. "The time path of investments for the management of protected areas." North American Congress for Conservation Biology. Madison, WI. Contributed oral presentation.
- 2016 McKenzie, P., **Armsworth, P.R.** Apr. 2016. "Prioritizing Areas of Investment to Optimize Tree Diversity Across Large Spatial Scales". National Conference on Undergraduate Research, Asheville, NC, US. Contributed poster.
- 2015 Armsworth, P.R., Cho, S., Hughes, J., Hayes, D.J., Iacona, G.D., Kim, R., Larson, E.R., Sutton, N. Aug. 2015. "Terrestrial protected area design through the coupled natural and human systems lens." Ecological Society of America Annual Meeting, Baltimore, MD. Contributed oral presentation.
- 2015 Dumoulin, C.E., Armsworth, P.R. Aug. 2015. "Specialization, stability and stochasticity: Extinction risk in a plant-pollinator model." Ecological Society of America Annual Meeting, Baltimore, MD. Contributed oral presentation.
- 2015 Larson, E.R., Howell, S., Kareiva, R., Armsworth, P.R. Aug. 2015. "Conservation planning in the Anthropocene: Reconciling biodiversity needs with philanthropic constraints." Ecological Society of America Annual Meeting, Baltimore, MD. Contributed oral presentation.
- 2015 Fovargue, R., Armsworth, P.R., Fargione, J.E. Aug. 2015. "The true cost of conservation investments: The opportunity cost of financing land protection." Ecological Society of America Annual Meeting, Baltimore, MD. Contributed Poster.
- 2015 Le Bouille, D., Armsworth, P.R., Iacona, G.D. Aug. 2015. "The time path of investments for the management of protected area." Ecological Society of America Annual Meeting, Baltimore, MD. Contributed Poster.
- 2015 Fovargue, R., Armsworth, P.R., Fargione, J.E. Aug. 2015. "What is the real cost of conservation investments? Calculating the conservation opportunity cost of financing land protection." International Congress for Conservation Biology. Montpellier, France. Montpellier, France. Contributed poster.
- 2015 Steadman, J., Armsworth, P.R., Dallimer, M., Hornibrook, S., St John, F.A.V., Davies, Z.G. Aug. 2015 "Understanding partnerships for delivering conservation outcomes: How and why do corporations and NGOs collaborate?" International Congress for Conservation Biology. Montpellier, France. Montpellier, France. Contributed oral presentation.
- 2015 Cho, S.H., Kim, T., Armsworth, P.R. "Capturing spatial spillover effects of return on investment in land conservation". Jan. 2015. Southern Agricultural Economics Association 2015 Annual Meeting. Atlanta, GA. Contributed oral presentation.
- 2015 Lee, J., Cho, S.H., Kim, T., Yu, T.H., Armsworth, P.R. "Exploring tax-based payment approaches for forest carbon sequestration". Jan. 2015. Southern Agricultural Economics Association 2015 Annual Meeting. Atlanta, GA. Contributed oral presentation.
- 2014 Armsworth, P.R., Bode, M., Boettiger, C., Chades, I., Donahue, M.J., Hastings, A., Karnauskas, M.A., LaRiviere, J., Paris, C., Ryan, D., Sanchirico, J.N., Toews, C. "Overview: pretty darn good control of ecological systems". Aug. 2014. The Ecological Society of America's Annual Conference, Sacramento, CA. Contributed oral presentation.
- 2014 Boettiger, C., Bode, M., Sanchirico, J.N., LaRiviere, J., Hastings, A., Armsworth, P.R. "Fisheries management when quotas are costly to change." Aug. 2014. The Ecological Society of America's Annual Conference, Sacramento, CA. Contributed oral presentation.

