

## Heather Joan Lynch

phone: 631-632-2384 e-mail: heather.lynch@stonybrook.edu

(Updated Feb. 13, 2024)

### Education

Harvard University Cambridge, MA Jan. 2003-Nov. 2006  
Ph.D. Organismic and Evolutionary Biology  
Thesis: Spatiotemporal dynamics of insect-fire interactions

Harvard University Cambridge, MA March 2004  
A.M. Physics

Princeton University Princeton, NJ May 2000  
A.B. Physics (*summa cum laude*) with certificate in Materials Science Engineering

### Employment

IACS Endowed Chair for Ecology & Evolution 2019 –  
Professor (Ecology & Evolution) 2020 –  
Director of the Collaborative for the Earth 2023 –

Associate Professor (Ecology & Evolution) Stony Brook University 2016 – 2020  
Joint Faculty of the Institute for Advanced Computational Science 2017 –

Affiliated Faculty of the Alan Alda Center for Communicating Science (2023 –)  
Affiliated Faculty of the Interdepartment Doctoral Program in Anthropological Sciences (2020 –)  
Affiliated Faculty of the Institute for AI-Driven Discovery and Innovation (2018 –)  
Affiliated Faculty in the Department of Applied Math and Statistics (2018 –)  
Affiliated Faculty of the Institute for Advanced Computational Science (2014 –)  
Affiliated Faculty of the School of Marine and Atmospheric Sciences (2013 –)

Data Science Advisor, ProPublica (2018 –)

Assistant Professor (Ecology & Evolution) Stony Brook University Aug. 2011 – 2016

Research Associate (Applied Math and Statistics) University of California, Santa Cruz Dec. 2010 – July 2011

Assistant Research Scientist (Biology) University of Maryland, College Park Feb. 2008 – July 2011  
Senior Research Fellow Oceanites, Inc.

Postdoctoral Research Associate (Biology) University of Maryland, College Park Nov. 2006 – Feb. 2008

### Grants & Awards

2023-2024: PI Stony Brook University Presidential Mini-grant “Training and team building to prevent sexual harassment in the field” (\$1,500)

2023-2026: (co-PI) NSF Division of Information and Intelligent Systems “R1: Medium: Information Super-Resolution for Very Large Images” (\$1,129,040) (PI: Dimitris Samaras, Stony Brook University)

2022-2025: (PI) Pew Marine Conservation Fellowship “Portfolio risk analysis for Antarctic penguins and its communication via a Living Planet Index” (\$150,000)

2021-2022: (PI) NASA SmallSat “Using spatial statistics to infer species identification in a deep-learning-based pan-Antarctic survey of pack-ice seals in Worldview imagery” (\$137,098)

2021-2024: (PI) NASA Biodiversity “Identifying population tipping points through imagery super-resolution” (\$728,339)

2020-2021: (PI) Stony Brook Office for the Vice President of Research Seed Award “Moving beyond mark-capture: Advanced Bayesian inference for inferring demographic rates from unmarked individuals” (\$55,000)

2020-2023: (co-PI) NASA Interdisciplinary Research in Earth Sciences “Antarctic marine predators in a dynamic climate” (Total budget: 1,478,914; Stony Brook University budget \$411,573)

2020-2023: (PI) NASA Interdisciplinary Research in Earth Sciences “Sea ice dynamics as driving mechanism for range expansion and colony establishment in gentoo penguins (*Pygoscelis papua*)” (\$134,806)

2019-2020: (PI) Pew Foundation “Chinstrap status assessment, 2019-2020” (\$48,200)

2019-2020: (co-PI) State University of New York Conversations in the Disciplines “Interpretable Artificial Intelligence: Across the Disciplines” (\$2,600) (co-PIs: Jeffrey Heinz [Lead], Il Memming Park, Christian Luhmann, Stony Brook University)

2019: (PI) National Geographic AI for Earth “Coupling AI with predictive modeling for real-time tracking of Antarctic penguin populations” (\$95,696) (co-PI: Dimitris Samaras, Stony Brook University)

2018: (PI) Alfred P. Sloan Foundation “The Ecological Forecasting Initiative: An Interdisciplinary Conference” (\$50,000) (Additional PIs: Michael Dietze, Boston University)

2017-2020: (PI) NSF EarthCube “Collaborative Research: ICEBERG: Imagery Cyberinfrastructure and Extensible Building-Blocks to Enhance Research in the Geosciences” (Total budget: \$1,815,860; Stony Brook University budget \$632,179) (Lead PI: Heather Lynch; Additional PIs: Shantenu Jha [Rutgers], Vena Chu [UC Santa Barbara], Mark Salvatore [Northern Arizona University], Michael Willis [UC Boulder])

2016-2020: (co-PI) NSF NRT-DESE “Interdisciplinary Graduate Training to Understand and Inform Decision Processes Using Advanced Spatial Data Analysis and Visualization” (\$2,993,930) (Lead PI: Robert Harrison; Additional PIs: Minghua Zhang, Arie E. Kaufman, Liliana Davalos Alvarez)

2015-2017: (PI) NSF EarthCube “Collaborative Research: Research Coordination Network for High-Performance Distributed Computing in the Polar Sciences” (Total budget \$300,000; Stony Brook University budget \$27,326) (Lead PI: Shantenu Jha [Rutgers]; Additional PIs: Lynn Yarmey [Colorado] and Jaroslaw Nabrzyski [Notre Dame])

2015-2016: (PI) Brookhaven National Lab/Stony Brook University SEED Grant 2015: “Three-dimensional structure and function for ecological monitoring using unmanned-aerial systems and computer vision” (Total budget \$41,561; Stony Brook University budget \$33,552) (Co-I: Shawn Serbin, Brookhaven National Lab)

2015-2018: (PI) NASA ROSES Program Element A.36 Earth Science Applications Phase II award (No. NNX14AC32G): “Bayesian Data-Model Synthesis for Biological Conservation in Antarctica” (Total budget \$630,651; Stony Brook University budget \$395,475) (Co-I: Mathew Schwaller NASA Goddard)

2014-2017: (PI) NSF Office of Polar Programs (No. 1341440): “Phytoplankton Phenology in the Antarctic: Drivers, Patterns, and Implications for the Adélie Penguin” (Collaborative proposal with Woods Hole Oceanographic Institution, University of Alaska Fairbanks, and the National Snow and Ice Data Center; Total budget \$938,950; Stony Brook University budget \$108,017)

2014-2016: (Collaborator) Dalio Explore Fund: The Danger Islands Expedition: A Multi-scale Study of Remote Penguin Supercolonies (\$419,804)

