

James O. Lloyd-Smith

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RESEARCH	Ecology and evolution of infectious diseases, focusing on zoonotic and emerging pathogens; using mechanistic models and computation to integrate dynamics across scales.	
APPOINTMENTS	Professor , Dept. of Ecology & Evolutionary Biology, UCLA	2016-
	Professor , Dept. of Computational Medicine, UCLA	2019-
	Professor , Dept. of Biomathematics, UCLA (renamed in 2019)	2016-2019
	Associate Professor , Dept. of Ecology & Evolutionary Biology, UCLA	2013-2016
	Associate Professor , Dept. of Biomathematics, UCLA	2014-2016
	Assistant Professor , Dept. of Ecology & Evolutionary Biology, UCLA	2009-2013
	De Logi Chair in Biological Sciences , UCLA	2009-2014
	Member , Immunity, Microbiology and Molecular Pathogenesis Home Area, UCLA	2013-
	Member , Interdepartmental Program in Bioinformatics, UCLA	2012-
	Member , Systems and Integrative Biology Training Program, UCLA	2011-
	Research Associate , RAPIDD, Fogarty International Center, NIH	2009-2019
	Research Associate , Dept. of Biology, Penn State University	2007-2009
EDUCATION	Penn State University , <i>Postdoctoral Fellow</i>	2006-2007
	University of California, Berkeley , <i>Postdoctoral Scholar</i>	2005-2006
	University of California, Berkeley , <i>PhD</i> , Biophysics	2005
	University of British Columbia , Vancouver BC, <i>MSc</i> , Physics	1999
	Queen's University , Kingston ON, <i>BSc (Honours)</i> , Physics & Chemistry	1996
GRANTS	UCLA AIDS Institute Coronavirus Seed Grant, "Quantitative tools to maximize insights from small-sample virological studies of SARS-CoV-2", 2020-2022 (Role: PI)	\$50,000
	DOD Strategic Environmental Research and Development Program, "Unforeseen impacts of a severe oceanographic anomaly on pathogen transmission in marine mammals", 2019-2022 (Role: PI)	\$361,933
	NOAA Prescott Grant, "Investigating the role of northern elephant seals (<i>Mirounga angustirostris</i>) in <i>Leptospira</i> transmission dynamics", 2019-2021 (Role: co-PI)	\$99,875
	DARPA, "Preventing emergence and spillover of bat pathogens in high-risk global hotspots", 2018-2022 (Role: co-PI)	UCLA funds: \$536,000
	UCLA Sustainable LA Grand Challenge, "Urban ecology of Los Angeles mammals: biodiversity, pathogen risks, and public perceptions", 2017-2019 (Role: co-PI)	\$225,000
	NSF Division of Environmental Biology, "Pathogen invasion and persistence in an establishing host population: Leptospirosis in the endangered island fox", 2016-2020 (Role: PI)	\$370,822
	DOD Strategic Environmental Research and Development Program, "Leptospirosis in endangered island foxes and California sea lions: Outbreak prediction and prevention in a changing world", 2016-2021 (Role: PI)	\$2,444,737
	NSF Biol. Oce., "Leptospirosis in California sea lions: Population impacts and persistence in a long-term study of infectious disease in marine mammals", 2013-2019 (Role: PI)	\$1,399,997
	DHS Foreign Animal and Zoonotic Disease Center Grant, "Quantifying transmission of influenza in swine using joint analysis of surveillance data", 2010-2011 (Role: PI)	\$138,890

NOAA Prescott Grant, "Using stranding data to understand the population-wide dynamics of leptospirosis in California sea lions (<i>Zalophus californianus</i>)", 2010-2012 (Role: PI)	\$99,880
NSF Emerging Frontiers in Theoretical Biology, "Collaborative research: Evolutionary dynamics of invasion and escape in hierarchical systems", 2009-2014 (Role: PI)	\$521,740
NIH Fogarty International Center, IPA for modeling transmission dynamics of zoonotic infections, 2009-2013 (Role: PI)	\$139,267
NSF Ecology of Infectious Diseases, "Eco-epidemiology of leptospirosis in Latin America: dynamics of transmission within a community", 2009-2014 (Role: Co-PI)	\$1,396,324
Gates Foundation Grand Challenges Explorations, "Therapeutic pseudovirus particles to target superspreaders", 2009-2010 (Role: Co-PI)	\$100,000
NSF Emerging Frontiers in Theoretical Biology "Quasispecies network theories for the cross-scale evolutionary dynamics of pathogens", 2008-2010 (Role: Co-PI)	\$679,994
NOAA Prescott Grant, "Understanding the cyclic dynamics of leptospirosis in California sea lions (<i>Zalophus californianus</i>)", 2007-2008 (Role: named postdoc, wrote entire proposal)	\$99,428