- 2014 Bode, M., Sanchirico, J.N., Armsworth, P.R. "Ecosystems may be complex, but just how complex do we need our institutions to be to manage them effectively?" Aug. 2014. The Ecological Society of America's Annual Conference, Sacramento, CA. Contributed oral presentation.
- 2014 Milt, A.W., Armsworth, P.R. "Shale gas surface infrastructure in Appalachia: reducing impacts through better planning." Aug. 2014. The Ecological Society of America's Annual Conference, Sacramento, CA. Contributed oral presentation.
- 2014 Dumoulin, C.E., Armsworth, P.R. "Stochasticity and extinction risk in a mutualist network." Aug. 2014. Ecological Society of America Annual Meeting, Sacramento, CA. Contributed oral presentation.
- 2014 Bode, M., Armsworth, P.R., Sanchirico, J., Almany, G., Jones, G.P. "Larval dispersal and the scale of coral reef fish management." Jul. 2014. The Future of Coral Reefs Symposium, Canberra, Australia. Invited oral presentation.
- 2014 Cho, S., Kim, T., Larson, E.R., Armsworth, P.R. "Economies of scale in costs of land acquisition for nature conservation." Jul. 2014. Agricultural and Applied Economics Association, Minnesota, MN. Invited oral presentation.
- 2014 Shwartz, A., Davies, Z.G., Adams, B., Armsworth, P.R., Ausden, M., Crick, H., Eigenbrod, F., Gonner, C.A., Hill, C., Knight, A., Macgregor, N., Phalan, B., Stoneman, R., Smith, B. "Scaling up from protected areas: the value of establishing large conservation areas." Jun. 2014. BES and DICE Joint Symposium Considering the Future of Conservation, University of Kent, UK. Contributed poster.
- 2014 Sutton, N.D., Armsworth, P.R. "Spatial grain of acquisition cost and biodiversity benefit data determines the apparent effectiveness of an opportunistic conservation strategy." Apr. 2014. NatureServe's Biodiversity Without Boundaries 2014 conference, New Orleans, LA. Contributed oral presentation.
- 2013 Milt, A.W., Armsworth, P.R. "Environmental impacts of Marcellus gas development: Tradeoffs among impacts and siting practices." Dec. 2013. The Nature Conservancy's All Science Meeting, Santa Clara, CA. Contributed poster.
- 2013 Armsworth, P.R. "Designing cost effective conservation payment programs." Nov. 2013. China-US Joint Research Center for Ecosystem and Environmental Change, Annual Conference. Gatlinburg, TN. Invited oral presentation.
- 2013 Kim, T, Cho, S., Larson, E., Armsworth P.R. "The effect of the size of an area on the cost of acquiring the site for protection: An application of propensity score matching." Nov. 2013. 60th Annual North American Meetings of the Regional Science Association International, Atlanta, GA. Contributed oral presentation.
- 2013 Dallimer M., Tinch D., Hanley N., Irvine K.N., Rouquette J.R., Warren P.H., Maltby L., Gaston K.J., Armsworth P.R. "Quantifying preferences for the natural world using monetary and non-monetary techniques." Nov. 2013. Marine Alliance for Science and Technology for Scotland (MASTS) Workshop, Crieff, UK.
- 2013 Kim, T., Cho, S., Larson, E.R., Armsworth, P.R. "The impact of protected area size on land acquisition costs for conservation." Aug. 2013. Agricultural and Applied Economics Association and Canadian Agricultural Economics Society Joint Meeting, Washington, DC. Contributed oral presentation and paper.
- 2013 Fovargue, R., Armsworth, P.R., Bode, M. "Size and Spacing Rules for Marine Protected Areas: Useful for Management?" Aug. 2013. Ecological Society of America Annual Meeting, Minneapolis, MN. Contributed oral presentation.
- 2013 Iacona, G. D., Bode, M., Armsworth, P.R. "Modeling the effectiveness of funding biodiversity protection as a multiplayer game with interacting conservation organizations." Aug. 2013. INTEcol, London, UK. Contributed oral presentation.
- 2013 Armsworth, P.R., Acs, S., Dallimer, M., Gaston, K.J., Hanley, N., Wilson, P. "Designing cost effective conservation payment programs." Jul. 2013. 26th International Congress on Conservation Biology, Baltimore, MD. Contributed oral presentation.