2014: Block scholarship from the National Outdoor Leadership School to support four Ph.D. students taking a summer course in glacier mountaineering (\$8,000)

2014: (PI) NASA ROSES Program Element A.36 Earth Science Applications Phase I award (No. NNX14AC32G): “Bayesian Data-Model Synthesis for Biological Conservation in Antarctica” (Total budget \$170,605; Stony Brook University budget \$113,120) (Co-I: Mathew Schwaller NASA Goddard)

2013-2018: (PI) NSF CAREER Award in Office of Polar Programs & Geography and Spatial Sciences (No. 1255058): “The use of quantitative geography to predict population tipping points for colonial seabirds” (\$782,840)

2013: (PI) UK Foreign and Commonwealth Office British Antarctic Territory for “Improving estimates of penguin abundance and trends in the British Antarctic Territory for the benefit of conservation and fisheries management” (\$41,317)

2012: Travel award to attend the 2012 Scientific Committee for Antarctic Research (SCAR) Open Science Conference in Portland, Oregon (\$1,000)

2008-2013: (Co-PI) NSF Award in Office of Polar Programs (No. 0739515) for “Multispecies, Multiscale Investigations of Longterm Changes in Penguin and Seabird Populations on the Antarctic Peninsula” (\$476,608)

2010: (PI) Mia J. Tegner Memorial Research Grant in Marine Environmental Sciences (\$10,000)

## **Honors & Distinctions**

2023 The Antarctic Penguin Biogeography Project receives Google’s Geo for Good 2023 Impact Award

2022 Pew Marine Conservation Fellow

2020 AAAS Leshner Leader Institute Public Engagement Fellow

2019 Blavatnik Laureate for Young Scientists in the category of Life Sciences, administered by the New York Academy of Sciences (\$250,000 unrestricted prize)

2014 Ecological Society of America Early Career Fellow

2006 Certificate of Distinction in Teaching (Harvard University)

2005 Interdisciplinary Graduate Education and Research Training Fellow (Biomechanics)

2005 Howard T. Fisher Prize for Excellence in GIS

2000 American Physical Society Leroy Apker Award for “A Kondo Box: Coulomb Blockade and the Kondo Effect in Iron-doped Copper Nanoparticles” (awarded to the best undergraduate physics thesis from a Ph.D. granting institution in the United States)  
2000 Allen Goodrich Shenstone Prize for outstanding work in experimental physics/Princeton University  
2000 Lucent Technologies Graduate Research Program for Women Fellowship (accepted; 2000-2004)  
2000 National Science Foundation Graduate Research Fellowship  
2000 National Defense Science and Engineering Graduate Fellowship  
2000 Phi Beta Kappa  
2000 Sigma Xi

## **Press Coverage and Media Appearances**

### **Film**

- “The Penguin Counters” (2017)

### **Television**

- Nature’s Strangest Mysteries: Solved (Season 1, Episode 3) *Animal Planet* (May 18, 2019)
- BBC News interview (April 25, 2019)
- “Antarctic penguins have existed for 60 million years. Can they survive climate change?” *PBS Newshour* (April 3, 2019)
- CBS News interview (March 8, 2018)
- CTV News interview (March 5, 2018)
- “Counting penguins: What penguins in Antarctica might be telling us about climate change” *NBC’s Sunday Night with Meghan Kelly* (June 25, 2017)

### **Online**

- National Geographic Kids Book Quest (Summer 2021)
- Data Science Mixer Podcast (September 7, 2021)

### **Radio**

- “Antarctica needs humans to protect it. It also need humans to stay away. What’s a potential visitor to do?” *WPRI’s The World* (June 11, 2018)
- “Should tourists go to Antarctica?” *WHYY’s The Pulse* (February 22, 2018)
- *BBC5* radio interview (November 2, 2016)

### **Print (partial list; more complete list of links at [www.lynchlab.com/media](http://www.lynchlab.com/media))**

- Wild Women Do *Birdwatch* (January 2023)
- Gentoo penguins found breeding further south due to climate change *New Scientist* (January 24, 2022)
- Penguin colony found in Antarctic sign of climate change *BBC* (January 24, 2022)
- An interview with Heather Lynch *Birding* (October 12, 2021)
- Why penguins may help us predict the impact of climate change *Financial Times* (February 27, 2020)
- Some Antarctic penguin colonies have declined by more than 75% in 50 years *CNN* (February 11, 2020)
- Chinstrap penguin numbers may have fallen by more than half on Antarctic island *National Geographic* (February 11, 2020)
- Climate change is decimating the chinstrap penguins of Antarctica *Time* (February 10, 2020)
- Alarm over collapse of chinstrap penguin numbers *The Guardian* (February 10, 2020)

- Penguins at risk in Antarctica *CBS Morning News* (January 16, 2020)
- Climate Change? “Meh,” Say Gentoo Penguins *Scientific American* (July 25, 2019)
- Interview *New York Times Kids* section (April 28, 2019)
- “Holy Tuxedo! It’s a Penguin-palooza!” *Discover Magazine* (December 2018) [Featured as one of the top science stories of 2018]
- “The Big Meltdown” *National Geographic* (November 2018) [Provided extensive scientific guidance for the story, as well as data used in the article’s maps and graphics.]
- “Counting penguins isn’t black and white” *Wall Street Journal* (November 3, 2018)
- “There’s a penguin colony so large you can see it from space” *New York Post* (March 5, 2018)
- “A Supercolony of Penguins Has Been Found Near Antarctica” *New York Times* (March 5, 2018)
- “Secret Penguin Supercolony Discovered on Danger Islands” *Popular Mechanics* (March 3, 2018)
- “The Secret Is Out: Scientists Spot Penguin ‘Super-Colony’ in Antarctica” *Wall Street Journal* (March 3, 2018)
- “Penguin supercolony spotted from space” *BBC* (March 3, 2018)
- “Penguin City” *National Geographic Kids* (January 2017)
- “Antarctica’s penguins could be decimated by climate change” *Washington Post* (June 30, 2016)
- “As Antarctic ice shrinks from climate change, will Adélie penguins disappear?” *Christian Science Monitor* (June 29, 2016)
- “Should tourists be banned from Antarctica?” *BBC News* (January 11, 2015)
- “One, Two, 3.79 million: How many penguins are there?” *Audubon Magazine* (August 21, 2014)
- “Adélie penguin census shows seabirds are thriving” *Wall Street Journal* (July 10, 2014)
- “Why some penguins thrive in climate change” *ABCNews* (July 7, 2014)
- “Emperor penguins may be moving due to climate change, study finds” *CBSNews* (June 24, 2014)
- “Breeding penguins vanishing from Antarctic island” *NBCNews* (September 4, 2012)
- “March of the tourists” *Mother Jones* (July/August 2008)

### **Expert Workshops & Working Groups**

Aspen Center for Physics Winter Conference “Dynamics of Social Interactions”, Aspen, CO, March 27-April 1, 2022.