AWARDS & HONOURS

Symposium lead speaker, Evolutionary epidemiology across scales, Evolution/ESEB Conf.	2018
Plenary speaker, Ecology & Evolution of Infectious Diseases Conference	2018
UCLA Life Sciences Excellence Award for Outstanding Research Publication	2017
UCLA Distinguished Teaching Award	2016
Faculty Teaching Award, Dept of Ecology and Evolutionary Biology, UCLA	2016
Plenary speaker, Epidemics ⁵ International Conf. on Infectious Disease Dynamics	2015
Plenary speaker, International Conference on One Medicine One Science, U. Minnesota	2014
Invited session chair, 3 rd International One Health Congress, Amsterdam, Netherlands	2015
Faculty Teaching Award, Dept of Ecology and Evolutionary Biology, UCLA	2013
Invited scholar, Isaac Newton Inst, Prog. on Infectious Disease Dynamics, Cambridge, UK	2013
Hellman Fellow, UCLA, \$25,000	2011-2012
Epidemics ³ Intl. Conf. on Infectious Disease Dynamics, Best Presentation Award	2011
De Logi Chair in Biological Sciences, UCLA, \$200,000	2009-2014
Center for Infectious Disease Dynamics (CIDD) Fellowship, Penn State U., \$100,000	2006-2008
Alan Bearden Memorial Award for outstanding dissertation research, U.C. Berkeley	2005
American Public Health Association, Student Presentation Award	2003
Wildlife Disease Association, Student Presentation Award	2001
Berkeley Fellowship (highest PhD fellowship at U.C. Berkeley), \$90,000	1999-2003
NSERC Post-graduate fellowship (PGS-B), \$40,000	1999-2001
NSERC Post-graduate fellowship (PGS-A), \$35,000	1997-1999
Prince of Wales Award, Queen's U.	1996
Gold Medal for Physics and Chemistry, Queen's U.	1996
Chancellor's Scholarship (highest fellowship at Queen's U.), \$24,000	1992-1996
Declined: MIT Chancellor's Fellowship, Stanford Graduate Fellowship, full support for PhD at Harvard, UCSF	

PROFESSIONAL EXPERIENCE

NIH RAPIDD (Research and Policy for Infectious Disease Dynamics) <i>Research Associate</i>	2017-2019
World Health Organization <i>External advisor on 'Prioritization of Pathogens', Blueprint for R&D Preparedness</i>	2015-2018
NIH RAPIDD (Research and Policy for Infectious Disease Dynamics) <i>Chair, Working Group on Pathogen Invasion Dynamics</i>	2011-2015
NIH RAPIDD (Research and Policy for Infectious Disease Dynamics) <i>Chair, Working Group on Pathogen Emergence and Escape</i>	2009-2011

NIH RAPIDD (Research and Policy for Infectious Disease Dynamics) <i>Working Group on Zoonotic Infections</i>	2008-2009
World Health Organization <i>Visiting Researcher</i>	2004, 2005
Global Alliance for TB Drug Development, New York, NY <i>Researcher</i>	2004-2006

TEACHING

University of California, Los Angeles	
<i>Mathematical and Computational Modeling in Ecology (EEB C119A/C219A)</i>	2011-
<i>Modeling in Ecological Research (EEB C119B/C219B)</i>	2013-
<i>Graduate seminar: Ecology and Evolution of Infectious Diseases</i>	2013-2017, 2018-
<i>Introduction to R for Ecology and Evolutionary Biology (EEB 201)</i>	2015-
<i>Quantitative Bootcamp for EEB graduate students</i>	2010-2014
<i>Graduate seminar: Ecology and Evolution of COVID-19</i>	2020
<i>Graduate seminar: Fundamentals of Disease Ecology</i>	2020
<i>Graduate seminar: Ecology and Evolution of Microbes</i>	2017-2019
<i>Graduate seminar: Demystifying the Academic Job Talk</i>	2018
<i>Graduate core Ecology (EEB 200B)</i>	2010-2018
<i>Evolution, Ecology and Biodiversity (LS 1)</i>	2011-2015
<i>Fiat Lux seminar: The Anti-Vaccine Movement – Controversy and Consequences</i>	2011
<i>Graduate seminar: Population Dynamics of Infectious Diseases</i>	2010
<i>Guest lectures: Epidemiology 220, Principles of Infectious Diseases</i>	2010
<i>UCLA/Caltech Medical Scientist Training Program</i>	2010
<i>Computational and Systems Biology 185, Thesis Research Opportunities</i>	2013-
<i>Computational and Systems Biology 184, Introduction to CASB</i>	2015-
<i>EEB 250, Professional Skills Development</i>	2015-
<i>Computer Science 122, Algorithms in Bioinformatics and Systems Biology</i>	2020
<i>Cal State U Northridge, Seminar in Environmental and Occupational Health</i>	2020
Pennsylvania State University	
<i>Lecturer, Advances in Ecology</i>	2007
<i>Guest lecturer, Ecology of Infectious Diseases</i>	2006, 2007
University of California, Berkeley	
<i>Seminar leader, Ecology of Infectious Disease</i>	2004-2005
<i>Co-created and led graduate seminar, leading to paper in Trends in Ecology & Evolution.</i>	
<i>Reading group leader, Immunology</i>	2005
<i>Guest lecturer, Natural Resource Modeling</i>	2005
<i>Guest lecturer, Quantitative Methods in Environmental Science</i>	2004
<i>Graduate Student Instructor, Natural Resource Modeling</i>	2003
African Institute for Mathematical Sciences, Cape Town, South Africa	
<i>Lead Instructor, NSF/DIMACS Advanced Studies Inst. on Modelling Diseases in Africa</i>	2007
<i>Conducted two-week intensive course on epidemic modelling for post-graduate students.</i>	
<i>Lecturer, Modelling of Infectious Disease Dynamics</i>	2003