- 2013 Dumoulin, C.E., Armsworth, P.R. "Locating conservation offices for efficient management." Jul. 2013. 26th International Congress for Conservation Biology, Baltimore, MD. Contributed poster.
- 2013 Fovargue, R., Armsworth, P.R., Bode, M. "Size and Spacing Rules for Marine Protected Areas: Useful or not?" Jul. 2013. 26th International Congress on Conservation Biology, Baltimore, MD. Contributed oral presentation.
- 2013 Iacona, G.D., Bode, M., Armsworth, P.R. "Measuring the effectiveness of funding biodiversity conservation using a game theoretic framework." Jul. 2013. 26th International Congress for Conservation Biology, Baltimore, MD. Contributed poster.
- 2013 Milt, A.W., Armsworth, P.R. "How additional rare species surveys change our conservation priorities." Jul. 2013. 26th International Congress for Conservation Biology, Baltimore, MD. Contributed oral presentation.
- 2013 Beckett, C., Dumoulin, C.E., Milt, A., Armsworth, P.R. "Recovery of predators and prey under scale disparities." Jul. 2013. University of Tennessee STEM REU Symposium, Knoxville, TN. Contributed Poster.
- 2013 Dumoulin, C.E., Milt, A., Armsworth, P.R. "Predators, prey and pattern at disparate scales." May 2013. IGERT Poster & Video Competition, University of Tennessee, Knoxville, TN. Contributed poster and video presentation.
- 2012 Iacona, G. D., Price, F.D., Armsworth, P.R. "Predicted invadedness of protected areas varies across species but is independent of funding." Dec. 2012. Ecological Society of Australia Conference, Melbourne, VIC, Australia. Contributed oral presentation.
- 2012 Ayers, C.A., Armsworth, P.R., Brosi, B.J. "The effects of memory and learning constraints on short-term foraging specialization in bees: An individual-based modeling approach." Nov. 2012. Entomological Society of America Annual Meeting, Knoxville, TN. Contributed oral presentation.
- 2012 Armsworth P.R. "Global environmental change: what is coming and why you should care." Nov. 2012. 43rd Annual Meeting of the Decision Sciences Institute, San Francisco, CA. Invited oral presentation.
- 2012 Hanley, N., Armsworth, P.R., Acs, S., Dallimer, M., Gaston, K.J., Wilson, P. "The costs of policy simplification in conservation incentive programs." Sep. 2012. Annual Bioecon Conference on Resource Economics, Biodiversity Conservation and Development. Cambridge, UK. Contributed oral presentation.
- 2012 Armsworth, P.R., Acs, S., Dallimer, M., Gaston, K., Hanley, N., Wilson, P. "Designing cost effective conservation payment programs." Aug. 2012. Ecological Society of America, Portland, OR, USA. Contributed oral presentation.
- 2012 Iacona, G.D., Price, F.D., Armsworth, P.R. "How does site invadedness relate to funding for invasive plant treatment?" Aug. 2012. Ecological Society of America Annual Meeting, Portland, OR, USA. Contributed oral presentation.
- 2012 Dumoulin, C.E., Milt, A., Armsworth, P.R. "Modeling spatial information transfer across trophic levels." Aug. 2012. Ecological Society of America Annual Meeting, Portland, OR, USA. Contributed poster.
- 2012 Milt, A., Armsworth, P.R. "When more surveying for rare species does not lead to more value for conservation planning." Aug. 2012. Ecological Society of America Annual Meeting, Portland, OR, USA. Contributed poster.
- 2012 Armsworth, P.R., Block, B., Roughgarden, J.E. "Modeling a time-area closure as a tool for managing US tuna fisheries." Jul. 2012. Society for Mathematical Biology Annual Meeting, Knoxville, TN, USA. Contributed oral presentation.
- 2012 Dumoulin, C., Milt, A., Armsworth, P.R. "Modeling spatial information transfer across trophic levels." Jul. 2012. Society for Mathematical Biology Annual Meeting, Knoxville, TN, USA. Contributed poster.
- 2012 Fovargue, R., Armsworth, P.R., Bode, M. "Managing reef fish under stochastic dispersal conditions." Jul. 2012. Society for Mathematical Biology Annual Meeting, Knoxville, TN, USA. Contributed poster.