Working Group (John Wesley Powell Center for Analysis and Synthesis, Fort Collins, CO, July 2012 – July 2014) / Topic: Modeling species response to environmental change: development of integrated, scalable Bayesian models of population persistence

EarthCube Early Career Strategic Visioning Workshop (Carnegie Institution for Science, Washington, D.C., October 16-17, 2012)

Expert Workshop (National Socio-Environmental Synthesis Center, Annapolis, MD, July 2012) / Topic: Visualization Technologies to Support Research on Human - Environment Interactions

Expert Workshop (Galapagos Islands, June 2012) / Topic: Leveraging citizen science for conservation and management of the Galapagos Islands

Expert Workshop (Dessau, Germany, May 2012) / Topic: Census of penguins by remote sensing

### **Professional Service**

Committee member for consensus study “Future Direction for Southern Ocean and Antarctic Nearshore and Coastal Research” sponsored by the National Academy of Sciences, Engineering, and Medicine (2022-2024)

Co-author of the Green List Assessment for the Chinstrap Penguin (*Pygoscelis antarctica*) (2022)

Co-editor of Biodiversity Data Journal Special issue on Antarctic biodiversity (2022)

Member of the IUCN Penguin Specialist Group (2020-)

Co-Organizer of the Ecological Forecasting Initiative 2019 Conference (May 13-15, 2019 in Washington, DC)

NASA Biological Diversity and Ecological Forecasting Working Group (2018-2020)

Organized Software Carpentry and HPC course for Polar 2018 Conference (Davos, Switzerland, June 16-18, 2018)

NASA Ames Research Center Non-Advocate Review Panel (2018)

Organized Software Carpentry course and Polar Science Hackathon (Stony Brook University, August 1-4, 2017)

Organized the Polar Science Hackathon at XSEDE17 (Miami, Florida, July 18-21, 2016)

Organized the Polar+Cyberinfrastructure Expert Workshop (Polar Geospatial Center, St. Paul, Minnesota, June 2-3, 2016)

Editorial Board for Scientific Reports (2016-2017)

Delegate for the Antarctic and Southern Ocean Coalition (ASOC) at the XXXVII Antarctic Treaty Consultative Meeting in Brasilia, Brazil (April 2014).

Faculty member, Population Ecology Section, Faculty of 1000 (2011-2015)

Book review consultant for the Quarterly Review of Biology (2011-2015)

Science and Operations Committee (2018- ongoing) of the University of Minnesota’s Polar Geospatial Center (Committee Chair)

Science and Operations Committee (2011-2013) of the University of Minnesota’s Polar Geospatial Center

Steering Group of the Commission for the Conservation of Antarctic Marine Living Resources’ (CCAMLR) Krill Predator Workshop held June 16-20, 2008 in Hobart, Australia.

Reviewer for American Naturalist, Animal Conservation, Auk, Biological Conservation, Biodiversity and Conservation, CCAMLR Science, Diversity, Diversity and Distributions, Ecography, Ecological Applications, Ecology, Ecology & Evolution, Environmental Management, Global Change Biology, Journal of Field Ornithology, Landscape Ecology, Limnology and Oceanography, Marine Biodiversity Records, Marine Ecology Progress Series, Marine Policy, Methods in Ecology and Evolution, Nature Climate Change, PLoS ONE, Polar Biology, Polar Research, Population Ecology, Quaternary Science Reviews, Remote Sensing of Environment, and the Wilson Journal of Ornithology.

Proposal reviewer for the National Science Foundation’s Office of Polar Programs in 2011, 2013, 2015, and 2018.

Proposal reviewer for the Deutsche Forschungsgemeinschaft (German Research Foundation) in 2013.

Proposal reviewer for the Einstein International Postdoctoral Fellowship for Junior Research groups (Germany) in 2019.

### **University Service**

OVPR Tiger Teams (AI 2021/22; Climate 2023/24)

Vice President for Research Search Committee (Fall 2023)

College of Arts and Sciences Departmental Self-Assessment Review Panel (Spring 2018)

Research Computing Committee (Spring 2018)

Ad hoc committee to streamline PTC processes (Spring 2018)

Streamlining Research Productivity (Procurement sub-committee) (Spring 2017)

AA/EEO Committee (Fall 2016)

Member of the Coordinating Committee for the School of Marine and Atmospheric Sciences' (SoMAS) M.A. in Marine and Conservation Policy (2013-2015).

### **Outreach, Public Lectures, and Community Service**

(excluding K-12 outreach activities, of which there are too many to list)

Public lecture: "Are Antarctica's penguins in peril?". Fred Elser First Sunday Science lecture series at the Bruce Museum Seaside Center, Greenwich, CT (August 6, 2023)

Public lecture: "Satellite-based science and the changing nature of what it means to "explore" Antarctica". SCAR Plenary Lecture to the Antarctic Treaty Consultative Meeting, Helsinki, Finland (May 30, 2023)

Public lecture: "Mapping penguins: A new era of Antarctic exploration". Vanderbilt Museum, Centerport, NY (April 14, 2022)

Public lecture: "How satellites reveal the physics of penguins". Aspen Center for Physics Winter Conference Public Lecture (March 30, 2022)

Invited plenary: "Satellites and the future of Antarctic biodiversity monitoring". Antarctic Parliamentarians Assembly (December 1, 2021)

Public lecture: "Are Antarctica's penguins in peril?". Stony Brook University Living World Lecture Series (November 19, 2021)

Presentation and panel discussion at the Wilson Center panel "Antarctic Science: Ensuring Vital Contributions to Environmental Policy and Understanding Climate Change" (September 29, 2021)

Public presentation and panel discussion: National Geographic Explorer's Festival 2019 (June 11, 2019)

Judge for the North Fork TV Festival Script Competition (2019,2020)

Public lecture: “How many Adélie penguins are there? And other mysteries solved by satellites”. Cary Institute for Ecosystem Studies (February 8, 2019)

Public lecture: “How many Adélie penguins are there? And other mysteries solved by satellites”. Stony Brook University Library STEM Speaker Series (September 18, 2018)