PUBLICATIONS

Metrics 113 publications
h-index: 47
>16000 citations
(data from [Google Scholar](#), March 2021)

Pre-prints (**Bold-faced** = member of research group. *Italics* = member of RAPIDD working group.)

- xx. **M. R. Ambrose**, A. J. Kucharski, P. Formenty, J.J. Muyembe-Tamfum, A.W. Rimoin, **J. O. Lloyd-Smith**. Quantifying transmission of emerging zoonoses: Using mathematical models to maximize the value of surveillance data. *In review at PLOS Computational Biology*. <https://doi.org/10.1101/677021v1>
- xx. **A. Gamble***, R.J. Fischer*, **D.H. Morris**, K.C. Yinda, V.J. Munster, **J.O. Lloyd-Smith**. Heat-treated virus inactivation rate depends strongly on treatment procedure. bioRxiv <https://www.biorxiv.org/content/biorxiv/early/2020/08/10/2020.08.10.242206.full.pdf>

Articles

106. **C.E. Snedden***, S. K. Makanani*, S.T. Schwartz, **A. Gamble**, R.V. Blakey, **B. Borremans**, **S.K. Helman**, L. Espericueta, A. Valencia, A. Endo, M.E. Alfaro, **J.O. Lloyd-Smith**. SARS-CoV-2: Cross-scale insights from ecology and evolution. *Trends in Microbiology*. In press.
105. Du, Y.*, **Dai, L.***, Qi, H., Huber, C., Chen, D., Zhang, T., Wu, N.C., Wang, E., **Lloyd-Smith, J.O.**, Sun, R. Quantifying the evolutionary constraints and potential of HCV NS5A protein. *mSystems*. In press. <https://doi.org/10.1101/078428>
104. **D.H. Morris***, K.C. Yinda*, **A. Gamble***, F.W. Rossine, Q. Huang, T. Bushmaker, R.J. Fischer, M.J. Matson, N. van Doremalen, P.J. Vikesland, L.C. Marr, V.J. Munster, **J.O. Lloyd-Smith**. Mechanistic theory predicts the effects of temperature and humidity on inactivation of SARS-CoV-2 and other enveloped viruses. *eLife*. In press. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7574252/>
103. E.R. Whitmer, **B. Borremans**, P.J. Duignan, S.P. Johnson, **J.O. Lloyd-Smith**, A.M. McClain, C.L. Field, **K.C. Prager**. (in press) Classification and regression tree (CART) analysis for predicting prognosis in wildlife rehabilitation: A case study of leptospirosis in California sea lions (*Zalophus californianus*). *Journal of Zoo and Wildlife Medicine*.
102. Schreiber, S.J., **Ke, R.**, **Loverdo, C.**, **Park, M.**, **Ahsan, P.**, **Lloyd-Smith, J.O.** (In press) Cross-scale dynamics and the evolutionary emergence of infectious diseases. *Virus Evolution*. <https://doi.org/10.1101/066688>.
101. T.-H. Zhang*, **L. Dai***, J. P. Barton, Y. Du, Y. Tan, W. Pang, A.K. Chakraborty, **J.O. Lloyd-Smith**, R. Sun. (2020) Predominance of positive epistasis among resistance-associated mutations in HIV-1 protease. *PLOS Genetics*. 16:e1009009. <https://doi.org/10.1371/journal.pgen.1009009>
100. **B. Borremans**, **A. Gamble**, **K.C. Prager**, **S.K. Helman**, A.M. McClain, **C. Cox**, V. Savage, **J.O. Lloyd-Smith**. (2020) Quantifying antibody kinetics and RNA detection during early-phase SARS-CoV-2 infection by time since symptom onset. *eLife*. 9:e61022. <https://elifesciences.org/articles/60122>

