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Department of Integrative Biology,
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Research Areas:

Philosophy and History of Science; Biomedical Humanities; Environmental Philosophy; Formal Epistemology; History of Philosophy of Science; Conservation Biology; Disease Ecology and Epidemiology.

Education

1981 -89: University of Chicago: M.A. 1984 (Conceptual Foundations of Science);
Ph.D. 1989 (Philosophy).

1977 -81: Columbia University: B.A. 1981 (Mathematics, Philosophy, Physics).

Professional Experience

Fall 2003 –present:	Professor, Department of Philosophy, Department of Integrative Biology, and Center for Computational Biology and Bioinformatics, University of Texas at Austin.
Spring 2017 –present	Distinguished University Fellow, Presidency University, Kolkata.
Fall 2006 –Spring 2007:	Graduate Faculty, Institute of Biology, Universidad Nacional Autónoma de México, Mexico City.
Fall 2002 –Spring 2003:	Visiting Scholar, Max-Planck-Institut für Wissenschaftsgeschichte in Berlin.

Fall 2001 –Spring 2010:	Co-Director, Environmental Sciences Center, Hornsby Bend, Austin.
Fall 1998 –Spring 2002:	Associate Professor, Department of Philosophy, and Director, Program in the History and Philosophy of Science, University of Texas at Austin.
Fall 1997 –Spring 2000:	Research Associate, Redpath Museum, McGill University.
Fall 1997 –Spring 1998:	Visiting Professor, Departments of Biology and Philosophy, McGill University.
Fall 1997 –Spring 1998:	Visiting Scholar, Max-Planck-Institut für Wissenschaftsgeschichte in Berlin.
Fall 1996 –Spring 1997:	Fellow, Wissenschaftskolleg zu Berlin.
Fall 1994 –Spring 1996:	Visiting Associate Professor, Department of Philosophy, McGill University.
Fall 1993 –Spring 1994:	Fellow, Dibner Institute for the History of Science and Technology, MIT.
Fall 1988 –Spring 1993:	Assistant Professor, Department of Philosophy, and Director, Theoretical Biology Group, Boston University.
Fall 1987 –Spring 1988:	Lecturer, Department of Philosophy, Roosevelt University.
Spring 1987:	Lecturer, Department of Philosophy, Northeastern Illinois University.
Fall 1985 –Spring 1988:	Lecturer, Harrington Institute of Design.
Summer 1985:	Lecturer, Department of Philosophy, Roosevelt University.
Fall 1984 –Spring 1986:	Lecturer, Department of Computer Science, University of Chicago.
Spring 1984:	Lecturer, Department of Philosophy, Loyola University of Chicago.

Doctoral Degree Supervision:

Knab, Brian. 2018. "Three Problems in Formal Epistemology." Ph.D. Department of Philosophy, University of Texas at Austin. (Co-advisor, with S. Dogramaci.)

Anderson, Derek. 2016. "Syntacticism and the Semantic Turn." Ph.D. Department of Philosophy, University of Texas at Austin.

Frank, David M. 2012. "Values and Decisions in Biological Conservation." Ph.D. Department of Philosophy, University of Texas at Austin.

Fuller, Trevon. 2009. "Area Prioritization for Conservation Planning under Uncertainty." Ph.D. Graduate Program in Ecology, Evolution, and Behavior, University of Texas at Austin.

Pawar, Samraat. 2009. "The Entangled Bank in an Uncertain World: The Effects of Environmental Fluctuations on Population Interaction Networks." Ph.D. Graduate Program in Ecology, Evolution, and Behavior, University of Texas at Austin.

Justus, James. 2007. "The Stability-Diversity-Complexity Debate of Community Ecology: A Philosophical Analysis." Ph.D. Department of Philosophy, University of Texas at Austin.

Garson, Justin. 2006. "A Critique of the Justificatory Structures of Psychiatry." Ph.D. Department of Philosophy, University of Texas at Austin.

Mooney, Susan. 1992. "The Evolution of Sex: A Historical and Philosophical Analysis." Ph.D. Department of Philosophy, Boston University.

Master's Degree Supervision:

Knab, Brian. 2016. "Infectious Disease and the South Texas Colonias." MS. Department of Statistics and Scientific Computation, University of Texas at Austin.

Wozniak, Edward. 2013. "The Biology of Triatomine Bugs Native to South Central Texas and Assessment of the Risk They Pose for Autochthonous Chagas' Disease Exposure." MPH. University of Texas School of Public Health at Houston.

Luo, Liming. 2010. "Estimation of Population Sizes for the Jollyville Plateau Salamander (*Eurycea tonkawae*) Using a Mark-Recapture Method." MS. Division of Statistics and Scientific Computation, University of Texas at Austin.

Cerro, Rowena. 2008. "Coastal-Marine Conservation: The Case of the Central Peru Region." MS. Graduate Program in Ecology, Evolution, and Behavior, University of Texas at Austin.

Pappas, Christopher, 2005. "The Logic of Expectations." MA. Department of Philosophy, University of Texas at Austin.

Fuller, Trevon. 2004. "The Use of Graph Theory in the Design of Conservation Area Networks: Methods for Maximizing Network Connectivity." MA. Department of Philosophy, University of Texas at Austin.

Floor, Anders. 2003. "Modality Systematized: The Development of Lewis' System of Strict Implication from Inception to Apotheosis." MA. Department of Philosophy, University of Texas at Austin.

Garson, Justin. 2002. "The Introduction of Information into Neurobiology." MA. Department of Philosophy, University of Texas at Austin.

Justus, James. 2002. "The Logical Empiricists' Search for a Formal Criterion of Empirical Significance: Utterly Hopeless After All?" MA. Department of Philosophy, University of Texas at Austin.

Nyberg, Ian. 2002. "An Argument for Multilevel Selection Theory: A Mathematical Model of Social Behavior in *Dictyostelium discoideum*." MA. Department of Philosophy, University of Texas at Austin.

Undergraduate Honors Thesis Supervision:

Vener, Daniel. 2015. "A Cummins Style Approach to Function in the Wakefield Harmful Dysfunction Analysis." Honors Thesis. Department of Philosophy University of Texas at Austin.

Ammon, Benjamin. 2012. "Evolution, God, and False Dichotomies: A Christian's Guidebook to Intelligent Design." Plan II Honors Thesis. University of Texas at Austin.

Keil, Heather. 2006. "Systematic Marine Conservation Planning." Plan II Honors Thesis. University of Texas at Austin.

Cameron, Susan. 2003. "Place Prioritization and Irreplaceability Analysis for Biodiversity Conservation in Ecuador Using Modeled Vegetation Classes as Surrogates." Honors Thesis. Department of Biology, University of Texas at Austin.

Kelley, Christopher. 2003. "Surrogacy Analysis, and the Effects of Spatial Scale and Modeled Data." Plan II Honors Thesis. University of Texas at Austin.

Podolsky, Scott. 1993. "The Role of the Virus in Origin-of-Life Theorizing." Honors Thesis. Committee on History and Science, Harvard University (Co-advisor, with A. I. Tauber).

Noonan, Jennifer, 1990. "Carnap's *Logical Syntax of Language*." Major Thesis. Department of Philosophy, Boston University.

Post-Doctoral Supervision

Ciarleglio, Michael, 2009 -2010. "Tabu Search Applications for the Design of Conservation Area Networks."

Illoldi-Rangel, Patricia. 2007 -2011. "Identification and Analysis of Conservation Priority Areas in Mexico Using a Multi-taxa Approach."

Aggarwal, Anshu. 1998 -2000. "ResNet: A Software Package for the Selection of Conservation Area Networks."

Academic Publications

Books:

[B6] **Sarkar, S.** 2012. *Environmental Philosophy: From Theory to Practice*. Malden, MA: Wiley-Blackwell.

[B5] Margules, C. R. and **Sarkar, S.** 2007. *Systematic Conservation Planning*. Cambridge, UK: Cambridge University Press, Ecology, Biodiversity and Conservation Series.

[Spanish translation with extensions: Margules, C. R. and **Sarkar, S.** 2009. *Planeación Sistemática de la Conservación*. México, D.F.: Comisión Nacional para el Conocimiento y Uso de la Biodiversidad.]

[B4] **Sarkar, S.** 2007. *Doubting Darwin? Creationist Designs on Evolution*. Oxford, UK: Blackwell Press, Public Philosophy Series.

[Book-of-the-Month Selection, The Secular Web (<http://www.infidels.org/>), November 2007.]

[B3] **Sarkar, S.** 2005. *Biodiversity and Environmental Philosophy: An Introduction*. New York: Cambridge University Press, Cambridge Studies in the Philosophy of Biology.

[Excerpted in: Gruen, L., Jamieson, D., and Schlottmann, C. Eds. 2013. *Reflecting on Nature: Readings in Environmental Ethics and Philosophy*. New York, Oxford University Press, pp. 240 - 244.]

[B2] **Sarkar, S.** 2005. *Molecular Models of Life: Philosophical Essays on Molecular Biology*. Cambridge, MA: MIT Press, Life and Mind Series.

[B1] **Sarkar, S.** 1998. *Genetics and Reductionism*. New York: Cambridge University Press, Cambridge Studies in the Philosophy of Biology.

Edited Works:

[E18] **Sarkar, S.** and Minter, B. Eds. 2018. *A Sustainable Philosophy: The Work of Bryan Norton*. Cham: Springer.

[E17] Garson, J. Plutynski, A., and **Sarkar, S.** Eds. 2017. *Routledge Handbook of Philosophy of Biodiversity*. New York: Routledge.

[E16] **Sarkar, S.** Ed. 2016. "Poincaré Reconsidered, One Hundred Years Afterwards." *HOPOS: The Journal of the International Society for the History of Philosophy of Science* **6**: 239 -308.

[E15] **Sarkar, S.** and Uebel, T. 2015. Eds. "Special Section—Formal Epistemology and the Legacy of Logical Empiricism." *Studies in History and Philosophy of Science Part A* **53**: 1 -56.

[E14] **Sarkar, S.** and Plutynski, A. Eds. 2008. *A Companion to the Philosophy of Biology*. Oxford, UK: Blackwell.

[E13] **Sarkar, S.** and Pfeifer, J. Eds. 2006. *The Philosophy of Science: An Encyclopedia*. 2 Vols. New York: Routledge.

[E12] Ashtekar, A., Cohen, R. S., Howard, D., Renn, J., **Sarkar, S.**, and Shimony, A. Eds. 2003. *Revisiting the Foundations of Relativistic Physics: Festschrift in Honor of John Stachel*. Dordrecht: Kluwer.

[E11] **Sarkar, S.** and Robert, J. S. Eds. 2003. *Evolution and Development. Biology and Philosophy* **18**, No. 2.

[E10] **Sarkar, S.** and Justus, J. Eds. 2002. *Conservation of Biodiversity: The New Consensus. Journal of Biosciences* **27**, No. 4 (Supplement 2).

[E9] **Sarkar, S.**, Ed. 1996. *The Philosophy and History of Molecular Biology: New Perspectives*. Dordrecht: Kluwer.

Sarkar, S., Ed. 1996. *Science and Philosophy in the Twentieth Century: Basic Works of Logical Empiricism*. 6 Vols. New York: Garland Publishing:

[E8] Volume 1: *The Emergence of Logical Empiricism: From 1900 to the Vienna Circle*.

[E7] Volume 2: *Logical Empiricism at Its Peak: Schlick, Carnap, and Neurath*.

[E6] Volume 3: *Logic, Probability, and Epistemology: The Power of Semantics*.

[E5] Volume 4: *Logical Empiricism and the Special Sciences: Reichenbach, Feigl, and Nagel*.

[E4] Volume 5: *Decline and Obsolescence of Logical Empiricism: Carnap vs. Quine and the Critics*.

[E3] Volume 6: *The Legacy of the Vienna Circle: Modern Reappraisals*.