Public lecture: “The who, how, what, and where of life as a penguin: How studying both captive and wild populations of penguins in redefining normal”. Linnean Society of New York (April 11, 2017)

Public lecture: “Antarctic penguins: What we know, how we know it, and what the future might hold”. Aquarium of the Pacific (March 17, 2015)

Panel member: “Exploring Antarctica”. Bruce Museum, Greenwich, CT (January 11, 2015)

Public lecture: “Penguins on the move”. Jefferson’s Ferry Retirement Community (January 6, 2015)

Public lecture: “Vocal communication among gentoo penguins and its role in new colony formation”. Kansas City Zoo (November 21, 2013)

Co-taught a workshop on “Grant Writing” for the Association of Polar Early Career Scientists (APECS) Bristol, UK (August 31, 2013)

Seminar for the Simons Fellows summer students, Stony Brook University (July 30, 2013 & July 15, 2014)

Keynote speaker: Student research symposium Bellport High School, Brookhaven, NY (June 4, 2013)

Co-organizer of Polar Climate Change Research: A Workshop for Educators, a 1 day workshop for middle and high school science educators on polar science and technology. Wang Center, Stony Brook University (April 11, 2012)

Public lecture: “Penguins: Sentinels of climate change”. Stony Brook University Living World Lecture Series (March 23, 2012)

## **Teaching Experience**

Biometry (BEE 552)	Spring 2012-2018, 2020-24
Statistics and Data Analysis (BIO 211)	Fall 2013
Graduate seminar (BEE 693)	Spring 2014
Bayesian Statistics and Data Analysis (BEE 569)	Fall 2014, 2017, 2020
Seminar of Decision support (MAR 534)	Spring 2020-2024
Antarctica's Heroic Age of Exploration (SSO 102)	Spring 2017

## **Mentoring & Advising**

Ph.D. students advised (15; in Ecology & Evolution unless otherwise noted):

(1) Paula Casanovas (co-advised by Dr. William Fagan, graduated April 2013)



- Title: “Novel approaches to studying biodiversity in remote areas: Distribution of lichens and penguins across the Antarctic Peninsula”
- (2) Philip McDowall (graduated May 2018)  
Title: “Spatial dynamics of *Pygoscelis* penguin coloniality”
  - (3) Casey Youngflesh (graduated December 2018)  
Title: “Ecological change in the Southern Ocean – Insights from Antarctic seabirds”
  - (4) Catherine Foley (graduated May 2019)  
Title: “Long-term human impacts on sub-Antarctic ecosystems and mesopredator abundance”
  - (5) Maureen Lynch (graduated May 2019)  
Title: “Gentoo penguin behavioral ecology: Vocalizations, aggression, and stress within the colony”
  - (6) Michael Schrimpf (graduated May 2020)  
Title: “The distribution and community ecology of breeding birds on the Antarctic Peninsula”
  - (7) Alex Borowicz (co-advised by Dr. Lesley Thorne; graduated May 2021)  
Title: “Eco-social and remote sensing: Applications across a new era of ecological data”
  - (8) Bento Goncalves (graduated December 2022)  
Title: “Roadmap to fully automated, pan-Antarctic, pack-ice seal surveys”
  - (9) Rachael Herman (graduated September 2023)  
Title: “Colonization, gene flow, and range expansion in a pioneering seabird species”
  - (10) Emma Talis (Applied Math and Statistics; graduated May 2023)  
Title: “Modelling population dynamics and capturing variability in Antarctic penguins”
  - (11) Michael Wethington
  - (12) Kate Blackwell
  - (13) Carole Hall (Applied Math and Statistics)
  - (14) Clare Flynn
  - (15) Derek Fucich

M.S. students advised (1):

- (1) Noah Strycker (SoMAS; graduated 2021)

Ph.D. student committees (25):

- (1) Michael McCann (E&E; graduated 2015)
- (2) Antonin Machac (E&E; graduated 2015)
- (3) Emily Rollinson (E&E; graduated 2016)
- (4) Benjamin Weinstein (E&E; graduated 2016)
- (5) Cecilia O’Leary (SoMAS; graduated 2018)
- (6) Sam Urmy (SoMAS; graduated 2017)
- (7) Jesse Wolfhagan (Anthropological Sciences; graduated 2019)
- (8) Bilgecan Sen (E&E; graduated 2020)
- (9) Yousef El-Laham (Electrical and Computer Engineering; graduated 2021)
- (10) Lisa Prowant (E&E; graduated 2021)
- (11) Kristjan Mets (E&E; graduated 2022)
- (12) Jannet Vu (E&E; graduated 2023)
- (13) Julia Stepanuk (E&E; graduated 2022)
- (14) Kenneth Davidson (E&E; graduated 2023)
- (15) Kayley Abell-Hart (Biomedical Informatics; graduated 2022)
- (16) Jacob Feder (Anthropological Sciences; graduated 2023)
- (17) John Winans (Anthropological Sciences)
- (18) Arieke Norford (E&E)
- (19) Yijie Tian (E&E)
- (20) Zahraa Krayem (Electrical and Computer Engineering)

- (21) Kim Lato (SoMAS; graduated 2024)
- (22) Marija Iloska (Electrical and Computer Engineering)
- (23) Carlos Morantes Ariza (E&E)
- (24) Chelsi Napoli (E&E)

Additional thesis committees: Breann Ross (Hofstra University; MS thesis committee), Ayman Al-Saadi (Rutgers University; MS thesis committee)

Ecology & Evolution M.A. students advised (4)

High school students advised (8):

- (1) Ryan Burke (Earl L. Vandermeulen High School; attended Brown University) Summer 2013: “Using camera trap methods to study the reproductive success of penguins”
- (2) Will Engellenner (Smithtown East High School; attended Northwestern University) Summer 2013: “A 15-year longitudinal study of the impact of marine ecotourism on Antarctic penguin populations”
- (3) Caroline Biondo (Earl L. Vandermeulen High School; attended the University of Virginia) Summer 2014: “Are stone stealing dynamics in a penguin colony consistent with predictions from game theory?”
- (4) Erin Burke (Earl L. Vandermeulen High School; attended Claremont McKenna College) Summer 2016: “Seabird life-history trade-offs and climate change resilience”
- (5) Reid Biondo (Earl L. Vandermeulen High School; attended the University of Virginia) Summer 2016 and 2017: “King- penguin population dynamics”
- (6) Andrea Dahl (Olathe North, Kansas City; attended Stanford University) Summer 2016: “Behavioral acoustics of gentoo penguins in captivity”
- (7) Sandeepna Eranki (Smithtown East High School; attended Carnegie Mellon University) Summer 2018: “Egg laying contagion among Gentoo penguins”
- (8) Dylan Friedman (John F. Kennedy High School): “The spatial statistics of vigilance behavior among gentoo penguins”