99. **R.O. Mummah**, N.A. Hoff, A. W. Rimoin, **J. O. Lloyd-Smith**. (2020) Controlling emerging zoonoses at the animal-human interface. *One Health Outlook*. 2:17. <https://doi.org/10.1186/s42522-020-00024-5>
98. **K.C. Prager, M.G. Buhnerkempe**, D.J. Greig, A.J. Orr, F. Gomez, E. Jensen, R.L. Galloway, Q. Wu, F.M.D. Gulland, **J.O. Lloyd-Smith**. (2020) Mapping the host-pathogen space to link longitudinal and cross-sectional biomarker data: *Leptospira* infection in California sea lions (*Zalophus californianus*) as a case study. *PLOS Neglected Tropical Diseases*. 14:e0008407. <https://journals.plos.org/plosntds/article?id=10.1371/journal.pntd.0008407>
97. M. J. Matson, C.K. Yinda, S.N. Seifert, T. Bushmaker, R. J. Fischer, **J. O. Lloyd-Smith**, V.J. Munster. (2020) Effect of environmental conditions on SARS-CoV-2 stability in human nasal mucus and sputum. *Emerging Infectious Diseases*. 26(9). https://wwwnc.cdc.gov/eid/article/26/9/20-2267_article
96. R.J. Fischer, **D.H. Morris**, N. van Doremalen, S. Sarchette, M.J. Matson, T. Bushmaker, C.K. Yinda, S.N. Seifert, **A. Gamble**, B.N. Williamson, S.D. Judson, E. de Wit, **J.O. Lloyd-Smith**, V.J. Munster. (2020) Effectiveness of N95 respirator decontamination and re-use for SARS-CoV-2 virus. *Emerging Infectious Diseases*. 26(9). <https://doi.org/10.3201/eid2609.201524>
95. Vespignani, A., Tian, H., Dye, C., **Lloyd-Smith, J.O.**, Eggo, R.M., Shrestha, M., Scarpino, S.V., Gutierrez, B., Kraemer, M.U.G., Wu, J., Leung, K., Leung, G.M. (2020). Modelling COVID-19. *Nature Reviews Physics*. <https://doi.org/10.1038/s42254-020-0178-4>.
94. **S.K. Helman, R.O. Mummah, K.M. Gostic, M. G. Buhnerkempe, K.C. Prager, J.O. Lloyd-Smith**. (2020) Estimating prevalence and test accuracy in disease ecology: how Bayesian latent class analysis can boost or bias imperfect test results. *Ecology and Evolution*. 10: 7221-7232. <http://dx.doi.org/10.1002/ece3.6448>
93. N. van Doremalen*, T. Bushmaker*, **D.H. Morris***, M.G. Holbrook, **A. Gamble**, B.N. Williamson, A. Tamin, J.L. Harcourt, N.J. Thornburg, S.I. Gerber, **J.O. Lloyd-Smith**, E. de Wit, V.J. Munster. Aerosol and surface stability of SARS-CoV-2 as compared with SARS-CoV-1. (2020) *New England Journal of Medicine*. 382: 1564-1567.
92. **K. M. Gostic, A.C.R. Gomez, R.O. Mummah**, A.J. Kucharski, **J.O. Lloyd-Smith**. Estimated effectiveness of symptom and risk screening to prevent the spread of COVID-19. (2020) *eLife*. 9: e55570. <https://elifesciences.org/articles/55570>
91. **K. M. Gostic**, R. Bridge, S. Brady, C. Viboud, M. Worobey, **J. O. Lloyd-Smith**. (2019) Childhood immune imprinting to influenza A shapes birth year-specific risk during seasonal H1N1 and H3N2 epidemics. *PLOS Pathogens*. 15: e1008109.
90. D. J. Becker, A. D. Washburne, C. L. Faust, J.R.C. Pulliam, E.A. Mordecai, **J. O. Lloyd-Smith**, R. K. Plowright. (2019) Dynamic and integrative approaches to understanding pathogen spillover. *Philosophical Transactions of the Royal Society, B*. 374: 20190014.
89. K. Pepin, M. Hopken, S. Shriner, E. Spackman, Z. Abdo, C. Parrish, S. Riley, **J. Lloyd-Smith**, A. Piaggio (2019) Improving risk assessment of the emergence of novel influenza A viruses by incorporating environmental surveillance. *Philosophical Transactions of the Royal Society, B*. 374: 20180346.
88. **K. M. Gostic**, E. A. Wunder, V. Bisht, C. Hamond, T. R. Julian, A. I. Ko, **J. O. Lloyd-Smith** (2019). Mechanistic dose-response modeling of animal challenge data shows that intact skin is a crucial barrier to leptospiral infection. *Philosophical Transactions of the Royal Society, B*. 374: 20190367.
87. B. Wasik, E. de Wit, V. Munster, **J. Lloyd-Smith**, L. Martinez-Sobrido, C. Parrish (2019). Onward transmission of viruses: how do viruses emerge to cause epidemics after spillover? *Philosophical Transactions of the Royal Society, B*. 374: 20190017.