[E2] **Sarkar, S.**, Ed. 1992. *Carnap: A Centenary Reappraisal. Synthese* **93**, Nos. 1 -2.

[E1] **Sarkar, S.**, Ed. 1992. *The Founders of Evolutionary Genetics: A Centenary Reappraisal*. Dordrecht: Kluwer.

Articles:

[P227] **Sarkar, S.** 2018. "Researchers Hit Roadblock with Gene Drives." *BioScience* **68**: 474 -480.

[P226] **Sarkar, S.** 2018. "Deliberative Decisions and Formal Multicriteria Analysis: Addressing Norton's Skepticism." In [E18], pp. 213 -236.

[P225] **Sarkar, S.** and Minter, B. E. 2018. "Introduction." In [E18], 1 -5.

[P224] **Sarkar, S.** 2017. "Haldane's *Causes of Evolution* and the Modern Synthesis in Evolutionary Biology." *Journal of Genetics* **96**: 753 -763.

- [P223] **Sarkar, S.**, Love, A., and Wimsatt, W. C. 2017. "Reductionism in Biology." In Pritchard, D. Ed. *Oxford Bibliographies in Philosophy*. New York: Oxford University Press, <http://www.oxfordbibliographies.com/view/document/obo-9780195396577/obo-9780195396577-0359.xml>.
- [P222] **Sarkar, S.** 2017. "What Is Threatening Monarchs?" *BioScience* **67**: 1080.
- [P221] **Sarkar, S.**, Sánchez-Cordero, V., and Margules, C. R. 2017. "Systematic Conservation Planning for Aichi Biodiversity Targets." *National Biodiversity Strategies and Action Plan (NBSAP) Forum Newsletter* **1** (1): <http://nbsapforum.net/#read-resource/2532>.
- [P220] **Sarkar, S.**, Dyer, J. S., Margules, C., Ciarleglio, M., Kemp, N., Wong, G., Juhn, D., and Supriatna, J. 2017. "Developing an Objectives Hierarchy for Multi-criteria Decisions on Land Use Options, with a Case Study of Biodiversity Conservation and Forestry Production from Papua, Indonesia." *Environment and Planning B: Planning and Design* **44**: 464 -485.
- [P219] Bui, C. M., Gardner, L., MacIntyre, R., and **Sarkar, S.** 2017. "Influenza A H5N1 and H7N9 in China: A Spatial Risk Analysis." *PLoS ONE* **12** (4): e0174980. doi.org/10.1371/journal.pone.0174980.
- [P218] Gardner, L., Chen, N., and **Sarkar, S.** 2017. "Vector Status of *Aedes* Species Determines Geographical Risk of Autochthonous Zika Virus Establishment." *PLOS Neglected Tropical Diseases* **11**(3): e0005487. doi: [10.1371/journal.pntd.0005487](https://doi.org/10.1371/journal.pntd.0005487).
- [P217] Garson, J. Plutynski, A., and **Sarkar, S.** Eds. 2017. "Introduction." In [E16], pp. 1 -7.
- [P216] **Sarkar, S.** 2017. "Approaches to Biodiversity." In [E16], pp. 43 -55.
- [P215] **Sarkar, S.** 2017. "Poincaré Reconsidered, One Hundred Years Afterwards: Guest Editor's Introduction." *HOPOS: The Journal of the International Society for the History of Philosophy of Science* **6**: 239 -241.
- [P214] **Sarkar, S.** 2016. "Air Travel and *Aedes* Mosquito-borne Diseases." In LeMay, M. C. *Global Pandemic Threats: A Reference Handbook*. Santa Barbara, CA: ABC-CLIO, pp. 160 -165.
- [P213] **Sarkar, S.** 2016. "The Zika Crisis: A Result of Neglect." *Phi Kappa Phi Forum* **2016** (Winter): 22 -25.

- [P212] Butt, A. M., Siddique, S., Gardner, L. M., **Sarkar, S.**, Lancelot, R., and Qamar, R. 2016. "Zika Virus in Pakistan: The Tip of the Iceberg?" *Lancet Global Health* **4**: e913 –e914.
- [P211] Bethmont, A., Bui, C. M., Gardner, L., **Sarkar, S.**, Chughtai, A. A., and MacIntyre, C. R. 2016. "Quantified Degree of Poultry Exposure Differs for Human Cases of Avian Influenza H5N1 and H7N9." *Epidemiology and Infection* **144**: 2633 -2640.
- [P210] **Sarkar, S.** and Gardner, L. 2016. "Zika: The Price of Neglect." *Palgrave Communications* **2**:16060 doi: 10.1057/palcomms.2016.60.
- [P209] **Sarkar, S.** 2016. "At One Hundred: The Living Legacy of Francis Crick." *BioScience* **66**: 437 -438.
- [P208] **Sarkar, S.** 2016. "Haldane and Mayr: A Response to Rao and Nanjundiah." *History and Philosophy of the Life Sciences* **38**: 151 -154.
- [P207] **Sarkar, S.** 2016. "The Ethics of Gene Drives against *Aedes aegypti*." *Infectious Disease News* **29** (4):11.
- [P206] Gardner, L., Chen, N. and **Sarkar, S.** 2016. "Global Risk of Zika Virus Depends Critically on Vector Status of *Aedes albopictus*." *The Lancet Infectious Diseases* **16**: 522 -523.
- [P205] Bui, C., Bethmont, A., Chughtai, A. A., Gardner, L., **Sarkar, S.**, Hassan, S., Seale H., and MacIntyre, C. R. 2015. "A Systematic Review of the Comparative Epidemiology of Avian and Human Influenza A H5N1 and H7N9—Lessons and Unanswered Questions." *Transboundary and Emerging Diseases* doi: 10.1111/tbed.12327.
- [P204] Tabery, J. and **Sarkar, S.** 2015. "R. A. Fisher, Lancelot Hogben, and the 'Competition' for the Chair of Social Biology at the London School of Economics in 1930: Correcting the Legend." *Notes and Records of the Royal Society of London* **69**: 437 -446.
- [P203] **Sarkar, S.** 2015. "The Genomic Challenge to Adaptationism." *British Journal for the Philosophy of Science* **66**: 505 -536.
- [P202] Wozniak, E. J., Lawrence, G., Gorchakov, R., Alamgir, A. H., Dotson, E., Sissel, B., **Sarkar, S.**, and Murray, K. O. 2015. "The Biology of the Triatomine Bugs Native to South Central Texas and Assessment of the Risk They Pose for Chagas Disease Exposure." *Journal of Parasitology* **101**: 520 -528.

- [P201] Gardner, L. and **Sarkar, S.** 2015. "The Risk of Dengue Spread from the Philippines through International Air Travel." *Transportation Research Record* **2501**: 25 -30.
- [P200] Crews, D., Weisberg, S. A. and **Sarkar, S.** 2015. "Hazards Inherent in Interdisciplinary Behavioral Research." *Frontiers in Zoology* **12**: S21.
- [P199] **Sarkar, S.** 2015. "Nagel on Reduction." *Studies in History and Philosophy of Science Part A* **53**: 43 -56.
- [P198] **Sarkar, S.** and Uebel, T. 2015. "Introduction: Formal Epistemology and the Legacy of Logical Empiricism." *Studies in History and Philosophy of Science Part A* **53**: 1 -2.
- [P197] Margules, C. R., Sayer, J., Boedhihartono, A. K., Makes, D., **Sarkar, S.**, and Supriatna, J. 2015. "Development in Eastern Indonesia: Are There Alternative Approaches?" *Taprobanica* **7**: 201 –211.
- [P196] **Sarkar, S.** 2015. "Religion and Science." In Oppy, G. Ed. *Routledge Handbook of Contemporary Philosophy of Religion*. New York: Routledge, pp. 402 -415.
- [P195] Botello, F., **Sarkar, S.**, and Sánchez-Cordero, V. 2015. "Impact of Habitat Loss on Distributions of Terrestrial Vertebrates in a High-biodiversity Region in Mexico." *Biological Conservation* **184**: 59 -65.
- [P194] **Sarkar, S.** 2014. "Lederberg on Bacterial Recombination, Haldane, and Cold War Genetics: An Interview." *History and Philosophy of the Life Sciences* **36**: 280 -288.
- [P193] Atkinson, S. F., **Sarkar, S.**, Aviña, A., Schuermann, J. A. and Williamson, P. 2014. "A Determination of the Spatial Concordance between Lyme Disease Incidence and Habitat Probability of Its Primary Vector *Ixodes scapularis* (Black-legged Tick)." *Geospatial Health* **9**: 203 -212.
- [P192] **Sarkar, S.** 2014. "The Inevitability of Normative Analysis." *Behavioral and Brain Sciences* **37**: 436.
- [P191] **Sarkar, S.** 2014. "Biodiversity and Systematic Conservation Planning for the Twenty-first Century: A Philosophical Perspective." *Conservation Science* **2**: 1 -11.
- [P190] Garza, M., Feria Arroyo, T. P., Casillas, E. A., Sánchez-Cordero, V., Rivaldi, C. -L., and **Sarkar, S.** 2014. "Projected Future Distributions of Vectors of

Trypanosoma cruzi in North America under Climate Change Scenarios.” *PLoS Neglected Tropical Diseases* **8**(5): e2818. doi:10.1371/journal.pntd.0002818.

- [P189] **Sarkar, S.** 2014. “Woese on the Received View of Evolution.” *RNA Biology* **11**: 220 -224.
- [P188] **Sarkar, S.** 2014. “Formal Darwinism: Some Questions.” *Biology and Philosophy* **29**: 249 -257.
- [P187] **Sarkar, S.** 2014. “Environmental Philosophy: Response to Critics.” *Studies in History and Philosophy of Science Part C: Studies in History and Philosophy of Biological and Biomedical Sciences* **45**: 105 -109.
- [P186] **Sarkar, S.** 2014. “Environmental Philosophy: From Theory to Practice.” *Studies in History and Philosophy of Science Part C: Studies in History and Philosophy of Biological and Biomedical Sciences* **45**: 89 -91.
- [P185] **Sarkar, S.** 2014. “Does ‘Information’ Provide a Compelling Framework for a Theory of Natural Selection?: Grounds for Caution.” *Philosophy of Science* **81**: 22 -30.
- [P184] **Sarkar, S.** 2013. “Multiple Criteria and Tradeoffs in Environmental Ethics: Comment on ‘Ethics of Species Research and Preservation’ by Rob Irvine.” *Journal of Bioethical Inquiry* **10**: 533 -537.
- [P183] **Sarkar, S.** 2013. “Carnap and the Compulsions of Interpretation: Reining in the Liberalization of Empiricism.” *European Journal for the Philosophy of Science*. **3**: 353 -372.
- [P182] Gardner, L. and **Sarkar, S.** 2013. “A Global Airport-Based Risk Model for the Spread of Dengue Infection via the Air Transport Network.” *PLoS ONE* **8** (8): e72129. DOI:10.1371/journal.pone.0072129.
- [P181] **Sarkar, S.** 2013. “The Vienna Circle.” In Fastiggi, R. Ed. *New Catholic Encyclopedia Supplement 2012-2013: Ethics and Philosophy*. Vol. 4. Detroit: Thomson Gale, pp. 612 -613.
- [P180] **Sarkar, S.** 2013. “Mayr’s Recollections of Haldane: A Document with Brief Commentary.” *History and Philosophy of the Life Sciences* **35**: 269 -280.
- [P179] **Sarkar, S.** 2013. “Erwin Schrödinger’s Excursus on Genetics.” In Harman, O. and Dietrich, M. Eds. *Outsider Scientists: Routes to Innovation in Biology*. Chicago: University of Chicago Press, pp. 93 -109.