- 2012 Dallimer, M., Irvine, K.N., Davies, Z.G., Gaston, K.J., Warber, S., Armsworth, P.R. "Birds and the feel good factor: Exploring links between avian diversity and human well-being." Apr. 2012. British Ornithologists' Union Conference, Leicester, UK. Invited oral presentation.
- 2012 Dumoulin, C., Milt, A., Armsworth, P.R. "Tracking spatial information across trophic levels." Mar. 2012. UT-ORNL-KBRIN Bioinformatics Summit, Louisville, KY, USA. Contributed poster.
- 2012 Armsworth, P.R. "Integrating ecology and economics in the design of conservation strategies for a changing world." Feb. 2012. Ecological Society of America, Emerging Issues Symposium, Shepherdstown, WV, USA. Invited oral presentation.
- 2011 Dallimer, M., Irvine, K.N., Armsworth, P.R., Davies, Z.G., Rouquette, J.R., Maltby, L.L., Warren, P.H., Gaston, K.J. "Biodiversity and the feel good factor: Ecological determinants of self-reported well-being among recreational visitors to urban greenspaces." Nov. 2011. URSULA Conference, Sheffield, UK. Invited oral presentation.
- 2011 Dallimer, M., Armsworth, P.R., Hanley, N., Lundhede, T.H., Jacobsen, J.B., Thorsen, B.J. "Who should run the countryside: How the EU spends your money?" Nov. 2011. Newcastle, UK. RELU Conference: Who should run the countryside? Newcastle, UK. Invited poster and interactive workshop.
- 2011 Iacona, G.D., Price, F.D., Armsworth, P.R. "What determines the invadedness of protected areas?" Nov. 2011. Natural Areas Conference, Tallahassee, FL, USA. Contributed oral presentation.
- 2011 Armsworth, P.R., Davies, Z.G., Boyer, A., Kareiva, P. "Historical trends in land conservation undertaken by The Nature Conservancy in the coterminous US." Oct. 2011. Seminar, The Nature Conservancy's All Science Meeting in Olive Branch, MS, USA. Invited oral presentation.
- 2011 Milt, A.W., Johnson, N., Gagnolet, T., Bearer, S., Armsworth, P.R. "Balancing Forest Conservation and Marcellus Gas Development." Oct. 2011. The Nature Conservancy's All Science Meeting in Olive Branch, MS, USA. Contributed poster.
- 2011 Iacona, G.D., Price, F.D., Armsworth, P.R. "What determines the invadedness of protected areas?" Oct. 2011. The Nature Conservancy's All Science Meeting in Olive Branch, MS, USA. Contributed poster.
- 2011 Milt, A.W., Johnson, N., Gagnolet, T., Bearer, S., Armsworth, P.R. "Balancing Forest Conservation and Marcellus Gas Development." Oct. 2011. Student Conference on Conservation Science New York, USA. Contributed poster.
- 2011 Iacona, G.D., Price, F.D., Armsworth, P.R. "Can we predict the cost of invasion in a protected area?" Oct. 2011. Student Conference on Conservation Science New York, USA. Contributed oral presentation.
- 2011 Eigenbrod, F., Bell, V.A., Davies, H.N., Heinemeyer, A., Armsworth, P.R., Gaston, K.J. "The impact of projected increases in urbanization on ecosystem services." Sep. 2011. British Ecological Society Annual Meeting. Sheffield, UK. Contributed oral presentation.
- 2011 Rouquette, J., Dallimer, M., Maltby, L., Armsworth, P.R., Gaston, K.J., Warren, P.H. "Species richness and turnover across multiple taxa in a dendritic river network." Sep. 2011. British Ecological Society Annual Meeting. Sheffield, UK. Contributed oral presentation.
- 2011 Armsworth, P.R., Davies, Z.G., Booth, J., Cantu-Salazar, L., Parnell, M., Stoneman, R. "Opportunities for cost-sharing in conservation: Spatial variation in volunteering effort on protected areas." Aug. 2011. The Ecological Society of America's Annual Conference, Austin, TX, USA. Contributed oral presentation.
- 2011 Dallimer, M., Irvine, Katherine N., Davies, Z.G., Armsworth, P.R., Maltby, L.L., Warren, P. H., Gaston, K.J. "Ecological determinants of well-being among recreational visitors to urban greenspaces." Aug. 2011. The Ecological Society of America's Annual Conference, Austin, TX, USA. Contributed oral presentation.