86. **B. Borremans**, C.L. Faust, K. Manlove, S. Sokolow, **J. Lloyd-Smith** (2019). Cross-species pathogen spillover across ecosystem boundaries: mechanisms and theory. *Philosophical Transactions of the Royal Society, B*. 374: 20190344.
85. S.A. Sura, L.L. Smith, **M.R. Ambrose**, C.E. Guerra Amorim, A.C. Beichman, **A.C.R. Gomez**, M. Juhn, G.S. Kandlikar, J.S. Miller, J. Mooney, **R.O. Mummah**, K.E. Lohmueller, **J.O. Lloyd-Smith** (2019). Ten simple rules for giving an effective academic job talk. *PLOS Computational Biology*. 15: e1007163.
84. Nelson, M.I., **Lloyd-Smith, J.O.**, Simonsen, L., Rambaut, A., Holmes, E.C., Chowell, G., Miller, M.A., Spiro, D.J., Grenfell, B., Viboud, C. (2019) Fogarty International Center collaborative networks in infectious disease modeling: lessons learnt in research and capacity building. *Epidemics*. 26: 116-127.
83. Whitaker, D., Reichley, S., Griffin, M., **Prager, K.**, Richey, C., Kenelty, K., Stevens, B., **Lloyd-Smith, J.O.**, Kreuder Johnson, C., Duignan, P., Johnson, S., Rios, C., DeLong, R., Halaska, B., Rust, L., Byrne, B., Struve, C., Mapes, S., Soto, E. (2018) Hypermucoviscous *Klebsiella pneumoniae* isolates from stranded and wild-caught marine mammals of the United States Pacific coast: Prevalence, phenotype and genotype. *Journal of Wildlife Diseases*. 54: 659-670.
82. Hoff, N.A.* , Morier, D.S.* , Kialu, N.K., Johnston, S.C., Doshi, R.H., Hensley, L.E., Okitolonda-Wemakoy, E., Muyembe-Tamfum, J.-J., **Lloyd-Smith, J.O.**, Rimoin, A.W. (2017) Varicella coinfection in patients with active monkeypox in the Democratic Republic of the Congo. *EcoHealth* 14: 564-574. <https://doi.org/10.1007/s10393-017-1266-5>.
81. **Lloyd-Smith, J.O.** (2017) Predictions of virus spillover across species [News & Views]. *Nature* 546: 603-604.
80. Plowright, R.K., Parrish, C.R., McCallum, H., *Hudson, P.J.*, Ko, A.I., *Graham, A.L.*, **Lloyd-Smith, J.O.** (2017) Pathways to zoonotic spillover. *Nature Reviews Microbiology* 15: 502-510.
79. **Buhnerkempe, M.G.**, **K. C. Prager**, **Strelioff, C.C.**, Greig, D.J., Laake, J.L., Melin, S.R., DeLong, R.L., Gulland, F.M.D., **Lloyd-Smith, J.O.** (2017) Detecting signals of chronic shedding to explain pathogen persistence: *Leptospira interrogans* in California sea lions as a case study. *Journal of Animal Ecology*. 86: 460-472.
78. *Pepin, K.M.*, Kay, S.L., Golas, B.D., Shriner, S.S., Gilbert, A.T., Miller, R.S., *Graham, A.L.*, *Riley, S.*, Cross, P.C., Samuel, M.D., Hooten, M.B., Hoeting, J.A., **Lloyd-Smith, J.O.**, Webb, C.T., **Buhnerkempe, M.G.** (2017) Inferring infection hazard in wildlife populations by linking data across individual and population scales. *Ecology Letters*. 20: 275-292 doi: 10.1111/ele.12732.
77. **Gostic, K.M.**, **Ambrose, M.R.**, Worobey, M, **Lloyd-Smith, J.O.** (2017) Maternal antibodies' role in protection – response. *Science* 355: 705. [Supporting analyses, 'Do maternal antibodies facilitate hemagglutinin imprinting to influenza A viruses encountered early in childhood?' (2017) *bioRxiv*. 110981. <http://dx.doi.org/10.1101/110981>]
76. Lipsitch, M., Barclay, W., Raman, R., Russell, C.J., Belser, J.A., Cobey, S., Kassin, P.M., **Lloyd-Smith, J.O.**, Maurer-Stroh, S., *Riley, S.*, Beauchemin, C.A.A., Bedford, T., Friedrich, T.C., Handel, A., Herfst, S., Murcia, P.R., Roche, B., Wilke, C., Russell, C.A. (2016) Viral factors in influenza pandemic risk assessment. *eLife*. 5:e18491. doi:10.7554/eLife.18491
75. Schakner, Z.* , **Buhnerkempe, M.G.***, Tennis, M.J., van der Leeuw, B.K., **Lloyd-Smith, J.O.**, Blumstein, D.T. (2016) Epidemiological models to control the spread of information in marine mammals. *Proceedings of the Royal Society of London, B*. 283: 20162037.