- [P178] Dimitrov, N., Moffett, A., Morton, D. P., and **Sarkar, S.** 2013. "Selecting Malaria Interventions: A Top-Down Approach." *Computers & Operations Research* **50**: 2229 -2240.
- [P177] **Sarkar, S.** 2013, "Information in Animal Communication: When and Why Does It Matter?" In Stegmann, U. Ed. *Animal Communication Theory: The Information Transfer Debate*. Cambridge, UK: Cambridge University Press, pp. 190 -205.
- [P176] Atkinson, S. F., **Sarkar, S.**, Aviña, A., Schuermann, J. A. and Williamson, P. 2012. "Modeling Spatial Concordance between Rocky Mountain Spotted Fever Disease Incidence and Habitat Probability of Its Vector *Dermacentor variabilis* (American Dog Tick)." *Geospatial Health* **7**: 91 -100.
- [P175] **Sarkar, S.** and Frank, D. M. 2012. "Conservation Biology: Ethical Foundations." *Nature Education* **3**(5): 3 (<http://www.nature.com/scitable/knowledge/library/conservation-biology-ethical-foundations-46518079>).
- [P174] **Sarkar, S.** 2012. "Complementarity and the Selection of Nature Reserves: Algorithms and the Origins of Conservation Planning, 1980--1995." *Archive for History of Exact Sciences* **66**: 397 -426.
- [P173] Illoldi-Rangel, P., Ciarleglio, M., Scheinvar, L., Linaje, M., Sánchez-Cordero, V., and **Sarkar, S.** 2012. "Opuntia in México: Identifying Priority Areas for Conserving Biodiversity in a Multi-Use Landscape." *PLoS One* **7**(5): e36650. DOI: 10.1371/journal.pone.0036650.
- [P172] **Sarkar, S.** 2012. "Complex Genetic Systems and Diseases." In *eLS 2012*. Chichester, UK: Wiley. www.els.net [DOI: 10.1002/9780470015902.a0005887.pub2].
- [P171] Gardner, L., Fajardo, D., Waller, S. T., Wang, O., and **Sarkar, S.** 2012. "A Predictive Spatial Model to Quantify the Risk of Air-Travel-Associated Dengue Importation into the United States and Europe." *Journal of Tropical Medicine* **2012**: Article ID 103679. DOI: 10.1155/2012/103679.
- [P170] Illoldi-Rangel, P., Rivaldi, C. -L., Sissel, B., Fryxell, R. T., Gordillo-Pérez, G., Rodríguez-Moreno, A., Williamson, P., Montiel-Parra, G., Sánchez-Cordero, V., and **Sarkar, S.** 2012. "Species Distribution Models and Ecological Suitability Analysis for Potential Tick Vectors of Lyme Disease in México." *Journal of Tropical Medicine* **2012**: Article ID 959101. DOI: 10.1155/2012/959101.
- [P169] **Sarkar, S.** 2011. "Sober on Intelligent Design." *Philosophy and Phenomenological Research* **83**: 683 -691.

- [P168] Labay, B., Cohen, A. E., Sissel, B., Hendrickson, D. A., Martin, F. D., and **Sarkar, S.** 2011. "Assessing Historical Fish Community Composition Using Surveys, Historical Collection Data, and Species Distribution Models." *PLoS ONE* **6** (9): e25145. DOI: 10.1371/journal.pone.0025145 .
- [P167] Knight, A. T., **Sarkar, S.**, Smith, R. J., Strange, N., and Wilson, K. A. 2011. "Engage the Hodgepodge: Management Factors Are Essential when Prioritizing Areas for Restoration and Conservation Action." *Diversity and Distributions* **17**: 1234 -1238.
- [P166] **Sarkar, S.**, Sánchez-Cordero, V. Illoldi-Rangel, P., Linaje, M., and Fuller, T. 2011. "Planeación sistemática de la conservación." In Gío Arguez, R. and Rosales Hoz, M. T. L. Eds. *Interacciones en el Planeta Tierra*. México, D.F.: Instituto de Ciencias del Mar y Limnología, UNAM, pp. 221 -229.
- [P165] **Sarkar, S.** 2011. "Habitat Reconstruction: Moving Beyond Historical Fidelity." In de Laplante, K., Brown, B., and Peacock, K. Eds. *Handbook of the Philosophy of Science. Volume 11: Philosophy of Ecology*. New York: Elsevier, pp. 327 -361.
- [P164] **Sarkar, S.** 2011. "Drift and the Causes of Evolution." In Illari, P. K., Russo, F., and Williamson, J. Eds. *Causality in the Sciences*. Oxford: Clarendon Press, pp. 445 -469.
- [P163] Vega Rivera, J. H., Ortega-Huerta, M. A., **Sarkar, S.**, and Rappole, J. H. 2011. "Modeling the Potential Winter Distribution of the Endangered Black-capped Vireo (*Vireo atricapilla*)." *Bird Conservation International* **21**: 92 -106.
- [P162] **Sarkar, S.** and Montoya, M. 2011. "Beyond Parks and Reserves: The Ethics and Politics of Conservation with a Case Study from Perú." *Biological Conservation* **144**: 979 -988.
- [P161] **Sarkar, S.** 2011. "The Science Question in Intelligent Design." *Synthese* **178**: 291 -305.
- [P160] Kelley, C. D., Lee, P. -F., Ding, T. -S., and **Sarkar, S.** 2010. "Biodiversity Conservation in an Urbanised Insular Landscape: Identifying Priority Areas for Bird Species in Taiwan." *Pacific Conservation Biology* **16**: 4 -19.
- [P159] **Sarkar, S.**, Strutz, S., Frank, D. M., Rivaldi, C. -L., Sissel, B., and Sánchez-Cordero, V. 2010. "Chagas Disease Risk in Texas." *PLoS Neglected Tropical Diseases* **4** (10): e836. DOI: 10.1371/journal.pntd.0000836.
- [P158] **Sarkar, S.** 2010. "Climate Change and Disease Risk in the Himalayas." *Himalayan Journal of Science* **6**: 7 -8.

- [P157] **Sarkar, S.** and Illoldi-Rangel, P. 2010. "Systematic Conservation Planning: An Updated Protocol." *Natureza & Conservação* **8**: 19 -26.
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Major Presentations

- [288] "Genetic Reductionism and Liberal Eugenics," Perspectives on the Human Genome Project and Genomics Workshop, National Human Genome Research Institute, Bethesda, Summer 2018.
- [287] "Fornal Epistemology in a Tropical Savanna," Symposium Contribution, 2018 Biennial Meeting of the Philosophy of Science Association, Seattle, Fall 2018.
- [286] "Gene Drive, Gene Edits, and CRISPR: Are There Conceptual Implications Beyond the Technohype," History of Molecular Biology and Genomics Lecture Series, National Human Genome Research Institute, Bethesda, Summer 2018.
- [285] "The Promise and Peril of CRISPR Gene Editing." Austin Forum for Technology and Society, Austin, Summer 2018.
- [284] "The Theory of Transformations: Thompson and His Critics," Workshop on the Conceptual Legacy of *On Growth and Form*: Interdisciplinary Perspectives, University of St. Andrews, Summer 2018.
- [283] "What Should New Conservation Be," Seminar, Reimagining the Good Life: Sustainability Ethics in Theory and Practice Workshop, Hunter College, City University of New York, Spring 2018.
- [282] "Physicalism and Reductionism in Biology," Panel Presentation, Graduate Philosophy Conference, University of Texas at Austin, Spring 2018.
- [281] "What Should 'Biodiversity' Be?" 2018 Texas Ethics Workshop, Texas State University, Spring 2018.
- [280] "Blind Variation and Evolutionary Explanation," Plenary Lecture, Workshop, On the Nature of Variation: Random, Biased and Directional, Faculdade de Ciências de Universidade de Lisboa, Lisbon, Fall 2017.

- [279] "What Is Biodiversity?" Seminar, Faculdade de Ciências de Universidade de Lisboa, Lisbon, Fall 2017.
- [278] "Saving the Monarch Migration: Environmental Philosophy—Ethics and Epistemology," University of Texas Global Ethics and Conflict Resolution Summer Symposium, Austin, Summer 2017.
- [277] "When Should Species Be Eliminated? Religion, Ethics, and Science." College of Arts and Sciences, University of Miami, Spring 2017.
- [276] "Interdisciplinarity and Transformative Research: Examples and Challenges," Seminar, College of Arts and Letters, Michigan State University, Spring 2017.
- [274] "Post-genome," Seminar, Department of Humanities, Illinois Institute of Technology, Chicago, Spring 2017.
- [273] "Post-genome: Biology and Philosophy for the Twenty-first Century," Seminar, Global Education Summit, Bicentenary Celebrations, Presidency University, Kolkata, Spring 2017.
- [272] "Evolution and Development," Panel Contributions, KLI Science Forum, Two Sides of the Same Coin: Mechanistic and Population-Level Perspectives on Evolution, Konrad Lorenz Institut für Evolutions- und Kognitionforschung, Klosterneuburg, Fall 2016.
- [271] "Klein's Erlangen Program and Physical Geometry in the Early Twentieth Century." Invited Philosophy of Mathematics Association Symposium Contribution, 2016 Biennial Meeting of the Philosophy of Science Association, Atlanta, Fall 2016.
- [270] "Intrinsic Values from the Perspective of Rational Decision Analysis." Ethics of Environmental Analysis Conference, Washington and Lee University, Fall 2016.
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- [268] "Nature and Nurture in the Postgenomic Era," Letters & Sciences Distinguished Speaker Series, Montana State University, Spring 2016.
- [267] "Reductionism in the Philosophy of Biology: What a Little History Does to the Debates," Workshop on What Can the Philosophy of Biology learn from the History of Biology?, Descartes Centre for the History and Philosophy of the Sciences and the Humanities, University of Utrecht, Spring 2016.
- [266] "Ethics of Gene Drives against Zika," Webinar on Using Gene Drives to Counter Zika, American Institute of Biological Sciences, Spring 2016.
- [265] "Nature, Nurture, and the Human Genome: The Philosophical Relevance of Epigenetics," Philosophy Today Lecture Series, University of Alabama, Fall 2015.
- [264] "The Logic of Exploration," Colloquium, Department of Philosophy, University of Alabama, Fall 2015.
- [263] "Social and Environmental Determinants of Neglected Tropical Diseases," Panel Contribution, Conference on The U.S. and Mexico—Addressing a Shared Legacy of Neglected Tropical Diseases and Poverty, Baker Institute for Public Policy, Rice University, Fall 2015.

- [262] “Comments on Postgenomics,” Seminar, Biennial Meeting of the International Society for the History, Philosophy, and Social Studies of Biology, Montréal, Summer 2015.
- [261] “Biodiversity of Central Texas,” University of Texas Project on Conflict Resolution Summer Symposium, Austin, Summer 2015.
- [260] “Nature and Nurture: Comments on Garson,” Author Meets Critics Session, Pacific Division Meeting of the American Philosophical Association Meeting, Vancouver, Spring 2015.
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- [258] “The Rise of Informational Thinking in the Sciences,” 80th Indian National Science Academy Anniversary Meeting, Goa, Winter 2014.
- [257] “Haldane and the Emergence of Modern Evolutionary Theory,” Haldane Memorial Symposium on Evolutionary Biology, 83rd Annual Meeting of Society of Biological Chemists, Bhubaneswar, Winter 2014.
- [256] “The Mathematics of Designing Biological Reserves,” Workshop on Quantitative Biology, 83rd Annual Meeting of Society of Biological Chemists, Bhubaneswar, Winter 2014.
- [255] “Theories and Models in Genetics and Evolutionary Biology,” Invited Symposium Contribution, 2002 Biennial Meeting of the Philosophy of Science Association, Chicago, Fall 2014.
- [254] “The Genomic Challenge to Reductionism,” Seminar, Department of Philosophy, University of Rijeka, Summer 2014.
- [253] “Whither Reductionism?,” Workshop, Department of Philosophy, University of Rijeka, Summer 2014.
- [252] “Logical Empiricism and Philosophy of Biology in the 1940s and 1950s,” Lecture, HOPOS: 2014: Tenth International Society for the History of Philosophy of Science Congress, Summer 2014.
- [251] “After Biodiversity: Nature Conservation for the Twenty-first Century,” Lecture, Edward O. Wilson Biodiversity Symposium, University of Alabama, Spring 2014.
- [250] “Nagel on Reduction,” Seminar, Department of Philosophy, University of Sydney, (Northern) Spring 2014.
- [249] “Spatial Risk Analysis for Vector-Borne Disease Using Species Distribution Models,” Seminar, School of Public Health and Community Medicine, University of New South Wales, (Northern) Spring 2014.
- [248] “Disease Intervention Optimization Using a Markov Decision Model,” Quantitative Methods Research Seminar, School of Public Health and Community Medicine, University of New South Wales, (Northern) Spring 2014.
- [247] “The Genomic Challenge to Adaptationism,” Unit for the History and Philosophy of Science, University of Sydney, (Northern) Spring 2014.
- [246] “Whither Reductionism?” Seminar, Research School of Philosophy, Australian National University, (Northern) Spring 2014.