### **Additional Academic Experience/Training**

2023: Santa Fe Institute Complexity Interactive (SFI-CI)

2014: National Socio-Environmental Synthesis Center (SESYNC) Summer Computational Institute

2006: Summer Institute at Duke University’s Center on Global Change: Uncertainty and Variability in Ecological Inference, Forecasting, and Decision Making

2005: ENR-423: Regional Ecosystem Management: Science, Policy and Law

- Seminar course taught by William Clark and Jody Freeman at the J.F.K. School of Public Policy

2005: Park City Mathematics Institute graduate summer school in Mathematical Biology

### **Publications & Lectures**

★ Indicates a Ph.D. student under my supervision, ✱ Indicates a postdoc or staff researcher under my supervision at the time of the research, ◆ Indicates an undergraduate student under my supervision

### **Refereed Journals**

- (102) Pertierra, L.R., G. Varliero, A. Barbosa, E.M. Biersma, P. Convey, S.L. Chown, D. Cowan, A. De los Rios, P. Escribano-Alvarez, D. Fontaneto, C.I. Fraser, M. Harris, K.A. Hughes, H.J. Griffiths, P.C. le Roux, X.P. Liu, **H.J. Lynch**, P.A. Martinez, M.A. Molina-Montenegro, M.A. Olalla-Tarraga, L. Peck, A. Quesada, Y. Ropert-Coudert, L. Sancho, A. Terauds, J.A. Vianna, A. Wilmotte, J. Hortal, and M. Greve. 2024. ANTALIFE 1.0 Biodiversity data checklist of all Antarctic terrestrial and freshwater life forms in the continent. *Biodiversity Data Journal* 12: e106199.
- (101) ★Herman, R.W., G. Clucas, J. Younger, J. Bates, B. Robinson, S. Reddy, J. Stepanuk, K. O'Brien, K. Veeramah, and **H.J. Lynch**. 2024. Whole genome sequencing reveals stepping stone dispersal buffered against founder effects in a range expanding seabird. *Molecular Ecology* 00:e17282.
- (100) ★Wethington, M.J., ★B.C. Goncalves, ★E. Talis, and **H.J. Lynch**. 2023. Species classification of Antarctic pack-ice seals using very-high-resolution satellite imagery. *Marine Mammal Science* 1-17.
- (99) ★Flynn, C.M, T. Hart, G.V. Clucas, and **H.J. Lynch**. 2023. Penguins in the anthropause: Covid-19 closures drive Gentoos penguin movement among breeding colonies. *Biological Conservation* 286: 110318.
- (98) ✎Gallagher, K., M. Dinniman, and **H.J. Lynch**. 2023. Quantifying Antarctic krill connectivity across the West Antarctic Peninsula and its role in large-scale *Pygoscelis* penguin population dynamics. *In press at Scientific Reports*.
- (97) **Lynch, H.J.** Satellite remote sensing for wildlife research in the polar regions. 2023. *Marine Technology Society Journal* 57(3): 43-50.
- (96) ★Talis, Emma, C. Che-Castaldo, T. Hart, L. McCrae, and **H.J. Lynch**. 2023. Penguindex: A biodiversity indicator for *Pygoscelis* spp. penguins identifies key eras of population change. *Polar Biology* 46(8): 1-12.
- (95) ★Talis, E., and **H.J. Lynch**. 2023. Letter: Capturing stochasticity properly is key to understanding the nuances of the Living Planet Index. *Nature Ecology & Evolution* 7: 1194-1195.
- (94) Che-Castaldo, C., G. Humphries, and **H.J. Lynch**. 2023. Antarctic Penguin Biogeography Project: Database of abundance and distribution for the Adélie, chinstrap, gentoo, emperor, macaroni, and king penguin south of 60 S. *Biodiversity Data Journal* 11: e101476.
- (93) ✎Sen, B., C. Che-Castaldo, K. Krumhardt, L. Landrum, M.M. Holland, M.A. LaRue, M.C. Long, S. Jenouvrier, and **H.J. Lynch**. 2023. Spatiotemporal predictability of population dynamics: A case study with the Adélie penguin. *Ecological Indicators* 150:110239.
- (92) ★Wethington, M., ★C. Flynn, A. Borowicz, and **H.J. Lynch**. 2023. Adélie penguins north and east of the 'Adélie gap' continue to thrive in the face of dramatic declines elsewhere in the Antarctic Peninsula region. *Scientific Reports* 13:2525.
- (91) ★Talis, Emma, C. Che-Castaldo, and **H.J. Lynch**. 2023. Difficulties in summing distributions for abundance and potential solutions. *PLoS ONE* 18(1): e0280351.
- (90) Hughes, K.A., M. Santos, J. A. Caccavo, S. Chignell, N. Gardiner, N. Gilbert, A. Howkins, B. J. van Vuuren, J. R. Lee, D. Liggett, A. Lowther, **H. Lynch**, A. Quesada, H. Chul Shin, A. Soutullo, and A. Terauds. 2022. Ant-ICON 'Integrated Science to Inform Antarctic and Southern Ocean Conservation': a new SCAR research programme. *Antarctic Science* 34(6): 446-455.

- (89) ★Goncalves, B.C., ★M. Wethington, and **H.J. Lynch**. 2022. SealNet 2.0: Human-level fully-automated pack-ice seal detection in very-high resolution satellite imagery with CNN model ensembles. *Remote Sensing* 14(22): 5655.
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**Lynch, H.J.** 2011. Review of “Remote Sensing of Vegetation: Principles, Techniques, and Applications” (Hamlyn G. Jones and Robin A. Vaughan) for *Quarterly Review of Biology*.

## **Popular Writing and Published Correspondence**

Schedel, M, and **H.J. Lynch**. 2021. Interdisciplinary collaborations are hard: 3 questions for your academic pre-nup. *Inside Higher Ed*.

**Lynch, H.J.** 2021. Spying on climate change: Using satellites to monitor penguin populations. *Penguins of the World*, 2<sup>nd</sup> edition. Firefly Books, Ontario, Canada. (Essay, updated from 2013)

Dietze, M., and **H.J. Lynch**. 2019. Forecasting a bright future for ecology. Guest editorial for *Frontiers in Ecology and the Environment* 17(1): 3.