74. **Gostic, K.M., Ambrose, M.R., Worobey, M., Lloyd-Smith, J.O.** (2016) Potent protection against H5N1 and H7N9 influenza via childhood hemagglutinin imprinting. *Science*. 354: 722-726.
- Perspective written by C. Viboud and S. L. Epstein.
 - Featured on NIH Director's blog.
73. Wu, N.C.*, **Dai, L.***, Olson, C.A., **Lloyd-Smith, J.O.**, Sun, R. (2016) Adaptation in protein fitness landscapes is facilitated by indirect paths. *eLife*. 5:e16965.
72. Muthukrishnan, R., **Lloyd-Smith, J.O.**, Fong, P. (2016) Mechanisms of resilience: Empirically quantified positive feedbacks produce alternate stable states dynamics in a model of a tropical reef. *Journal of Ecology*. 104: 1662-1672.
71. A. L. *Graham*, D. H. Nussey, **J. O. Lloyd-Smith**, M. Maley, J. M. Pemberton, J. G. Pilkington, **K. C. Prager**, L. Smith, K. A. Watt, K. Wilson, T. N. McNeilly & F. Brulisauer. (2016) Exposure to viral and bacterial infections among Soay sheep of the St. Kilda archipelago. *Epidemiology and Infection*. 144: 1879-1888.
70. **Buhnerkempe, M.G.***, **Gostic, K.M.***, **Park, M.**, **Ahsan, P.**, Belser, J.A., **Lloyd-Smith, J.O.** (2015) Mapping influenza transmission in the ferret model to transmission in humans. *eLife*. 4:e07969.
69. *Biek, R.*, Pybus, O.G., **Lloyd-Smith, J.O.**, Didelot, X. (2015) Measurably evolving pathogens in the genomic era. *Trends in Ecology and Evolution*. 30: 306-313.
68. **Gostic, K.M.**, *Kucharski, A.J.*, **Lloyd-Smith, J.O.** (2015) Effectiveness of traveller screening for emerging pathogens is shaped by epidemiology and natural history of infection. *eLife* 4:e05564.
67. Heesterbeek, H., Anderson, R., Andreasen, V., Bansal, S., De Angelis, D., Dye, C., Eames, K., Edmunds, J., Frost, S., Funk, S., Hollingsworth, D., House, T., Isham, V., Klepac, P., Lessler, J., **Lloyd-Smith, J.**, Metcalf, J., Mollison, D., Pellis, L., *Pulliam, J.*, Roberts, M., Viboud, C., Isaac Newton Institute IDD Collaboration (2015) Modeling infectious disease dynamics in the complex landscape of global health. *Science* 347: aaa4339-1-10.
66. **Ke, R.**, **Loverdo, C.**, Qi, H., Sun, R., **Lloyd-Smith, J.O.** (2015) Rational design and adaptive management of combination therapies for Hepatitis C virus infection. *PLoS Computational Biology* 11: e1004040.
65. **Prager, K.C.**, Alt, D.P., **Buhnerkempe, M.G.**, Greig, D.J., Galloway, R.L., Wu, Q., Gulland, F.M.D., **Lloyd-Smith, J.O.** (2015) Antibiotic efficacy in eliminating leptospirosis in California sea lions (*Zalophus californianus*) stranding with leptospirosis: 14 cases (2010-2011). *Aquatic Mammals* 41: 203-212.
64. **Lloyd-Smith, J.O.**, Mollison, D., Metcalf, C.J.E., Klepac, P., Heesterbeek, J.A.P. (2015) Challenges in modelling infectious disease dynamics: preface. *Epidemics* 10: iii-iv.
63. **Buhnerkempe, M.G.**, Roberts, M.G., Dobson, A.P., Heesterbeek, H., *Hudson, P.J.*, **Lloyd-Smith, J.O.** (2015) Eight challenges in modelling disease ecology in multi-host, multi-agent systems. *Epidemics* 10: 26-30.
62. **Lloyd-Smith, J.O.**, Funk, S., McLean, A.R., *Riley, S.*, Wood, J.L.N. (2015) Nine challenges in modelling the emergence of novel pathogens. *Epidemics* 10: 35-39.
61. Metcalf, C.J.E., Birger, R., Funk, S., Kouyos, R.D., **Lloyd-Smith, J.O.**, Jansen, V.A.A. (2015) Five challenges in evolution and infectious diseases. *Epidemics* 10: 40-44.
60. Gog, J.R., Pellis, L., Wood, J.L.N., McLean, A.R., Arinaminpathy, N., **Lloyd-Smith, J.O.** (2015) Seven challenges in modelling pathogen dynamics within-host and across scales. *Epidemics* 10: 45-48.

59. Russell CA, Kasson PM, Donis RO, *Riley S*, Dunbar J, Rambaut A, Asher J, Burke S, Davis CT, Garten RJ, Gnanakaran S, Hay SI, Herfst S, Lewis NS, **Lloyd-Smith JO**, Macken CA, Maurer-Stroh S, Neuhaus E, Parrish CR, *Pepin KM*, Shepard S, Smith DL, Suarez DL, Trock SC, Widdowson M, *George D*, Lipsitch M, Bloom JD. (2014) Improving pandemic influenza risk assessment. *eLife*. 3:e03883.
58. Viana, M., Mancy, R., *Biek, R.*, Cleaveland, S., Cross, P.C., **Lloyd-Smith, J.O.**, Haydon, D.T. (2014) Assembling evidence for identifying disease reservoirs. *Trends in Ecology and Evolution*. 29: 270-279.
57. Wu, Q., **Prager, K.C.**, Goldstein, T., Alt, D.P., Galloway, R.L., Zuerner, R.L., **Lloyd-Smith, J.O.**, Schwacke, L. (2014) Development of a real-time PCR for the detection of pathogenic *Leptospira* spp. in California sea lions (*Zalophus californianus*). *Diseases of Aquatic Organisms*. 110: 165-172.
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 - Recommended twice by Faculty of 1000.