- [245] “The Mechanical Philosophy and the Chemical Revolution,” VII Encuentro de Filosofía UNAM—UT-Austin, Instituto de Investigaciones Filosóficas, Universidad Nacional Autónoma de México, Fall 2013.
- [244] “The Genomic Challenge to Adaptationism,” Seminar, Department of Philosophy, University of South Carolina, Fall 2013.
- [243] “The Genomic Challenge to Adaptationism,” Seminar, Instituto de Investigaciones Filosóficas, Universidad Nacional Autónoma de México, Fall 2013.
- [242] “Opening Speech Relating to John Stachel’s Work in Philosophy of Science,” An Intellectual Life across Disciplines: Colloquium in Honour of John Stachel’s 85th Birthday, Max-Planck-Institut für Wissenschaftsgeschichte, Berlin, Fall 2013.
- [241] “Information and the Modes of Evolutionary Dynamics,” Plenary Address, Conference on Evolution, Intentionality and Information, Department of Philosophy, University of Bristol, Summer 2013.
- [240] “Whither Reductionism?” Colloquium, Department of Philosophy, University of Aberdeen, Summer 2013.
- [239] “Nagel on Reduction,” Plenary Session, Formal Epistemology and the Legacy of Logical Empiricism Workshop, University of Texas, Spring 2013.
- [238] “What Is Physicalism?” Lecture, Graduate Philosophy Conference, University of Texas at Austin, Spring 2013.
- [236] “Environmental Philosophy: From Theory to Practice,” Author Meets Critics Session, Pacific Division Meeting of the American Philosophical Association Meeting, San Francisco, Spring 2013. Respondents: David Frank, Justin Garson, and Jay Odenbaugh.
- [235] “Sustainability: 7 Billion and Counting?” University Lecture Program, University of Texas at Austin, Spring 2013.
- [234] “Biology and Information?” Seminar, Indian Statistical Institute, Kolkata, Spring 2013.
- [233] “Climate Change and the Risk of Vector-Borne Diseases,” Seminar, Department of Civil and Environmental Engineering, University of New South Wales, Sydney, (Northern) Fall 2012.
- [232] “Climate Change and the Risk of Infectious Disease in North America,” Invited Seminar, Sixtieth Annual Meeting of the Entomological Society of America, Knoxville, Fall 2012.
- [231] “Methodological Individualism,” Seminar, Population Research Center, University of Texas at Austin, Fall 2012.
- [230] “Whither Reductionism?” Seventh University of Texas/Universidad Nacional Autónoma de México (UNAM) Workshop: “Metaphysics and Epistemology in Science.” University of Texas at Austin, Fall 2012.
- [229] “Sustainability and the Conservation of Nature.” Public Lecture. University of Texas at Tyler, Fall 2012.

- [228] “The Ecology of Chagas Disease in Texas,” Population Biology Seminar, Section of Integrative Biology, University of Texas at Austin, Spring 2012.
- [227] “The Molecular Vision of Life,” Departmental Seminar, Department of Biology and Biochemistry, University of Houston, Houston, Spring 2012.
- [226] “Database of Aquatic Ecosystem Organisms and Conservation Prioritization for the Great Plains LCC,” Webinar, Great Plains Landscape Conservation Cooperative, United States Fish and Wildlife Service, Austin, Fall 2011.
- [225] “Environmental Ethics in the Light of Modern Biology,” Ethics after Darwin Conference, Depauw University, Spring 2011.
- [224] “Sober on Intelligent Design,” American Philosophical Association Central Division Meeting, Minneapolis, Spring 2011.
- [223] “Spatial Analysis in Systematic Conservation Planning,” Seminar, Department of Biological Sciences, University of North Texas, Spring 2011.
- [222] “Systematic Conservation Planning for Fish Species in Texas,” Seminar, Texas Parks and Wildlife Department, Austin, Fall 2010.
- [222] “Winter Habitat and Conservation Status of the Black-capped Vireo, *Vireo atricapilla*, Predicted from a Species Distribution Model,” 2010 Black-capped Vireo Symposium, Austin District of Texas Department of Transportation, Austin, Fall 2010.
- [221] “Ethics in Systematic Conservation Planning,” International Forum on Climate Change and Biodiversity—Ethics for Action, UNESCO, Seoul, Fall 2010.
- [220] “Spatial Planning and Decision Support: The Use of Multi-criteria Analysis,” Conservation International Workshop, Washington, DC, Spring 2010.
- [219] “After Biodiversity?,” Jubilee Symposium, Center for the Philosophy of Science, Boston University, Spring 2010.
- [218] “Philosophy and Biology,” Conference in Honor of Bill Wimsatt’s Retirement, Committee on the Conceptual and Historical Studies of Science, University of Chicago, Spring 2010.
- [217] “Climate Change and the Spread of Vector-Borne Infectious Disease,” Beta Beta Beta (National Biology Honors Society) Meeting, University of Texas, Fall 2009.
- [216] “Environmental Decisions with Multiple Agents: The Limits of *Homo economicus*,” Inland Northwest Philosophy Conference, Washington State University and University of Idaho, Spring 2009.
- [215] “Heredity before Genetics,” History and Philosophy of Science Seminar, University of Idaho, Spring 2009.
- [214] “Evolution and Intelligent Design?” Panel Contribution, Reasons to Believe Seminar, University of Texas at Austin, Spring 2009.
- [213] “Creationism and Texas Schools,” Dean’s Scholars Seminar, College of Natural Sciences, University of Texas at Austin, Spring 2009.

- [212] "Evolution and Intelligent Design in Texas Schools," Science and Society Workshop, Southwestern University, Georgetown, Spring 2009.
- [211] "The Balcones Canyonlands," Science under the Stars Program, Breckenridge Field Laboratory, University of Texas at Austin, Spring 2009.
- [210] "Internalist and Externalist Theories of Development: Before the Divorce of Evolution from Embryology," Behavior Seminar, Section of Integrative Biology, University of Texas at Austin, Spring 2009.
- [209] "Darwin and Wallace," Darwin Day Celebration, Texas Memorial Museum, Austin, Spring 2009.
- [208] "Spatial Planning and Decision Support," Conservation International Workshop on Planning for Merauke, Papua, Jakarta (Indonesia), Fall 2008.
- [207] "Wallace, Natural Selection, and Biogeography," Plenary Lecture, Letter from Ternate: An International Conference on Alfred Russel Wallace and the Wallacea, Indonesian Academy of Sciences, Makassar (Sulawesi), Fall 2008.
- [206] "Sacred Groves and the Diversity of Nature," Killeen Chair Lecture, St. Norbert's College (Wisconsin), Fall 2008.
- [205] "Systematic Conservation Planning for México," Lecture, Reunión Multidisciplinaria 'Interacciones en el Planeta Tierra,' Universidad Nacional Autónoma de México, Fall 2008.
- [204] "Norms and the Conservation of Biodiversity," College Lecture, St. Michael's College (Vermont), Fall 2008.
- [203] "Beyond Parks: The Ethics of Biodiversity Conservation, with a Case Study from Perú," Invited Symposium, Society for Conservation Biology Annual Meeting, Chattanooga, Summer 2008.
- [202] "The Mathematics of Designing Biological Reserves," Institute for Computational and Engineering Sciences Forum, University of Texas at Austin, Spring 2008.
- [201] "Doubting Darwin? The Ethics of Teaching Non Standard Science in Public Schools." Annual Meeting, Association for Professional and Practical Ethics, San Antonio, Spring 2008.
- [200] "The Greening of America," Panel Contribution, School of Journalism, University of Texas at Austin, Spring 2008.
- [199] "Dispersal and Plasticity: Preparing for Climate Change," Seminar, Discussion Meeting on Phenotypic and Developmental Plasticity, Estuary Island, Trivandrum, Fall 2007.
- [198] "Early Life," Lecture, "Earth's Birthday" Workshop, Center for Inquiry, Austin, Fall 2007.
- [197] "Systematic Conservation Planning," Seminar, International Centre for Integrated Mountain Development, Katmandu, Nepal, Summer 2007.
- [196] "Curriculum Development," Panel Contribution, National Mathematics and Science Initiative—UTeach Institute Conference, University of Texas at Austin, Summer 2007.
- [195] "The Travails of Being a Biologist," Lecture, Center for Inquiry, Austin, Summer 2007.

- [194] "Intelligent Design," Lecture, Undergraduate Research Focus Group, Department of Chemistry and Biochemistry, University of Texas at Austin, Spring 2007.
- [193] "The Poverty of Intelligent Design," Public Lecture, Bioethics Program, Iowa State University, Spring 2007.
- [192] "Habitat Reconstruction," Seminar, Department of Philosophy, Iowa State University, Spring 2007.
- [191] "The Central Dogma and Biological Information," Seminar, Workshop on History of the Central Dogma of Molecular Biology and Its Epistemological Status Today, University of Geneva, Spring 2007.
- [190] "The Cost of Postponing Biodiversity Conservation in Mexico," VII Congreso Nacional de Mastozoología (Mexico), Zacatecas, Fall 2006.
- [189] "Environmental Ethics: A Defense of Anthropocentrism," Keynote Address, Second International Conference on Applied Ethics, Middle East Technical University, Ankara, Fall 2006.
- [188] "Measures of Imprecise Probability: A Conceptual Hierarchy." Seminar, Second Decision Theory Workshop, University of Texas at Austin, Fall 2006.
- [187] "The Poverty of Design—Evolution and Reformed Creationism," Colloquium, Department of Philosophy, University of California at Santa Cruz, Spring 2006.
- [186] "How Can We Improve the Teaching of Evolution?" Discovery Learning Center Symposium Panel Contribution, University of Texas at Austin, Spring 2006.
- [185] "Multiple Agents and Multiple Criteria—Exploiting the Formal Isomorphism," Colloquium, Department of Philosophy, University of California at Santa Cruz, Spring 2006.
- [184] "Intelligent Design," Dean's Scholars Seminar, College of Natural Sciences, University of Texas at Austin, Spring 2006.
- [183] "Disentangling Nature and Nurture: Gene, Organism, and Environment," Center for Genetics and Society, University of California at Los Angeles, Spring 2006.
- [182] "Systematic Conservation Planning," Seminar, Universidad Autónoma del Estado de Morelos, Cuernavaca, Spring 2006.
- [181] "Systematic Conservation Planning," Pronatura Meeting, Mexico City, Spring 2006.
- [180] "Disentangling Nature and Nurture: A History of $G \times E$ Interaction Models," Plasticity and Epigenetics Seminar, Section of Integrative Biology, University of Texas at Austin, Spring 2006.
- [179] "Multiple Agents, Multiple Criteria—Exploiting the Formal Isomorphism," Colloquium, Department of Philosophy, Carnegie-Mellon University, Fall 2005.
- [178] "Biological Information," Workshop on Information Beyond Shannon, University of Central Florida, Orlando, Fall 2005.
- [177] "Experts and Algorithms in Conservation Planning," National Conference, Engineers for a Sustainable World, University of Texas at Austin, Fall 2005.