★Youngflesh, C., and **H.J. Lynch**. 2017. Black-swan events: Population crashes or temporary emigration? *PNAS* <https://doi.org/10.1073/pnas.1713621114>.

**Lynch, H.J.**, ★C.M. Foley, ★M.A. Lynch, and L. H. Thorne. 2017. Response to Van Norman. (Correspondence) *BioScience* DOI: <https://doi.org/10.1093/biosci/bix109>

Hart, T., **H.J. Lynch**, and R. Naveen. 2015. Probe effects of krill fishing and climate. (Correspondence) *Nature* 523: 410.

**Lynch, H.J.** 2013. Spying on climate change: Using satellites to monitor penguin populations. *Penguins of the World*. Firefly Books, Ontario, Canada. (Essay)

## Refereed Conference Proceedings

- El-Laham, Y., L. Yang, **H. Lynch**, P. Djuric, and M. Bugallo. 2020. Particle Gibbs sampling for regime-switching state-space models. ICASSP 2021 - 2021 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP).
- Liu, Y., V. Shah, ★A. Borowicz, ★M. Wethington, ★N. Strycker, S. Forrest, **H. Lynch** and H. Singh. 2020. Efficient UAV and machine learning based method in penguin colony census. IEEE/OES Autonomous Underwater Vehicle Symposium, Sept. 2020.
- Spitzbart, B., **H.J. Lynch**, M. Turilli, and S. Jha. 2020. ICEBERG: Imagery Cyber-infrastructure and Extensible Building blocks to Enhance Research in the Geosciences. (A Research Programmer's Perspective). PEARC 2020 Conference.
- Paraskevagos, I., M. Turrili, B. C. Goncalves, **H.J. Lynch**, and S. Jha. 2019. Workflow design analysis for high resolution satellite image analysis. *IEEE e-Science Conference*.
- Le, H., ★B. Goncalves, D. Samaras, and **H.J. Lynch**. 2019. Weakly labeling the Antarctic: The penguin colony case. 2019 IEEE/CVF Conference on Computer Vision and Pattern Recognition Workshops (CVPRW).
- Wyngaard, J., **H. Lynch**, J. Nabrzyski, A. Pope and S. Jha. 2017. Hacking at the Divide Between Polar Science and HPC: Using Hackathons as Training Tools. Pages 352-359 in 2017 IEEE International Parallel and Distributed Processing Symposium Workshops (IPDPSW), Lake Buena Vista, FL.
- Lynch, H.J.**, R.A. Renkin, R.L. Crabtree, and P.R. Moorcroft. 2006. Insect-fire interactions in Yellowstone National Park: The influence of historical mountain pine beetle (*Dendroctonus ponderosae*) activity on the spatial pattern of the 1988 Yellowstone fires. Pages 109-118 in A. Wondrak Biel, ed., *Greater Yellowstone Public Lands: A Century of Discovery, Hard Lessons, and Bright Prospects*. Proceedings of the 8<sup>th</sup> Biennial Scientific Conference on the Greater Yellowstone Ecosystem. October 17-19, 2005, Mammoth Hot Springs Hotel, Yellowstone National Park, Wyo.: Yellowstone Center for Resources.

## Papers written on behalf of the United States and other Parties and/or Observers for Antarctic Treaty Consultative Meetings

- H.J. Lynch**. 2023. Satellite remote sensing for wildlife research in the polar regions, Information Paper submitted by SCAR to the XLV Antarctic Treaty Consultative Meeting in Helsinki, Finland.
- Naveen, R., and **H.J. Lynch**. 2016. Report of Oceanites, Inc., Information Paper submitted by SCAR to the XXXIX Antarctic Treaty Consultative Meeting in Santiago, Chile.
- Naveen, R., ★N. Bender, and **H. Lynch**. 2016. Patterns of tourism in the Antarctic Peninsula region: A 20-year re-analysis., Information Paper submitted by the United States and IAATO to the XXXIX Antarctic Treaty Consultative Meeting in Santiago, Chile.
- Naveen, R., ★C. Foley, and **H. Lynch**. 2015. A methodology to assess site sensitivity at visitor sites: Progress report, Information Paper submitted by Australia, New Zealand, Norway, the United Kingdom, and the United States to the XXXVIII Antarctic Treaty Consultative Meeting in Sofia, Bulgaria.

- Naveen, R., and **H. Lynch**. 2015. Antarctic Site Inventory: Results from long-term monitoring, Information Paper submitted by New Zealand and the United States to the XXXVIII Antarctic Treaty Consultative Meeting in Sofia, Bulgaria.
- Naveen, R., ★C. Foley, and **H. Lynch**. 2014. Developing a new methodology to analyze site sensitivities, Information Paper submitted by the United States to the XXXVII Antarctic Treaty Consultative Meeting in Brasilia, Brazil.
- Naveen, R., ★C. Foley, and **H. Lynch**. 2014. Advancing recommendations of the CEP tourism study, Working Paper submitted by Australia, New Zealand, Norway, the United Kingdom, and the United States to the XXXVII Antarctic Treaty Consultative Meeting in Brasilia, Brazil.
- Naveen, R., and **H. Lynch**. 2014. Antarctic Site Inventory: 1994-2014, Information Paper submitted by the United States to the XXXVII Antarctic Treaty Consultative Meeting in Brasilia, Brazil.
- Naveen, R., and **H. Lynch**. 2013. Antarctic Site Inventory: 1994-2013, Information Paper submitted by the United States to the XXXVI Antarctic Treaty Consultative Meeting in Brussels, Belgium.
- Naveen, R., and **H. Lynch**. 2012. First direct, site-wide penguin survey at Deception Island, Antarctica suggests significant declines in breeding chinstrap penguins, Information Paper submitted by the United States to the XXXV Antarctic Treaty Consultative Meeting in Hobart, Australia.
- Naveen, R., **H.J. Lynch**, and W. Fagan. 2011. Antarctic Site Inventory: 1994-2011, Information Paper submitted by the United States to the XXXIV Antarctic Treaty Consultative Meeting in Buenos Aires, Argentina.
- Lynch, H.J.**, K. Crosbie, W.F. Fagan, R. Naveen. 2010. Spatial patterns of tour ship traffic in the Antarctic Peninsula region, Information Paper submitted by the United States to the XXXIII Antarctic Treaty Consultative Meeting in Punta del Este, Uruguay.
- Naveen, R., **H.J. Lynch**, and W. Fagan. 2010. Antarctic Site Inventory: 1994-2010, Information Paper submitted by the United States to the XXXIII Antarctic Treaty Consultative Meeting in Punta del Este, Uruguay.
- Naveen, R., **H.J. Lynch**, and W. Fagan. 2009. Antarctic Site Inventory: 1994-2009, Information Paper submitted by the United States to the XXXII Antarctic Treaty Consultative Meeting in Baltimore, Maryland.
- Naveen, R., **H.J. Lynch**, and W. Fagan. 2009. Monitoring and assessment using hierarchical Bayesian modeling: An approach taken by the Antarctic Site Inventory, Information Paper submitted by the United States to the XXXII Antarctic Treaty Consultative Meeting in Baltimore, Maryland.
- Naveen, R., **H.J. Lynch**, and W. Fagan. 2008. Antarctic Site Inventory: 1994-2008, Information Paper submitted by the United States to the XXXI Antarctic Treaty Consultative Meeting in Kiev, Ukraine.