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7. Cross, P.C., **Lloyd-Smith, J.O.**, Getz, W.M. (2005) Disentangling association patterns in fission-fusion societies using African buffalo as an example. *Animal Behaviour* 69: 499-506.
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4. Cross, P.C., **Lloyd-Smith, J.O.**, Bowers, J., Hay, C.T., Hofmeyr, M., Getz, W.M. (2004) Integrating association data and disease dynamics: an illustration using African Buffalo in Kruger National Park. *Annales Zoologici Fennici* 41: 879-892.
3. **Lloyd-Smith, J.O.***, Galvani, A.P.* , Getz, W.M. (2003) Curtailing transmission of severe acute respiratory syndrome within a community and its hospital. *Proceedings of the Royal Society of London, B* 270, 1979-1989. * equal contributors
2. Crawford, M.A., Bloom, M., Broadhurst, C.L., Schmidt, W.F., Cunnane, S.C., Galli, C., Gehbremeskel, K., Linseisen, F., **Lloyd-Smith, J.**, Parkington, J. (1999) Evidence for the unique function of DHA during the evolution of the modern hominid brain. *Lipids* 34: 539-47.
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Book chapters (peer-reviewed)

- B7. Shrestha, S. and **Lloyd-Smith, J.O.** (2010) Introduction to mathematical modelling of infectious disease. In *Modeling Paradigms and Analysis of Disease Transmission Models*, ed. A. Gumel, S. Lenhart. AMS/DIMACS Vol. 75: 1-46.
- B6. Sánchez, M.S., **Lloyd-Smith, J.O.**, Williams, B.G., Getz, W.M. (2010) Using mathematical models to monitor and evaluate the impact of public health interventions on epidemics: the case of the TB/HIV co-pandemic in Africa. In *Modeling Paradigms and Analysis of Disease Transmission Models*, ed. A. Gumel, S. Lenhart. AMS/DIMACS Vol. 75: 135-186.
- B5. Bar-David, S., **Lloyd-Smith, J.O.**, Getz, W.M. (2006) Infectious disease in spatially expanding populations: a model for reintroduced species. In *Conservation Biology in Asia*, ed. McNeely, J.A., McCarthy, T. M., Smith, A., Olsvig-Whittaker, L., Wikramanayake, E.D., Society for Conservation Biology (Asia Section) and Resources Himalaya, Kathmandu, Nepal, 340-362.
- B4. **Lloyd-Smith, J.O.**, Schreiber, S.J., Getz, W.M. (2006) Moving beyond averages: Individual-level variation in disease transmission. In *Mathematical studies of human disease dynamics: Emerging paradigms and challenges*, ed. Gumel, A.B., Castillo-Chavez, C., Mickens, R.E., Clemence, D.P., AMS Contemporary Mathematics Series, Vol. 410, 235-258.
- B3. Getz, W. M., and **Lloyd-Smith, J. O.** (2006) Basic methods for modeling the invasion and spread of contagious disease. In *Disease evolution: Models, concepts and data analysis*, ed. Feng, Z., Dieckmann, U., Levin, S.A. AMS/DIMACS Vol. 71: 87-109.
- B2. Getz, W.M., **Lloyd-Smith, J.O.**, Cross, P.C., Bar-David, S., Johnson, P.L., Porco, T.C., Sánchez, M.S. (2006) Modeling the invasion and spread of contagious disease in heterogeneous populations. In *Disease evolution: Models, concepts and data analysis*, ed. Feng, Z., Dieckmann, U., Levin, S.A. AMS/DIMACS Vol. 71: 113-144.
- B1. Bloom, M., Linseisen, F., **Lloyd-Smith, J.**, Crawford, M.A. (1999) Insights from NMR on the functional role of polyunsaturated lipids in the brain. In *Magnetic Resonance and Brain Function: Approaches from Physics*, ed. B. Maraviglia, Italian Physical Society.