- [176] "God by Design," Humanities Institute Free Thinking Lunch Series, University of Texas at Austin, Spring 2005.
- [175] "Environmental Philosophy: Analysis of Biological and Social Data," Liberal Arts Informational Technology Seminar Series, University of Texas at Austin, Spring 2005.
- [174] "Planning for Biodiversity: Conservation and Restoration," Colloquium on Environmental Ethics, Science and Policy, University of Utah, Spring 2005.
- [173] "Planning for Biodiversity: Conservation and Restoration," Ecology Centre, University of Queensland—St. Lucia, Northern Spring 2005.
- [172] "The Politics of Anti-Naturalism," Big Problems Program Lecture, University of Chicago, Spring 2005.
- [171] "The Poverty of Design: Evolution and Its Discontents," Big Problems Program Lecture, University of Chicago, Spring 2005.
- [170] "Planning for Biodiversity: Conservation and Restoration," History, Philosophy, and Social Studies of Science Annual Lecture, University of Chicago, Spring 2005.
- [169] "Popular Misconceptions of Science: Intelligent Design," Student Undergraduate Research Group, University of Texas at Austin, Spring 2005.
- [168] "Naturalism and Its Discontents," Conference on Methodology and Science, Visva-Bharati University, Santiniketan, Winter 2004.
- [167] "On Dembski's Doubts about Unintelligent Evolution," Annual Meeting of the Society of Christian Philosophers, American Academy of Religion Meeting, San Antonio, Fall 2004.
- [166] "Genes, Genomes, and Development: Comments on Burian, Griffiths, Laubichler, and Root," Fifth Annual Meeting of the Philosophy and Development Group, University of Texas, Fall 2004.
- [165] "Incorporating Multiple Criteria," Contribution to Panel on "Engaging the Public for Improved Water Management Strategies," Engineers for a Sustainable World, University of Texas at Austin, Fall 2004.
- [164] "Multiple Criterion Synchronization for Conservation Planning," Invited Symposium, Society for Conservation Biology Annual Meeting, Columbia University, New York, Summer 2004.
- [163] "What is Sustainability?," Contribution to Panel on "Critical Environmental Issues and Sustainable Development," Engineers for a Sustainable World, University of Texas at Austin, Spring 2004.
- [162] "Developmental Evolution and the Expansion of Evolutionary Theory," Colloquium, Department of Philosophy, University of Utah, Spring 2004.
- [161] "The Mathematics of Designing Biodiversity Conservation Area Networks," Mathematical Biology Group, University of Utah, Spring 2004.
- [160] "Popular Misconceptions of Science: Evolutionary Psychology," Student Undergraduate Research Group, University of Texas at Austin, Spring 2004.

- [159] "Systematic Conservation Planning V: Software Tools," CONABIO (Comisión nacional para el conocimiento y uso de la biodiversidad), Mexico, Spring 2004.
- [158] "Systematic Conservation Planning IV: Multiple Criterion Synchronization," CONABIO (Comisión nacional para el conocimiento y uso de la biodiversidad), Mexico, Spring 2004.
- [157] "Systematic Conservation Planning III: Place Prioritization," CONABIO (Comisión nacional para el conocimiento y uso de la biodiversidad), Mexico, Spring 2004.
- [156] "Systematic Conservation Planning II: Surrogacy Analysis," Instituto de Biología, Universidad Nacional Autónoma de México, Spring 2004.
- [155] "Systematic Conservation Planning I: The Consensus Framework," Instituto de Biología, Universidad Nacional Autónoma de México, Spring 2004.
- [154] "Evolutionary Psychology and the Law," Colloquium, Cardozo School of Law, Yeshiva University, Spring 2004.
- [153] "Darwin and Society II: Current Status," Humanities Institute Teachers-as-Scholars Seminar, University of Texas at Austin, Fall 2003.
- [152] "Darwin and Society I: The History," Humanities Institute Teachers-as-Scholars Seminar, University of Texas at Austin, Fall 2003.
- [151] "God in a Lab Coat: Science and Religion in School Textbooks," Conference on Fundamentalism's Threat to Democracy, Texas Freedom Network, Dallas, Fall 2003.
- [150] "Systematic Biodiversity Conservation Planning," The Nature Conservancy of Texas, San Antonio, Fall 2003
- [149] "Systematic Biodiversity Conservation Planning," Instituto de Biología, Universidad Nacional Autónoma de México, Summer 2003.
- [148] "Uncertainty and Conservation Biology," International Summer School on Probability and the Special Sciences, Universität Konstanz, Summer 2003.
- [147] "Stochasticity and Ecology," International Summer School on Probability and the Special Sciences, Universität Konstanz, Summer 2003.
- [146] "Probability and Evolutionary Theory," International Summer School on Probability and the Special Sciences, Universität Konstanz, Summer 2003.
- [145] "The Selection of Conservation Area Networks," Meeting of the Working Group on Conservation Planning Tools, National Center for Ecological Analysis and Synthesis, Santa Barbara, Summer 2003.
- [144] "Systematic Conservation Planning: The Use of Environmental Surrogate Data Sets for India," Seminar, Ecoinformatics Workshop, Ashoka Trust for Research in Ecology and the Environment, Bangalore, Summer 2003.
- [143] "Biodiversity and Environmental Philosophy," Invited Symposium on [B3], Pacific Division Meeting of the American Philosophical Association, San Francisco, Spring 2003. Respondents: Jay Odenbaugh, Anya Plutynski.

- [142] "Conservation Biology and Social Ecology," Colloquium, First Southwest Colloquium in the History and Philosophy of the Life Sciences, Arizona State University, Spring 2003.
- [141] "Project Tiger: Comments on Michael Lewis," Commentary, First Southwest Colloquium in the History and Philosophy of the Life Sciences, Arizona State University, Spring 2003.
- [140] "Disentangling Nature and Nurture," Seminar, Department of Philosophy, University of British Columbia, Fall 2002.
- [139] "Evolutionary Theory in the 1920s: The Nature of the 'Synthesis,'" Invited Symposium Contribution, 2002 Biennial Meeting of the Philosophy of Science Association, Milwaukee, Fall 2002.
- [138] "Heritability, Norms of Reaction, and the Detection of Genotype-Environment Interactions," Seminar, Workshop on Genes and Human Behavior: Conceptual and Ethical Issues, Dalhousie University, Fall 2002.
- [137] "The Emergence of Conservation Biology," Seminar, Program in the History and Philosophy of Science, Johns Hopkins University, Fall 2002.
- [136] "The Aims and Structure of Conservation Biology," Seminar, Department of Philosophy and Religious Studies, University of North Texas, Fall 2002.
- [135] "From Wallace's Biogeography to Habitat Dioramas: The Role of Visual Thinking in Science," College of Natural Sciences Honors Program Seminar, University of Texas at Austin, Summer 2002.
- [134] "Biological Information in the Proteomics Age" Tufts University 150 Anniversary Colloquium ("The Philosophical Basis of Biology"), Tufts University, Spring 2002.
- [133] "How Development May Direct Evolution," Seminar, Third Annual Meeting on Philosophy and Developmental Biology, University of Texas, Spring 2002.
- [132] "Methodological Individualism and the Future of Ecological Theory," Lunch-Time Seminar, Center for Philosophy of Science, University of Pittsburgh, Spring 2002.
- [131] "Evolutionary Psychology and the Pre-emption of Culture in Recent Theories of Human Behavior," Seminar, Third Central Texas Philosophy of Science Conference, Rice University, Spring 2002.
- [130] "Population Viability Analysis in Conservation Biology," Seminar, Section of Integrative Biology, University of Texas at Austin, Spring 2002.
- [129] "Evolutionary Models of Phenotypic Plasticity and Reaction Norms: A History," Colloquium, Annual Meeting of the Society for Integrative and Comparative Biology, Anaheim, Spring 2002.
- [128] "On Biological Information," Colloquium, Eastern Division Meeting of the American Philosophical Association, Atlanta, Fall 2001.
- [127] "The Origins of Biological Information," Colloquium, University of Vienna, Fall 2001.
- [126] "Evolutionary Psychology: Science and Public Policy," Panel Contribution, Plan II Honors Program, University of Texas at Austin, Fall 2001.

- [125] "Logic and Logicism in Carnap's Logical Syntax of Language," Colloquium, 2001 Logic Colloquium, European Society for Symbolic Logic, Technisches-Universität Wien, Summer 2001.
- [124] "From Modules to Morphogenesis," Seminar, Second Annual Meeting on Philosophy and Developmental Biology, Yale University, Summer 2001.
- [123] "The Origins of Biological Information," Seminar, Biennial Meeting of the International Society for the History, Philosophy, and Social Studies of Biology, Quinnipiac University, Summer 2001.
- [122] "Reconstructing Logical Empiricism: Historiographical Issues," Seminar, Conference on The Vienna Circle and Logical Empiricism: Re-Evaluation and Future Perspectives of the Research and Historiography, Insitut Wiener Kreis, Vienna, Summer 2001.
- [121] "Implications of the Human Genome Project," Panel Presentation, Lyceum, College of the Liberal Arts, University of Texas at Austin, Summer 2001.
- [120] "Computational Problems of Conservation Biology," Seminar, First Annual Computational Biology Seminar Series, University of Texas at Austin, Spring 2001.
- [119] "Animal Welfare versus Biodiversity Conservation," Panel Presentation, Pugwash Conference on Science, Technology, and Ethics: Animals in Research in the 21st Century, University of Texas at Austin, Spring 2001.
- [118] "Where the Philosophy of Developmental Biology is Going," Seminar, First Central Texas Philosophy of Science Conference, University of Texas at Austin, Spring 2001.
- [117] "Choosing Surrogates to Represent Biodiversity in Reserve Networks," Seminar, Section of Integrative Biology, University of Texas at Austin, Spring 2001.
- [116] "Place Prioritization for Texas Using GAP Data: The Use of Biodiversity and Environmental Surrogates in the Presence of Socioeconomic Constraints," National Gap 2000 Conference, San Antonio, Summer 2000.
- [115] "Cultures of Sustainable Habitat--Biodiversity Conservation, Wilderness Preservation and Social Justice," School for Tropical Environment Studies and Geography, James Cook University of North Queensland, Cairns (Northern) Summer 2000.
- [114] "Genes versus Molecules: How to and How Not to Think about Reductionism," Lecture, Phillipe Laudat Conference on Promises and Limits of Reductionism in the Biomedical Sciences, INSERM, Abbaye de Royaumont, Paris, Summer 2000.
- [113] "On the Emergence of Semiotic Information in Macromolecular Systems," Seminar, Belgian Society for Logic and Philosophy of Science, Brussels, Summer 2000.
- [112] "Genes versus Molecules: How to and How Not to Think about Reductionism," Colloquium, Department of Philosophy, University of Ghent, Summer 2000.
- [111] "On the Emergence of Semiotic Information in Macromolecular Systems," Plenary Lecture, Interdisciplinary Conference on the Role of Naturalism in Science, Michael Polanyi Center, Baylor University, Spring 2000.