**Papers written for the Commission for the Conservation of Antarctic Marine Living Resources' Working Group on Ecosystem Monitoring and Management (CCAMLR WG-EMM)**

- ★Strycker, N., ★M. Wethington, ★A. Borowicz, S. Forrest, T. Hart, and **H.J. Lynch**. 2020. Towards an updated chinstrap penguin population assessment. CCAMLR-IXXXX.

- Naveen, R., G. Humphries, and **H.J. Lynch**. 2016. Mapping Application for Penguin Populations and Projected Dynamics (MAPPPD). CCAMLR-XXXV/BG/15.
- Naveen, R., G. Humphries, and **H.J. Lynch**. 2016. Report to CCAMLR by Oceanites, Inc. CCAMLR-XXXV/BG/16.
- Lynch, H.J.**, and M.A. LaRue. 2014. First global survey of Adélie penguin populations. CCAMLR WG-EMM-14/P05.
- Lynch, H.J.**, and M. Schwaller. 2013. Bayesian data-model synthesis for biological conservation and management in Antarctica. CCAMLR WG-EMM-13/26.
- Lynch, H.J.**, N. Ratcliffe, J. Passmore, E. Foster, and P.N. Trathan. 2012. Sensitivity analysis identifies high influence sites for estimates of penguin krill consumption on the Antarctic Peninsula. CCAMLR WG-EMM-12/P02.
- Trathan, P.N., **H. Lynch**, C. Southwell, P.T. Fretwell, G. Watters, and N. Ratcliffe. 2012. Extending ecological monitoring to underpin the development of feedback management approaches for the Antarctic krill fishery. CCAMLR WG-EMM-12/04.
- Southwell, C., J. Forcada, M. Goebel, J. Hinke, **H. Lynch**, P. Lyver, J. McKinlay, N. Ratcliffe, D. Ramm, K. Reid, C. Reiss, W. Trivelpiece, S. Trivelpiece, and P. Trathan. 2009. Update on progress in inter-sessional work from the Predator Survey workshop. CCAMLR WG-EMM-09/39.
- Trivelpiece, S., W. Trivelpiece, **H. Lynch**, D. Ramm, J. McKinlay, R. Naveen, P. Trathan, and C. Southwell. 2008. Preliminary estimation of penguin breeding abundance at spatial scales of relevance to CCAMLR: Incorporating uncertainty in count data. CCAMLR WG-EMM-08/53.
- Trivelpiece, S.G., W.F. Fagan, **H. J. Lynch**, W.Z. Trivelpiece, and R. Naveen. 2008. Timing of clutch initiation in *Pygoscelis* penguins on the Antarctic Peninsula: Towards an improved understanding of off-peak census correction factors. WG-EMM-PSW-08/15.

### **Invited Talks & Department Seminars**

- H.J. Lynch**. 2023. “Emergent pattern formation in penguin colonies”. Princeton University (February 20, 2023)
- H.J. Lynch**. 2022. “Emergent pattern formation in penguin colonies”. University of Maryland (September 20, 2022)
- H.J. Lynch**. 2021. “How many Adélie penguins are there? (and other mysteries solved by satellites)”. Harvard University (February 8, 2021)
- H.J. Lynch**. 2020. “How many Adélie penguins are there? (and other mysteries solved by satellites)”. University of Liverpool (UK) (November 10, 2020)
- H.J. Lynch**. 2019. “Adventures in mathematical biology inspired by a bird’s eye view of penguin colonies in Antarctica”. Mathematical Biology Seminar, University of Utah (March 27, 2019)

- H.J. Lynch.** 2019. “How many Adélie penguins are there? (and other mysteries solved by satellites)”. Department of Ecology, Evolution, and Natural Resources Seminar, Rutgers University (March 7, 2019)
- H.J. Lynch.** 2017. “How many Adélie penguins are there? (and other mysteries solved by satellites)”. Department of Natural Resources and the Environment Seminar, University of Connecticut (September 12, 2017)
- H.J. Lynch.** 2017. “Spatiotemporal dynamics of Antarctic penguin populations”. NASA Icesat2 Team (May 22, 2017)
- H.J. Lynch.** 2016. “Spatiotemporal dynamics of Antarctic penguin populations”. Department of Biology Seminar, Hofstra University (March 18, 2016).
- H.J. Lynch.** 2015. “Spatial ecology in the era of high-resolution satellite imagery: Linking pattern and process to understand population tipping points for Antarctic penguins”. Ecology & Evolutionary Biology Colloquium, University of California, Santa Cruz (February 18, 2015).
- H.J. Lynch.** 2014. “Spatial ecology in the era of high-resolution satellite imagery: Linking pattern and process to understand population tipping points for Antarctic penguins”. Ecology, Evolution, & Environmental Biology Colloquium, Columbia University (September 9, 2014).
- H.J. Lynch.** 2014. “Data fusion modelling approaches for tracking Adélie penguin abundance, distribution, and demography”. Morss Colloquium, Woods Hole Oceanographic Institute (May 5, 2014).
- H.J. Lynch.** 2013. “How many Adélie penguins are there? (and other mysteries solved by satellites)”. Stony Brook Southampton Lecture Series 2013 (November 1, 2013).
- H.J. Lynch.** 2013. “Thinking big and thinking small: How satellites are revolutionizing penguin ecology”. Biology Department seminar at Woods Hole Oceanographic Institute.
- H.J. Lynch.** 2013. “A sea change in seabird research: How emerging geospatial technologies are radically changing the study of spatial ecology in the Antarctic”. Departmental seminar at the University of Massachusetts, Amherst.
- H.J. Lynch.** 2013. “Climate change winners and losers: Penguin population dynamics on the Antarctic Peninsula”. Departmental seminar at the School of Marine and Atmospheric Sciences, Stony Brook University.
- H.J. Lynch.** 2012. “Automated classification of Antarctic penguin colonies in satellite imagery”. Social-Environmental Synthesis Center Workshop on Data Visualization, Annapolis, MD.
- H.J. Lynch.** 2010. “Climate change winners and losers: Penguin population dynamics on the Antarctic Peninsula”. Departmental seminar at the University of Maryland, College Park.
- H.J. Lynch.** 2010. “Climate change winners and losers: Penguin population dynamics on the Antarctic Peninsula”. Seminar at the University of California, Santa Cruz.
- H.J. Lynch, E.H.C. Grant, R. Muneeppeerakul, I. Rodriguez-Iturbe, and W.F. Fagan.** 2009. “India’s Inter Basin Water Transfer project: The impact of network manipulation on freshwater fish communities”. Organized Oral Session 16-7 of ESA Annual Conference 2009.