- 2011 Hughes, M.J., Johnson, E.G., Armsworth, P.R. "Near-optimal temporal and spatial control strategies for kudzu using goats." Aug. 2011. Ecological Society of America, Austin, TX, USA. Contributed poster.
- 2011 Iacona, G.D., Price, F.D., Armsworth, P.R. "What determines the invadedness of protected areas?" Aug. 2011. The Ecological Society of America's Annual Conference, Austin, TX, USA. Contributed poster.
- 2011 Janicki, A., Caddle, J., Cooper, J., Guldan, T., Haque, S., Armsworth, P.R. "Modeling a theoretical "cleaning" agent for white-nose syndrome." May 2011. White-Nose Syndrome Symposium, Little Rock, AK, USA. Contributed poster.
- 2011 Hughes, M.J., Johnson, E.G., Armsworth, P.R. "Near-optimal, local control of kudzu using goats." Mar. 2011. UT-ORNL-KBRIN Bioinformatics Summit, Memphis, TN, USA. Contributed poster.
- 2011 Dumoulin, C.E., Koessler, D., Milt, A., Lineback, N., Armsworth, P.R. "Ecoinformatics for conservation planning." Feb. 2011. UT-ORNL-KBRIN Bioinformatics Summit, Memphis, TN, USA. Contributed poster.
- 2010 Rouquette, J., Dallimer, M., Maltby, L., Armsworth, P.R., Gaston, K.J., Warren, P. "Does species richness and assemblage similarity correlate between instream and riparian taxa?" Sep. 2010. International Rivers Conference, York, UK. Contributed poster.
- 2010 Acs, S., Dallimer, M., Hanley, N., Gaston, K.J., Armsworth, P.R. "Policy impact on farm economy, ecology and land use: An ecological-economic modelling approach." Jul. 2010. International Conference on Economic Modeling, EcoMod Network, Bilgi University, Istanbul, Turkey. Contributed oral presentation at international conference.
- 2009 Dallimer, M., Acs, S., Hanley, N., Robertson, P., Wilson, P., Gaston, K.J., Armsworth, P.R. "The implications of agricultural change on avian diversity & the economics of upland farming." Sep. 2009. Farming and Wildlife Advisory Group Annual Conference, Shropshire, UK. Invited oral presentation.
- 2009 Dallimer, M., Acs, S., Hanley, N., Robertson, P., Wilson, P., Gaston, K.J., Armsworth, P.R. "The implications of agricultural change on avian diversity & the economics of upland farming." Sep. 2009. Second European Congress on Conservation Biology, Prague, Czech Republic. Contributed oral presentation at international conference.
- 2009 Armsworth, P.R., Acs, S., Dallimer, M., Gaston, K.J., Hanley, N., Robertson, P., Tinch, D., Wilson, P. "The sustainability of hill farming." Jul. 2009. Moors for the Future, Bakewell, UK. Contributed oral presentation.
- 2009 Armsworth, P.R., Acs, S., Dallimer, M., Gaston, K.J., Hanley, N., Robertson, P., Tinch, D., Wilson, P. "The future of the uplands." Jun. 2009. Rural Economy and Land Use, London, UK. Invited oral presentation.
- 2009 Gullett, P., Hopkins, J., Armsworth, P.R. "Costs of heathland management." Mar. 2009. Natural England: Heathland Action Plan Meeting. Devon, UK. Invited oral presentation.
- 2008 Armsworth, P.R., Acs, S., Dallimer, M., Gaston, K.J., Hanley, N., Robertson, P., Tinch, D., Wilson, P. "Future impacts of agriculture on biodiversity and socio-economics in the uplands." Jul. 2008. The Future of Farming, Cambridge Conservation Forum / RELU, Cambridge, UK. Invited oral presentation.
- 2008 Booth, J., Gaston, K.J., Armsworth, P.R. "People and protected areas - Benefits and knowledge." Apr. 2008. UK Population Biology Network Conference, York, UK. Invited poster.
- 2008 Armsworth, P.R. "Models of ecological dispersal." Mar. 2008. British Mathematics Colloquium, York, UK. Contributed oral presentation.
- 2008 Booth, J., Gaston, K.J., Armsworth, P.R. "Who benefits from protected areas? Visitor numbers, demographics and knowledge." Mar. 2008. Student Conference on Conservation Science. Cambridge, UK. Contributed oral presentation.
- 2008 Fishburn, I., Gaston, K.J., Kareiva, P., Armsworth, P.R. "Patterns of conservation investment in the US." Mar. 2008. Student Conference on Conservation Science. Cambridge, UK. Contributed poster.