- [110] "Place Prioritization Procedures and Social Values," Plenary Lecture, Inter-Disciplinary Workshop on Philosophical Issues in Biodiversity Conservation, Program in the History and Philosophy of Science, University of Texas at Austin, Spring 2000.
- [109] "The Use of Evolutionary Arguments in the Social Sciences," Panel Comment, Graduate Student Conference on Philosophy and the Social Sciences, Department of Philosophy, University of Texas at Austin, Spring 2000.
- [108] "Artificial Intelligence Applications in the Environmental Sciences," Panel Comment, Artificial Intelligence and Smart Agents Panel, South by SouthWest Interactive Conference, Austin, Spring 2000.
- [107] "Global Warming and the Fate of Species," Panel Comment, Conference on the Kyoto Protocol, Lyndon B. Johnson School of Public Affairs, University of Texas at Austin, Spring 2000.
- [106] "Prioritizing Areas by Biodiversity with an Application to Québec," Seminar, Desert Ecological Research Centre, Gobbet (Namibia), (Northern) Winter 1999.
- [105] "Prioritizing Areas by Biodiversity with an Application to Québec," Seminar, Ministry of Environment and Tourism, Windhoek (Namibia), (Northern) Winter 1999.
- [104] "Cultures of Sustainable Habitat," Seminar, Centre for Resource and Environmental Studies, Australian National University, (Northern) Summer 1999.
- [103] "Population Viability Analysis and Environmental Stochasticity," Seminar, Division of Wildlife and Environment, Commonwealth Scientific and Research Organization, Canberra, (Northern) Summer 1999.
- [102] "Assessing 'Biodiversity.'" Seminar, Unit for the History and Philosophy of Science, University of Sydney, (Northern) Summer 1999.
- [101] "The Québec Biodiversity Project," Seminar, Sustainable Landscapes Program, Commonwealth Scientific and Industrial Research Organization, Canberra, (Northern) Summer 1999.
- [100] "Why Do Bayesian and Frequentist Analyses Give Different Results in Population Viability Analysis?" Seminar, Biennial Meeting of the International Society for the History, Philosophy, and Social Studies of Biology, Oaxaca, Summer 1999.
- [99] "The Aims and Status of Contemporary Evolutionary Psychology," Panel Comment, Graduate Student Conference on Genetics, Evolution and Culture, Department of Philosophy, University of Texas at Austin, Spring 1999.
- [98] "Models, Theories, and the Estimation of Extinction Risks," Lecture, Conference on Modeling and Simulation across the Disciplines-II: Experiment Visualization and "Thick Data," University of Chicago, Spring 1999.
- [97] "Loop Analysis of Ecological Feedback Models," Seminar, Centre for Nonlinear Dynamics, McGill University, Spring 1999.
- [96] "Loop Analysis of Ecological Feedback Models," Plenary Lecture, International Workshop on Dynamical Roles of Feedback Circuits and Related Topics, Cuernavaca (Mexico), Fall 1998.

- [95] "Chance, Laws, and Design: A Response to Dembski," Commentary, Department of Philosophy, University of Texas at Austin, Fall 1998.
- [94] "Human and Quantitative Genetics," Panel Discussion Contribution, Postgenomics? Historical, Techno-Epistemic and Cultural Aspects of Genome Projects Workshop, Max-Planck-Institut für Wissenschaftsgeschichte, Berlin, Summer 1998.
- [93] "Entanglement, Reductionism, and Quantum Mechanics," Seminar, Workshop ("Space-Time, Quantum Entanglement and Critical Epistemology") in Honor of John Stachel, Max-Planck-Institut für Wissenschaftsgeschichte, Berlin, Summer 1998.
- [92] "Biodiversity Conservation and the Mythology of Wilderness," Colloquium, Conference on Environmental Ethics and Philosophy, Department of Philosophy, University of California at Davis, Spring 1998.
- [91] "Haldane and Evolutionary Theory," Seminar, Redpath Museum, McGill University, Spring 1998.
- [90] "The Neglect of Theory in the Recent Philosophy and History of Molecular Biology," Seminar, Department of Philosophy, University of Texas at Austin, Spring 1998.
- [89] "The DNA Double Helix Model and the Role of Theories in Molecular Biology," Colloquium, Department of Philosophy, University of Maryland--Baltimore County, Spring 1998.
- [88] "Haldane and Evolutionary Biology," Seminar, Department of Biology, Dartmouth College, Spring 1998.
- [87] "The Neglect of Theory in the Recent Philosophy and History of Molecular Biology," Seminar, Department of Philosophy, University of California at Santa Cruz, Spring 1998.
- [86] "The Luria-Delbrück Problem," Seminar, Department of Biology, McGill University, Spring 1998.
- [85] "The Neglect of Theory in the Recent Historiography of Molecular Biology," Seminar, Department of Philosophy, University of Notre-Dame, Spring 1998.
- [84] "The Neglect of Theory in the Recent Historiography of Molecular Biology," Seminar, Department of Philosophy, University of Illinois at Urbana-Champaign, Spring 1998.
- [83] "Deep Ecology and Intrinsic Value: Can the Foundations of Conservation Biology Be Sustained?" Seminar, Annual Meeting of the British Society for the Philosophy of Science, University of Oxford, Summer 1997.
- [82] "Expressivity, Penetrance, and the Gene: the Problem, Its History, and Its Significance," Seminar, Max-Planck-Institut für Wissenschaftsgeschichte, Spring 1997.
- [81] "Expressivity, Penetrance and Genetic Explanation," Dienstagskolloquium, Wissenschaftskolleg zu Berlin, Spring 1997.
- [80] "Haldane and Evolutionary Theory," Colloquium, Max-Planck-Institut für Wissenschaftsgeschichte, Berlin, Spring 1997.
- [79] "Molecular Challenges to the Neo-Darwinian Interpretation of Evolution," Seminar, Department of Biology, Universität Kaiserslautern, Spring 1997.

- [78] "Genetic Reductionism, Nature-Nurture, and the Analysis of Heritability," Seminar, Department of Philosophy, University of California--Irvine, Spring 1997.
- [77] "Demystifying Emergence, Taking Epistemology Seriously," Seminar, Konrad Lorenz Institut für Evolutions- und Kognitionforschung, Altenberg, Fall 1996.
- [76] "Reductionism in Molecular Biology: The Question of Dominance," Molecular Genetics and Developmental Biology Seminar, Department of Biology, McGill University, Spring 1996.
- [75] "The Obsession with Heritability," Seminar, Department of the Social Studies of Medicine," McGill University, Fall 1995.
- [74] "Decoding 'Coding': Text, Context and DNA," Seminar, Biennial Meeting of the International Society for the History, Philosophy, and Social Studies of Biology, Leuven, Summer 1995.
- [73] "Morgan's Uncertain Legacy: Aspects of German Genetics, 1920 -1930," Seminar, Biennial Meeting of the International Society for the History, Philosophy, and Social Studies of Biology, Leuven, Summer 1995.
- [72] "Waiting for Monod: The Temporality of Gene Action, 1938 -1958," Seminar, Biennial Meeting of the International Society for the History, Philosophy, and Social Studies of Biology, Leuven, Summer 1995.
- [71] "Genetic Reductionism and the Obsession with Heritability," Seminar, Population Genetics Laboratory, Museum of Contemporary Zoology, Harvard University, Spring 1995.
- [70] "Patterns of Reduction in Quantum Mechanics and Condensed Matter Physics," Conference on Reduction, Emergence and their Respective Heuristics, Boston Colloquium for the Philosophy of Science, Spring 1995.
- [69] "Race, Behavior, and IQ: How to Lie with Genetics," Seminar, Department of Philosophy, University of Western Ontario, Spring 1995.
- [68] "The Significance of Renormalization," Seminar, Sigma Club, University of Western Ontario, Spring 1995.
- [67] "Between Philosophy and Architecture: Where Was Modernism?" Seminar, Department of Philosophy, Concordia University, Fall 1994.
- [66] "The Selection of Alleles and the Additivity of Variance," Contributed Paper, 1994 Biennial Meeting of the Philosophy of Science Association, New Orleans, Fall 1994.
- [65] "On Stochastic Modifications of Quantum Dynamics," Symposium in Honor of Abner Shimony, Boston Colloquium for the Philosophy of Science, Fall 1994.
- [64] "Theoretical Analysis of Directed Mutations," Georgetown University Medical Center, Spring 1994.
- [63] "Between History and Physics: On a View from Santa Fe," Seminar, Department of the History of Science, Harvard University, Spring 1994.
- [62] "Dissipated Structures: On Non-Equilibrium Thermodynamics and the Origins of Order," Lecture, Workshop on the Meaning and Use of Entropy, Digner Institute, Spring 1994.

- [61] "Neutrality or Selection: Do Experiments Matter?" Seminar, Population Genetics Laboratory, Museum of Contemporary Zoology, Harvard University, Spring 1994.
- [60] "Beyond Physicalism," Seminar, Department of Philosophy, Georgetown University, Spring 1994.
- [59] "On Alternative Fitness Sets Giving Rise to Identical Allele Frequencies," Seminar, Developmental Biology and Genetics Laboratory and Centre for Ecological Sciences, Indian Institute of Science, Bangalore, Spring 1994.
- [58] "Haldane and Evolutionary Biology," Colloquium, Dibner Institute for the History of Science and Technology, MIT, Fall 1993.
- [57] "Evolutionary Systems," Volterra Lecture, Volterra Center for Science Studies, Brandeis University, Fall 1993.
- [56] "Genetic Reductionism," Colloquium, Department of Philosophy, Brandeis University, Fall 1993.
- [55] "Biometry, Mendelism, and the Emergence of Theoretical Population Genetics," Bar-Hillel Colloquium for the Philosophy of Science, Jerusalem, Spring 1993.
- [54] "Novel Modeling of the Immune System," Conference on Conceptual Issues in Immunology: Experimental and Clinical Foundations, Boston Colloquium for the Philosophy of Science, Spring 1993.
- [53] "Biological Information," Seminar, Department of Philosophy, McGill University, Spring 1993.
- [52] "Codes and Cybernetics in Molecular Biology," Boston Colloquium for the Philosophy of Science, Spring 1993. Commentator: Abner Shimony.
- [51] "Non-Reductive Models in Molecular Biology," Lecture, Conference on Methods in Philosophy and the Sciences, New School, New York, Spring 1993.
- [50] "What's 'Genetic'?", Seminar, Department of Philosophy, University of New Mexico, Albuquerque, Fall 1992.
- [49] "Form, Function, and the Molecularization of Biology," Lecture, Conference on the Elusive Synthesis: Aesthetics and Science, Boston Colloquium for the Philosophy of Science, Fall 1992.
- [48] "Science Confronts Philosophy: The Case of J. B. S. Haldane," Lecture, Society of Fellows, Boston University, Fall 1992.
- [47] "The New Genetics and the Future of Society," Lecture, South Place Ethical Society, London, Fall 1992.
- [46] "Haldane and the Foundations of Theoretical Population Genetics," Lecture, Annual Meeting, Indian Academy of Science, Ahmedabad, Fall 1992.
- [45] "Biology and Physics," Seminar, Centre for Theoretical Studies, Indian Institute of Science, Bangalore, Fall 1992.
- [44] "Clonal Genetics: Results of Computational Studies," Seminar, Developmental Biology and Genetics Laboratory, Indian Institute of Science, Bangalore, Fall 1992.