**H.J. Lynch.** 2005. "Spatiotemporal dynamics of insect-fire interactions". Seminar at the University of Colorado, Boulder.

**H. Lynch.** 2001. "A Kondo box: Coulomb blockade and the Kondo effect in iron-doped copper nanoparticles". Invited Talk in Session J1 of APS March Meeting 2001.

### **Contributed Talks**

★C. Foley and **H.J. Lynch.** 2018. "Estimating the pre-exploitation population size of Antarctic fur seals (*Arctocephalus gazella*) in South Georgia." Population dynamics and regulation session at Ecological Society of America Annual Meeting 2018.

★B. Goncalves, **H.J. Lynch.** 2018. "Monitoring pack-ice seals from space with deep learning." Using satellite imagery to study wildlife ecology in polar regions session at the Scientific Committee on Antarctic Research Biennial Meeting 2018.

★C. Youngflesh, S. Jenouvrier, **H.J. Lynch.** 2018. "Divergent trends, unsynchronized community dynamics and extreme years – the challenge in finding effective ecological proxies." Population dynamics and regulation session at Ecological Society of America Annual Meeting.

★C. Youngflesh, S. Jenouvrier, **H.J. Lynch.** 2018. "Divergent trends and unsynchronized dynamics – the challenge in finding effective ecological proxies." Life distribution and responses to environmental changes in Polar ecosystems session at the Scientific Committee on Antarctic Research Biennial Meeting 2018.

★M. A. Lynch, ★C. Youngflesh, N. Agha, M. A. Ottinger and **H. J. Lynch.** 2018. "Variation in hormonal stress levels in gentoo penguins (*Pygoscelis papua*) in relation to tourist visitation on the Antarctic Peninsula". Physiology I Contributed Oral Session of the Ecological Society of America Annual Meeting 2018.

★C. Che-Castaldo, **H.J. Lynch,** ★C. Youngflesh, and M.R. Schwaller. 2018. "Range-wide Adelie penguin abundance from 30 years of Landsat satellite imagery". Satellite-based Remote Sensing of Wildlife Session of the Scientific Committee on Antarctic Research Biennial Meeting 2018.

**H.J. Lynch.** 2018. "Real-time population forecasts for Antarctic management". Ecological Society of America Annual Conference 2018.

★P. McDowall and **H.J. Lynch.** 2014. "High-resolution terrestrial habitat models for *Pygoscelis* Penguins". Diversity and Connectivity in Antarctica & Spatial Analysis of Antarctic Biodiversity Session of the Scientific Committee on Antarctic Research Biennial Meeting 2014.

**H.J. Lynch.** 2014. "Data fusion modelling approaches for tracking Adélie penguin abundance and distribution". Remote Sensing of the Antarctic Environment Session of the Scientific Committee on Antarctic Research Biennial Meeting 2014.

**H.J. Lynch** and M.A. LaRue. 2013. "Emerging geospatial technologies for studying penguin biogeography". 8<sup>th</sup> International Penguin Conference, Bristol, UK.



- H.J. Lynch.** 2012. "Detection, differentiation, and abundance estimation of penguin species by high-resolution satellite imagery". Birds and Marine Mammals Session of the Scientific Committee on Antarctic Research Biennial Meeting 2012.
- H.J. Lynch.** 2010. "Climate change winners and losers: Penguin population dynamics on the Antarctic Peninsula". 7<sup>th</sup> International Penguin Conference, Boston, MA.
- H.J. Lynch.** 2010. "Climate change winners and losers: Penguin population dynamics on the Antarctic Peninsula". Organized Oral Session 33 of ESA Annual Conference 2010.
- H.J. Lynch** and P.R. Moorcroft. 2007. "The 1988 Yellowstone fires: A geospatial examination of the impact of historical insect damage on forest fire risk". Contributed Oral Session 78-3 of ESA Annual Conference 2007.
- H.J. Lynch** and P.R. Moorcroft. 2006. "Mountain Pine Beetle Dynamics in a Spatially-Explicit Heterogeneous Landscape". Contributed Oral Session 91 of ESA Annual Conference 2006.
- H.J. Lynch,** Paul R. Moorcroft., Roy A. Renkin, and Robert L. Crabtree. 2005. "Insect-fire interactions in Yellowstone National Park". Greater Yellowstone Public Lands Conference 2005.
- H.J. Lynch** and P.R. Moorcroft. 2005. "Spatiotemporal Dynamics of Insect-Fire Interactions". Contributed Oral Session 130 of ESA Annual Conference 2005.
- H.J. Lynch,** L. DiCarlo, L.I. Childress, N.J. Craig, M.D. Lukin, C.M. Marcus, M.P. Hanson, A.C. Gossard. 2003. "Capacitive Sensing of Localized Charge in a Double Quantum Dot System". Session Y19 of APS March Meeting 2003.
- H.J. Lynch,** S. M. Cronenwett, C. M. Marcus, L. P. Kouwenhoven, V. Umansky. 2002. "Spin Effects and '0.7 Structure' in Quantum Point Contacts". Session F24 of APS March Meeting 2002.
- H.J. Lynch,** L. L. Sohn. 2000. "Spin Polarized Tunneling in an Iron-doped Copper Nanoparticle". Session P28 of APS March Meeting 2000.
- C. E. Sosolik, A. C. Lavery, J. R. Hampton, **H.J. Lynch,** B.H. Cooper. 1999. "Temperature Dependent K<sup>+</sup> and Ca<sup>+</sup> Scattering from Cu(001)". Session FC33 of APS March Meeting 1999.