- 2007 Armsworth, P.R. "Profiling carbon emissions from corporate travel." May 2007. Association of Corporate Travel Executives (ACTE), Miami, FL, USA. Invited keynote presentation.
- 2007 Armsworth, P.R. "How we fund solutions to the biodiversity crisis?" May 2007. Nature and Economy Conference, LEI-University of Wageningen, The Netherlands. Invited keynote presentation.
- 2007 Booth, J., Gaston, K.J., Armsworth, P.R. "Who benefits from protected areas?" Apr. 2007. UK Population Biology Network Conference, York, UK. Invited oral presentation.
- 2007 Armsworth, P.R. "Interdisciplinarity and the Millennium Ecosystem Assessment: Research challenges in Europe." Mar. 2007. EU E-congress: Biodiversity and ecosystem services - the Millennium Ecosystem Assessment concept from a European perspective, UK. Invited e-keynote.
- 2006 Armsworth, P.R. "The challenges and opportunities of interdisciplinarity." Dec. 2006. British Ecological Society - DEFRA, Workshop: Assessing Ecosystem Services in the UK. London, UK. Invited keynote presentation.
- 2006 Armsworth, P.R., Acs, S., Dallimer, M., Gaston, K.J., Hanley, N., Robertson, P., Wilson, P. "The sustainability of hill farming." Nov. 2006. Moorlands Research Forum, Moors for the Future, Castleton, UK. Invited oral presentation.
- 2006 Booth, J., Armsworth, P.R., Gaston, K.J., Raffaelli, D. "The distribution of costs and benefits of protected areas in the UK." Sep. 2006. British Ecological Society Annual Meeting. Oxford, UK. Contributed poster.
- 2006 Armsworth, P.R., Gaston, K.J., Hanley, N., Seabrook, M. "A landscape-scale analysis of the sustainability of the hill farming economy and impact of farm production decisions on upland landscapes and biodiversity." Jan. 2006. Rural Economy and Land Use, Manchester, UK. Invited oral presentation.
- 2004 Armsworth, P.R., Gaston, K.J. "Efficient conservation investments." Oct. 2004. Moors for the Future, Castleton, UK. Invited oral presentation.
- 2004 Armsworth, P.R., Daily, G. "Sustainability days." Oct. 2004. Sustainability Days, Stanford, CA, USA. Invited oral presentation.
- 2004 Armsworth, P.R., Gaston, K.J. "Efficient conservation investments." Oct. 2004. Drivers of Change in the Peak District, Castleton, UK. Invited oral presentation.
- 2003 Armsworth, P.R., Kappel, C., Micheli, F., Bjorkstedt, E. "Working seascapes: The protection of endangered species and the conservation of biodiversity in marine ecosystems." Nov. 2003. ESA @ 30, Santa Barbara, CA, USA. Invited oral presentation.
- 2003 Armsworth, P.R., James, M.K., Bode, M., Mason, L., Bode, L. "Local and regional scale population dynamic consequences of reef fish larval dispersal." Aug. 2003. Annual Larval Fish Conference. Santa Cruz, CA, USA. Contributed oral presentation.
- 2003 Armsworth, P.R., Roughgarden, J. "Biodiversity consequences of directed versus random movement patterns." Aug. 2003. Ecological Society of America. Savannah, GA, USA. Contributed oral presentation.
- 2003 Armsworth, P.R., Roughgarden, J. "The consequences of directed versus random movement for biodiversity patterns and speciation processes." Jul. 2003. Evolution, Chico, CA, USA. Contributed oral presentation.
- 2001 Armsworth, P.R., James, M.K., Mason, L., Bode, L. "Physical and behavioral models of reef fish larval dispersal." Dec. 2001. British Ecological Society. Warwick, UK. Contributed oral presentation.