- [43] "The Significance of J. B. S. Haldane," Seminar, Center for Cellular and Molecular Biology, Hyderabad, Fall 1992.
- [42] "Mathematical Treatment of Fluctuation Analysis," Seminar, Centre for Cellular and Molecular Biology, Hyderabad, Fall 1992.
- [41] "Biology and Physics," Seminar, Tata Institute of Fundamental Research, Bombay, Fall 1992.
- [40] "Voices and Cycles," Seminar, Department of Science and Technology Workshop on Behavioural Ecology, Indian Institute of Science, Bangalore, Fall 1992.
- [39] "Population Models of Bacterial Mutagenesis," Seminar, Developmental Biology and Genetics Laboratory, Indian Institute of Science, Bangalore, Summer 1992.
- [38] "Haldane and the Luria-Delbrück Problem," Special Lecture, Indian Statistical Institute, Calcutta, Summer 1992.
- [37] "Engels, Haldane, and the Dialectics of Living Matter," Boston Colloquium for the Philosophy of Science, Spring 1992.
- [36] "Science Confronts Philosophy: The Case of J. B. S. Haldane," Plenary Lecture, J. B. S. Haldane Centenary Meeting, The Royal Society (London), University College London and the Science Museum (London), Spring 1992.
- [35] "Logic and Logicism in Carnap's *Logical Syntax of Language*," Seminar, Belgian Society for Logic and Philosophy of Science, Brussels, Spring 1992.
- [34] "Science Confronts Philosophy: The Case of J. B. S. Haldane," Colloquium, Laboratory of Genetics, University of Ghent, Spring 1992.
- [33] "What Good is the Human Genome Project?," Seminar, Laboratory of Genetics, University of Ghent, Spring 1992.
- [32] "What Good is the Human Genome Project?," Colloquium, Department of Philosophy, Rijkuniversiteit Limburg, Maastricht, Spring 1992.
- [31] "J. B. S. Haldane's Philosophy of Science," Seminar, Committee on the Conceptual Foundations of Science, University of Chicago, Spring 1992.
- [30] "What's 'Genetic'?" Colloquium, Department of Philosophy, Boston University, Spring 1992.
- [29] "Science Confronts Philosophy: The Case of J. B. S. Haldane," Seminar, Department of Science and Technology Studies, Cornell University, Spring 1992.
- [28] "Sex, Disease and Evolution: Variations on a Theme from J. B. S. Haldane," First International Conference on Haploidy and Diploidy, University of Wisconsin--Madison, Fall 1991.
- [27] "Logic in Carnap's *Logical Syntax of Language*," Carnap Centenary Symposium, Boston Colloquium for the Philosophy of Science, Fall 1991.
- [26] "Social and Political Problems from the Human Genome Initiative," Seminar, Biennial Meeting of the International Society for the History, Philosophy, and Social Studies of Biology, Northwestern University, Summer 1991.

- [25] "Reduction, Function and Molecular Biology," Workshop on the Philosophy and History of Biology: New Perspectives, Boston Colloquium for the Philosophy of Science, Spring 1991.
- [24] "Haldane, Fisher, Wright and Evolutionary Biology," Boston Colloquium for the Philosophy of Science, Spring 1991. Commentator: Richard C. Lewontin.
- [23] "The Evolutionary Synthesis: What Synthesis?" Colloquium, University of Washington, Seattle, Winter 1991.
- [22] "The Emergence of Theoretical Population Genetics," Colloquium, University of Minnesota, Twin Cities, Winter 1991.
- [21] "The Modern 'Synthesis': Reduction or Synthesis?" Seminar, Duke University, Spring 1991.
- [20] "Conceptual Issues in Evolutionary Biology," Colloquium, University of Illinois at Urbana-Champaign, Spring 1991.
- [19] "Particles and Quantum Field Theory--A Response to Simon Saunders," Commentary, Boston Colloquium for the Philosophy of Science, Fall 1990.
- [18] "Structures of Choice in Human Genetics," Seminar, Workshop on the Human Genome Initiative, Dibner Institute for the History of Science and Department of the History of Science, Harvard University, Summer 1990.
- [17] "Physical Warrants and the Case for Reductionism in Molecular Biology," Seminar, Belgian Society for Logic and the Philosophy of Science, Brussels, Spring 1990.
- [16] "Conceptual Issues in the Controversy Over Directed Mutagenesis in Bacteria," Colloquium, Department of Philosophy, Stanford University, Spring 1990.
- [15] "Neither Equal nor Indifferent: the Case against Caste--A Response to Huston Smith," Boston University Institute for Philosophy and Religion, Spring 1990.
- [14] "Naturalizing the Philosophy of Language," Faculty Seminar, Department of Philosophy, Boston University, Spring 1990.
- [13] "Haldane at Cambridge: Biochemistry, Enzymes, and Biochemical Genetics," Seminar, Department of the History of Science, Harvard University, Spring 1990.
- [12] "The *Bhagavad Gita* and the Indian Tradition," Humanities Lecture, Boston University, Spring 1990.
- [11] "Directed Mutations and Non-Darwinian Evolution: Where We Are Today," Colloquium, Boston Colloquium for the Philosophy of Science, Spring 1990. Commentator: Stephen Jay Gould.
- [10] "Is Molecular Biology Committed to a Reductionist Methodology? The Case of the Common Code," Colloquium, Department of Philosophy, University of Chicago, Spring 1989.
- [9] "Natural Selection, Hypercycles, and the Origin of Life," Contributed Paper, 1988 Biennial Meeting of the Philosophy of Science Association, Evanston, Fall 1988.
- [8] "Natural Selection and Hypercycles," Colloquium, Department of Philosophy, University of Chicago, Spring 1988.

- [7] “The Hypercycle Model and Some of its Implications,” Seminar, Biennial Meeting of the International Society for the History, Philosophy, and Social Studies of Biology, Virginia Polytechnic Institute, Summer 1987.
- [6] “Reductionism and Molecular Biology: A Reappraisal,” Seminar, Biennial Meeting of the International Society for the History, Philosophy, and Social Studies of Biology, South Bend, Summer 1985.
- [5] “How to think about Quantum Field Theory,” Colloquium, Series in Philosophy, Great Expectations Bookstore, Evanston, Spring 1985.
- [4] “Ramsey, Wittgenstein, and Logic as a Normative Science,” Colloquium, Department of Philosophy, Roosevelt University, Spring 1984.
- [3] “On Descartes, Boyle, Boerhaave, and Some Controversies Concerning Cartesian Theories of Heat,” Colloquium, Committee on the Conceptual Foundations of Science, University of Chicago, Winter 1984.
- [2] “On Evolutionary Epistemology,” Graduate Student Colloquium, Department of Philosophy, University of Illinois—Chicago Circle, Spring 1983.
- [1] “Quark Search from e^+e^- Collisions,” Colloquium, Stanford Linear Accelerator Center, Stanford University, Summer 1979.

External Courses:

- [3] “Introduction to ConsNet.” Insitute of Biology, Universidad Nacional Autónoma de México (UNAM), Mexico City, Spring 2008 (1 week).
- [2] “Systematic Conservation Planning.” Insitute of Biology, Universidad Nacional Autónoma de México (UNAM), Mexico City, Spring 2007 (1 month).
- [1] “Systematic Conservation Planning.” CONABIO (Comisión nacional para el conocimiento y uso de la biodiversidad), Mexico City, Spring 2004 (1 week).

Grants:

“Integrated Systems for Epidemic Response (ISER),” National Health and Medical Research Council, APP1107393, 2015 -2020. (AU\$ 2 491 912). Chief Investigator (Principal Investigator: R. MacIntyre, University of New South Wales).

“Curriculum Development Grant,” College of Undergraduate Studies, University of Texas at Austin, 2013 (\$ 2 000; declined). PI.

“Ecology of Disease Vectors in Central Texas: Extensions and Continuation.” Texas Natural Science Center Private Lands Research Grants Program, 2012 –2013 (\$ 14 390). PI.

“Data Provision and Projected Impact of Climate Change on Fish Biodiversity within the Desert Landscape Conservation Co-operative.” Bureau of Reclamation, Department of the Interior, 2011 –2013 (\$ 94 637). Co-PI. (PI: D. Hendrickson).

“Data Compilation, Distribution Models, Conservation Planning, and Status Surveys for Selected Fishes of Concern in Texas.” Texas Parks and Wildlife Department, 2011 – 2013 (\$ 98 985). Co-PI. (PI: D. Hendrickson).

“Species Distribution Models for Arthropod Vectors of Chagas Disease and Leishmaniasis in Texas.” Texas Natural Science Center Private Lands Research Grants Program, 2011 –2012 (\$ 10 000). PI.

“Fine Scale Risk Assessment of Chagas Disease Transmission on the US-Mexican Border.” Texas Border Health Disparities Center, 2011 (\$ 14 965). Co-PI. (PI: T. P. Feria, University of Texas—Pan American.)

“Provision and Inventory of Diverse Aquatic Ecosystem-Related Resources for the Great Plains Landscape Conservation Cooperative,” United States Fish and Wildlife Service, 2010 –2015 (\$ 99 022). Co-PI. (PI: D. Hendrickson.)

“Curriculum Development Grant,” College of Undergraduate Studies, University of Texas at Austin, 2010 (\$ 5 000). PI.

“Karst Invertebrates of Hays County, Texas,” Zara Environmental LLC, 2010 –2011 (\$ 10 000). PI.

“At-Risk Species’ Habitats in Central Texas,” Texas Natural Science Center Private Lands Research Grants Program, 2010 –2011 (\$ 10 000). PI.

“Area Prioritization for Medco Concession in Merauke,” Conservation International, 2009 -2011 (\$ 40 000). PI.

“Curriculum Development Grant,” College of Undergraduate Studies, University of Texas at Austin, 2009 (\$ 5 000). PI.

“Biodiversity of Central Texas,” Texas Natural Science Center Private Lands Research Grants Program, 2009 (\$ 5 600). PI.

“Habitat Conservation Plan Consultancy for Comal and Hays Counties,” Comal County and Hays County, 2008 (\$ 4 800). PI.

“Curriculum Development Grant,” College of Undergraduate Studies, University of Texas at Austin, 2008 (\$ 5 000). PI.

“From Ecological Diversity to Biodiversity: Conceptual Changes in the Emergence of Conservation Biology,” NSF Grant No. SES-0645884, 2007 –2010, Principal Investigator (\$ 142 476). PI.

“The ConsNet Portal,” University of Texas, FAST Tex Grant, 2006 –2007 (\$ 5 000). PI.

“Making Decisions on Complex Environmental Problems,” Working Group, National Center for Ecological Analysis and Synthesis, 2006 –2008 \$ 78 600. PI. (Joint PI: H. Regan.)

“The ConsNet Portal,” University of Texas Liberal Arts Instructional Technology Services Grant, 2006 –2007 (\$ 41 500). PI.

“Biodiversity of Central Texas,” University of Texas Environmental Science Institute Private Lands Research Grants Program, 2006 (\$ 3 801; declined). PI.

“Oyster Bed Restoration in Lavaca Bay,” Lower Colorado River Authority, Lavaca-Navidad River Authority , 2006 (\$ 5 000). PI.

“The ConsNet Portal,” University of Texas, FAST Tex Grant, 2005 -2006 (\$ 5 000).

“The ConsNet Portal,” University of Texas Liberal Arts Instructional Technology Services Grant, 2005 –2006 (\$ 35 000). PI.

“The ConsNet Portal,” University of Texas Liberal Arts Instructional Technology Services Grant, 2004 –2005 (\$ 39 000). PI.

“The Norm of Reaction and Phenotypic Plasticity: A Philosophical and Historical Analysis,” NSF Grant No. SES-0090036, 2002 –2003, Principal Investigator (\$ 157 000). PI.

“Genetic Algorithms,” Research Grant, Sulzer Corporation, 2001 -2002 (\$ 55 000). PI.

“The ConsNet Portal,” University of Texas, FAST Tex Grant, 2000 -2001 (\$ 5 000). PI.

“Model Organisms,” Faculty Research Grant, University of Texas at Austin, 1999 -2000 (\$ 6 000). PI.

“Genetic Reductionism: Its Sources and Implications,” NIH Grant No. 1-R01-HG00912-02, 1993 -1995, Principal Investigator (\$ 340 000). PI.

“J. B. S. Haldane: A Scientific Biography,” Boston University Graduate School Faculty Research Seed Grant, Summer 1991 (\$ 4 000). PI.

“J. B. S. Haldane: A Scientific Biography,” American Philosophical Society Archival Research Grant, Summer 1990 (\$ 4 000). PI.