TEACHING

Qualifications

- 2005-2007 Postgraduate Certificate of Higher Education (Biological Sciences), University of Sheffield.

1996-1997 Postgraduate Certificate of Education (Mathematics), Cambridge University.

Teaching Awards

2015 Alumni Outstanding Teacher Award, University of Tennessee.
2002 Norman K. Wessells Award for Teaching Excellence, Stanford University.

Teaching Experience: University of Tennessee, Knoxville, USA.

2019-2023 Environmental Science and Policy Practicum. Project-based learning experience in which groups of interdisciplinary graduate students design research questions of regional policy significance.

2011-2015
2017-2023 Advanced Topics in Conservation Biology. Interdisciplinary discussion group run as part of Baker Center Energy and Environment Forum for which Armsworth is the coordinator. Discussions bring together postgraduate students from across four colleges (Arts & Sciences, Law, Agriculture and Natural Resources, Business Administration).

2010-2013,
2018,2020-
2022 Conservation Biology. Overview of the biodiversity crisis and application of ecology and evolutionary biology concepts to improve the design of conservation strategies. Enrolment 25-35 juniors, seniors and graduate students from five-six different majors.

2009-2016
2018, 2019,
2022 Models in Biology. Introduction to application of mathematical models to biological questions. Enrolment 18-40 juniors, seniors and graduate students from six-eight different majors.

2009-2013 Ecology Core. Required 4-credit course for incoming EEB graduate students. Armsworth has served as instructor for units on Population Ecology, Community Ecology and Conservation Biology.

Teaching Experience: University of Sheffield, UK.

2007-2009 Undergraduate Ambassadors Program. Small group teaching (1-3 students) with third year undergraduates on a practice based course for prospective science teachers run jointly with local secondary schools.

2005-2009 Population and Community Ecology. First year undergraduate introduction to ecology lecture course. Enrolment of 120-140 per year. Responsible for units on multispecies communities and conservation applications.

2004-2009 Tutorial groups. Small group teaching (5-6 students) with first and second year undergraduates designed to build broader skill sets including presentation and writing skills, experimental design, data analysis, etc.

2004-2009 Project and dissertation students. Small group and individual supervision of project work and literature reviews equivalent to one third of the modules required for third year undergraduates.

2004-2009 Individual supervision of Masters level students on research project work.

Teaching Experience: Stanford University, USA.

2002 Teaching assistant to S. Tuljapurkar. Graduate level course on ecological and evolutionary theory. Including occasional lecturing, running tutorial sessions, assisting with design of materials and assessments, project supervision.

2001 Teaching assistant to M. Feldman. Second year undergraduate course on biostatistics. Including running tutorial sessions and assisting with assessments.

2000 Teaching assistant to J. Roughgarden. Second and third year undergraduate course on ecological theory. Including occasional lecturing, running tutorial sessions, assisting with design of materials and assessments, project supervision.

Teaching Experience: James Cook University, Australia.

- 1998-1999 Teaching assistant on first year undergraduate mathematical methods courses. Including running tutorial sessions and assessment.
- 1998-1999 Teaching assistant on second year undergraduate mathematical methods courses. Including running tutorial sessions and assessment.

Other Teaching Experience

- 1997 Saffron Walden County High School, UK. Secondary school mathematics teacher with classes aged 11 through 18.

SERVICE**Grant Panels**

- 2015-2023 NCEAS-SNaPP annual grant program.
- 2015 WWF Russell E Train Education for Nature Program
- 2013, 2015 NSF CNH grant program.
- 2011 US DoD SERDP grant program.
- 2008 NERC (UK) Knowledge Exchange grant program.
- 2008 NERC (UK) Fellowship grant program.
- 2008 UK Population Biology Network Research Project grant program.
- 2008 UK Population Biology Network Early Career Pump-priming grant program.
- 2008 British Ecological Society New Investigators grant program.

Editor

- 2018-present Handling Editor for *People and Nature*.
- 2014-present Handling Editor for *Conservation Biology*.
- 2010-2016 Editor for *Conservation Letters*.
- 2010-2016 Editor for *Theoretical Ecology*.
- 2009-2014 Associate Editor for *Journal of Applied Ecology*.
- Occasional Assigning Editor, *Ecological Applications, Methods in Ecology and Evolution*.

Reviews

Referee for interdisciplinary journals (*Science, Nature, Proceedings of the National Academy of the Sciences USA*, etc.), ecological journals (*Ecology Letters, Ecology, American Naturalist*, etc.), economic and policy journals (*Resource and Energy Economics, Journal of Agricultural Economics, Journal of International Development*, etc.), conservation journals (*Conservation Biology, Journal of Applied Ecology, Biological Conservation*, etc.), and marine science journals (*Marine Ecology Progress Series, Limnology and Oceanography, Coral Reefs*, etc.) and for national and international grant panels.

Select National and International Science Panels

- 2017-present DoI's SE Climate Adaptation Science Center, Leadership Team.
- 2016-2017 FASAB Federal Taskforce on Public Land Valuation.
- 2015-present NCEAS-SNaPP, Science Advisory Council.
- 2008-2010 TEEB D0, Economic Valuation Methodologies Team.
- 2008-2009 DEFRA Business and Biodiversity Strategies Group.

2008-2009 UK Population Biology Network, Science Management Committee.
 2006-2009 NERC Peer Review College.
 2004-2005 Millennium Ecosystem Assessment Business & Industry Synthesis Panel.

Select Department & University Committees

2019- Chair, Awards committee.
 2019 UTIA-UTK Land Grant Unification Team
 2019, 2023 Academic Program Review Team, Department of Civil and Environmental Engineering
 2017-present Faculty mentor to Assist. Profs. O. Gaoue, X. Giam, M. Papes and K. Sheldon.
 2015-2016 Associate Head, EEB.
 2015-2016 Chair, Search Committee for Assistant Professor, Conservation Biology.
 2015-2016 Chair, Search Committee for Assistant Professor, Spatial Biology.
 2014-2015 Search Committee for Assistant Professor, Ecology.
 2014-2016 Associate Director for Post-doctoral Activities and Member of the Leadership Team, National Institute for Mathematical and Biological Synthesis
 2013-2015 Chair, Graduate Admissions Committee, EEB.
 2012-2013 Search Committee for Head of Department, EEB.
 2011-present Baker Center Energy and Environment Forum, cofounder and organizer.
 2010-2013 Member, Graduate Admissions Committee, EEB.
 2009-2010 Chair, Seminar Committee, EEB.
 2008-2009 Program Director, BSc and MBiolSci in Biology with Biodiversity and Conservation, Department of Animal and Plant Sciences, U. Sheffield.
 2007-2009 Examinations Committee. Department of Animal and Plant Sciences, U. Sheffield.