“Dissertation Research Grant: Reductionism and Molecular Biology: A Reappraisal,” University of Chicago Women’s Association Travel Grant, 1988 (\$ 1 000). PI.

Major Consultancies and Committees:

Review Panel, Ecology and Evolution of Infectious Diseases Program, National Science Foundation, 2016 -2017.

Review Panel, Ecology and Evolution of Infectious Diseases Program, National Science Foundation, 2014 -2015.

Co-Director, “Heredity in the Postgenomic Era,” Fellow Forum, Wissenschaftskolleg zu Berlin, 2014 -2015 (with M. Viney).

Review Panel, Ecology and Evolution of Infectious Diseases Program, National Science Foundation, 2012 -2013.

Advisor, “Rapid Assessment of features and areas for Circumarctic Ecosystem Resilience in the 21-st Century (‘RACER’),” WorldWide Fund for Nature/ World Wildlife Fund (WWF), 2009 -2011.

Member, Review Panel, Biology 9 -12 End-Of-Course Assessment Content Validation Program, Texas Education Agency, 2009.

Member, Review Panel, US-Mexico Trainings, Internships, Exchanges and Scholarships (TIES), Higher Education for Development, United States Agency for International Development (US-AID), 2009.

Member, Review Panel, Biology 9 -12 End-Of-Course Assessment Content Validation Program, Texas Education Agency, 2008.

Co-Director, “Making Decisions on Complex Environmental Problems,” Working Group, National Center for Ecological Analysis and Synthesis (NCEAS), 2006 -2008 (with H. Regan).

Member, Program Committee, Philosophy of Science Association, 2005 -2006.

Member, Program Committee, International Congress for Logic, Methodology and Philosophy of Science, Section General Methodology and Scientific Reasoning, 2005 - 2006.

Co-Organizer, Formal Epistemology Workshops, 2004, 2005, 2006, 2007, 2008, 2009 (with B. Fitelson and local organizers).

Member, "Conservation Planning Tools," Working Group, National Center for Ecological Analysis and Synthesis (NCEAS), Santa Barbara, 2003 –2004.

Fellowships and Visiting Appointments:

Fellow, University of Texas Humanities Institute, 2017 (declined).

Faculty Research Fellow, *Deutscher Akademischer Austausch Dienst* (DAAD), Summer, 2014.

Visiting Scholar, Max-Planck-Institut für Wissenschaftsgeschichte, Berlin, 2014.

Faculty Research Assignment, University of Texas at Austin, Spring 2014.

Senior Research Fellow, School of Public Health and Community Medicine and School of Environmental and Civil Engineering, University of New South Wales, (Northern) Spring 2014.

Visiting Fellow, Wissenschaftskolleg zu Berlin, Summer 2012.

Fellow, University of Texas Humanities Institute, 2003 –2004.

Faculty Research Assignment, University of Texas at Austin, Spring 2003.

Visiting Scholar, Max-Planck-Institut für Wissenschaftsgeschichte, Berlin, 2002 –2003.

Fellow, Center for the Philosophy of Science, University of Pittsburgh, 2002 -2003 (declined).

Visiting Scientist, Division of Wildlife and Ecology, Commonwealth Scientific and Industrial Research Organization, Canberra, 1999.

Visiting Scholar, Max-Planck-Institut für Wissenschaftsgeschichte, Berlin, 1997 -1998.

Fellow, Wissenschaftskolleg zu Berlin, 1996 –1997.

Fellow, Dibner Institute for the History of Science and Technology, Massachusetts Institute of Technology, 1993 –1994.

Associate, Department of Biology and Museum of Contemporary Zoology, Harvard University, 1993 -1994.

Senior Fellow, Edelstein Centre for the Philosophy of Science, Hebrew University, Jerusalem, Spring -Summer 1992.

Visiting Scientist, Indian Institute of Science, Bangalore, Fall 1992.

Junior Fellow, Society of Fellows, Boston University, 1992 –93.

Boston University Graduate School Faculty Fellowship, Summer 1989.

Traveling Fellowship, Women’s Board of the University of Chicago, Summer 1988.

Research Fellowship, Argonne National Laboratory, 1987 –88.

Division of the Physical Sciences Teaching Fellowship, Department of Computer Science, University of Chicago, 1984 -86.

Graduate Research Fellowship, Department of Biophysics and Theoretical Biology, University of Chicago, 1982 –83.

Searle Graduate Fellowship, University of Chicago, 1981 –84.

Faculty Teaching Fellowship, Department of Physics, Columbia University, 1980 –81.

Summer Science Fellowship in Physics, Stanford Linear Accelerator Center, Stanford University, 1979.

Awards and Honors:

Highly Cited Author, 2007 –2010, *Biological Conservation*, 2010.

Killeen Chair Lecturer, St. Norbert’s College (Wisconsin), 2008.

Columbia College Gold Crown Medal, Columbia University, 1980.

Adam Leroy Jones Prize in Logic and Philosophy of Science, Columbia University, 1980.

Van Amringe Mathematical Prize, Columbia University, 1979.

Adam Leroy Jones Prize in Logic and Philosophy of Science, Columbia University, 1979.

Teaching Honors:

University of Texas Student Research Internship Award, 2003 –2004 (S. Villareal).

Distinguished Graduate Teacher, Department of Philosophy, University of Texas at Austin, 2002 –2003.

University of Texas Student Research Internship Award, 1999 –2000 (C.Pappas).

Distinguished Graduate Teacher, Department of Philosophy, University of Texas at Austin, 2001 –2002.

University of Texas Student Research Internship Award, 1999 –2000 (J. Garson).

Editorial and Advisory Posts:

Honorary Associate, *Church and State*, 2017 –present.

Editorial Advisory Board, *Einstein Studies*, 2017 –present.

Editorial Board, *BioScience*, 1996 –2002, 2016 -present.

Editor, *Springer Briefs in the Philosophy of Science*, 2013 –present.

Ad Hoc Editor, *Proceedings of the National Academy of Sciences (USA)*, 2013.

Reviewer, *The Millennium Project*, 2013 –present.

Associate, *Behavioral and Brain Sciences*, 2012 –present.

Editorial Board, *Analytic Philosophy*, 2011 –present.

Editorial Board, *Philosophical Books*, 2009 –2010.

Honorary Advisory Board, *Internet Infidels*, 2007 –present.

Editorial Board, *Open Environmental Sciences*, 2007 –2009.

Ad Hoc Editor, *Ecology*, 2007.

Topic Editor, Environmental Philosophy, Philosophy of Science, Systematic Conservation Planning, *Encyclopedia of Earth*, 2006 –2010.

Editorial Board, *Biology and Philosophy*, 2000 –2016.

Co-Editor (with P. Griffiths and J. S. Robert), Philosophy of Biology Section, *Stanford Encyclopedia of Philosophy*, 2000 -2006.

Editorial Board, *Journal of Biosciences*, 1997 –2004.

Editorial Board, *Evolutionary Theory*, 1996 –2008.

Editorial Advisory Board, *Boston Studies in the Philosophy of Science*, 1992 –1996.

Editorial Board, *Uroboros*, 1991 –1992.

General Editor, *Columbia Journal of Ideas*, 1979 –980.

Review and Referee Work:

Acta Biotheoretica

Acta Physiologiae Plantarum

Acta Tropica

African Journal of Agricultural Science

African Journal of Biotechnology

African Journal of Business Management

*African Journal of Mathematics and Computer
Science Research*

Agricultural Science Research Journal

Analytic Philosophy

Animal Conservation

Australasian Journal of Philosophy

AVANT

Axiomathes

Alytes

Behavioral Ecology and Sociobiology

Biodiversity and Conservation

Biology Letters

Biological Conservation

Biological Reviews

Biology and Philosophy

BioMed Central Infectious Diseases

BioScience

British Journal for the History of Science

British Journal for the Philosophy of Science

Community Ecology

Computers in Biology and Medicines

Conservation & Society

Conservation Biology

Conservation Letters

Differentiation

Diversity

Diversity & Distributions

Ecography

Ecological Applications

Ecological Indicators

Ecological Modelling

Ecological Processes

Ecological Research

Ecology

Ecology and Society

Ecology Letters

Economics and Philosophy

Ecosphere

Emerging Infectious Diseases

Environmental Conservation

Environmental Management

Environmental Modelling & Software

Environmental Values

Erkenntnis

European Journal for the Philosophy of Science

Evolution

Evolution & Development
Evolutionary Theory
Foundations of Science
Frontiers in Ecology and the Environment
Future Internet
Genetica
Genetics
Geographical Analysis
Global Research Journal of Microbiology
Herald Journal of Economics and Finance
Hyle
Inquiry
Insect Science
International Journal of Health Geographics
Journal of Agricultural and Environmental Ethics
Journal of Applied Ecology
Journal of Biosciences
Journal of Development and Agricultural Economics
Journal of Environmental Management
Journal of Experimental Zoology, Part B: Molecular and Developmental Evolution
Journal of Medicine and Medical Sciences
Journal of Nature Conservation
Journal of the History of Biology
Journal of the Royal Society Interface
Journal of Scientific Research and Reports
Journal of Theoretical Biology
Journal of Vector Ecology
Journal of Agriculture and Biological Sciences
Landscape and Urban Planning
Malaria Journal
Nature
Oecologia Australis
Oikos
Oryx
Pediatrics
Perspectives on Science
Philosophical Papers and Reviews
Philosophy of Science
PLoS Computational Biology
PLoS Neglected Tropical Diseases
PLoS ONE
Research Journal of Earth and Planetary Sciences
Research Letters in Ecology
Revista do Instituto de Medicina Tropical de Sao Paulo
Science
Science and Education
Social Studies of Science
South African Journal of Science

Studies in the History and Philosophy of Biological and Biomedical Science
Studies in the History and Philosophy of Modern Physics
Studies in History and Philosophy of Science Synthese
Systematics & Biodiversity
Theory in Biosciences
Tópicos
Trends in Ecology and Evolution
World Journal of Modeling and Simulation
Wudpeker Journal of Educational Research

Blackwell Press
 Bloomsbury Press
 Cambridge University Press
 Elsevier Press
 Harvard University Press
 Kluwer Publishers
 Oxford University Press
 Roberts and Company Publishers
 Routledge Press
 Sinauer Associates Publishers
 University of Chicago Press
 Wiley-Blackwell Press

American Council of Learned Societies
 American Philosophical Society
 Australian Honours Secretariat
 Basque Foundation for Science
 Commonwealth Scientific and Industrial Research Organisation (Australia)
 Czech Science Foundation
 Fundação para a Ciência e a Tecnologia (Portugal)
 Inland Northwest Philosophy Conference (US)
 International Congress of Logic, Methodology and Philosophy of Science
 Israel Science Foundation
 MacArthur Foundation
 National Aeronautical and Space Administration (NASA)
 National Institutes of Health (NIH)
 National Marine Fisheries Service (US)
 National Science Foundation (US)
 Netherlands Organisation for Scientific Research
 Romanian National Council for Scientific Research
 Philosophy of Science Association
 Sigma Xi
 Social Sciences and Humanities Research Council of Canada (SSHRC)

United States Fish and Wildlife Service
(USFWS)

Arizona State University
Boston University
California Institute of Technology
Drexel University
Hebrew University (Jerusalem)
Hunter College—City University of New York
Lewis & Clark College
Imperial College London
Iowa State University
New York University
Oak Ridge Associated Universities
Southern Illinois University
United Arab Emirates University
Universidad Autónoma de Nuevo León
University of Aberdeen
University of Bristol
University of Calcutta
University of California—Santa Cruz
University of Canterbury (New Zealand)
University of Illinois—Urbana-Champaign
University of Mississippi
University of New Hampshire
University of North Carolina--Charlotte
University of North Carolina--Greensboro
University of North Texas Health Sciences
Center
University of Otago
University of Queensland
University of South Carolina
University of Utah
University of Western Ontario