INVITED TALKS		
	UCLA DGSOM I3T seminar series, Los Angeles CA	2020
	Duke Univ. Computational Biology & Bioinformatics seminar series, Durham NC	2020
	SERDP Resource Conservation & Resiliency Program, In-progress review, Arlington VA	2020
	Isaac Newton Institute, Future Pandemics Workshop, Cambridge UK	2020
	University of Texas at Austin, COVID-19 Consortium Colloquium, Austin TX	2020
	Santa Fe Institute, Workshop on Critical Phenomena in the Viral World, Santa Fe, NM	2019
	SERDP Resource Conservation & Resiliency Program, In-progress review, Arlington VA	2019
	(<i>Student selection</i>) U of Minnesota, College of Veterinary Medicine seminar, St Paul MN	2019
	UCLA Virology seminar series, Los Angeles CA	2019
	J. Craig Venter Institute seminar series, La Jolla CA	2019
	Princeton University, Dept of Ecology and Evolutionary Biology seminar, Princeton NJ	2019
	Santa Fe Institute, Workshop on Multi-Scale Virus Evolution, Santa Fe, NM	2018
	SERDP Resource Conservation & Resiliency Program, In-progress review, Arlington VA	2018
	NIH Fogarty Workshop on Universal Influenza Vaccines, Bethesda MD	2018
	(Symposium lead speaker) Evolution/ESEB Conference, Montpellier France	2018
	(Plenary) Ecology & Evolution of Infectious Diseases (EEID) conference, Glasgow Scotland	2018
	DARPA-Montana State Univ. Workshop on Predicting Pathogen Spillover, Emigrant, MT	2017
	SERDP Resource Conservation & Resiliency Program, In-progress review, Arlington VA	2017
	NIH Fogarty International Center, Ellis McKenzie Memorial Symposium, Bethesda MD	2017
	University of Texas at Austin, Dept of Ecology and Evolutionary Biology, Austin TX	2017
	Yale School of Public Health, Dept of Epidemiology of Microbial Diseases, New Haven CT	2017
	UCLA, Quantitative and Computational Biology Annual Symposium, Los Angeles CA	2016
	UC Santa Cruz, Dept of Ecology and Evolutionary Biology, Santa Cruz CA	2016
	World Health Organization, Workshop on Prioritization of Pathogens, Geneva Switzerland	2015
	(Plenary) Epidemics ⁵ International Conf. on Infectious Disease Dynamics, Clearwater FL	2015
	UCLA, Quantitative and Computational Biology seminar, Los Angeles CA	2015
	UCLA, Dept of Ecology and Evolutionary Biology seminar, Los Angeles CA	2015
	International Leptospirosis Society Conference, Semarang, Indonesia (<i>sent lab member</i>)	2015
	NIH/NIAID Workshop on Emergence of New Epidemic Viruses, Bethesda MD	2015
	University of Southern California, Computational Biology Seminar Series, Los Angeles CA	2015
	RAPIDD Workshop on Modeling and predicting influenza phenotypes, Cambridge UK	2015
	(<i>Session chair</i>) Third International One-Health Congress, Amsterdam, Netherlands	2015
	RAPIDD Workshop on Modeling serological data, Fort Collins CO	2015
	UCLA, Program for Excellence in Education and Research in the Sciences, Los Angeles CA	2014
	(Plenary) International Conference on One Medicine One Science, Minneapolis MN	2014
	Jacques Monod Conference, From emerging to pandemic viruses, Roscoff, France	2014
	UC Davis, Ecology and Evolution seminar, Davis CA	2014
	Scripps Inst of Oceanography, Ecology seminar, La Jolla, CA	2014
	UCLA IoES Environmental Science Colloquium, Los Angeles, CA	2014
	RAPIDD Workshop on Outbreak potential of non-human influenza viruses, Atlanta GA	2013
	University of Cambridge, Newton Instit. on Infectious Disease Dynamics, Cambridge, UK	2013
	NOAA National Marine Mammal Stranding Network 20 th Anniversary webinar series	2013
	University of Minnesota, IGERT Symposium on Introduction of Microbes, St Paul MN	2013
	University of Colorado, Boulder, Dept of Ecology and Evolutionary Biology, Boulder CO	2013
	California State University, Long Beach, Dept of Biology, Long Beach CA	2013
	UC Berkeley, Dept. of Integrative Biology, Berkeley CA	2013
	UCLA, Dept of Ecology and Evolutionary Biology, Los Angeles CA	2012
	Royal Society Mtg, Next-gen molecular and evolutionary epidemiology, London England	2012
	Oregon State University, College of Veterinary Medicine, Corvallis OR	2012
	Gordon Research Conference on Biology of Spirochetes, Ventura CA	2012

Princeton University, Workshop on serological modeling, Princeton NJ	2011
(Keynote) International Leptospirosis Society Conference, Merida, Mexico	2011
DIMACS Workshop on Genetics and Disease Control, Cape Coast, Ghana	2011
University of Virginia, Dept of Biology, Charlottesville VA	2011
UC Santa Barbara, Dept of Ecology, Evolution & Marine Biology, Santa Barbara CA	2011
(Plenary) Boyd Orr Centre for Population & Ecosystem Health, U. of Glasgow, Scotland	2011
DTRA Workshop on Anticipating the Species Jump: Bioinformatics, McLean VA	2011
NESCent Workshop on Evolution of Infectious Diseases, Durham NC	2011
Royal Society Symposium on Disease Invasion, London, England	2010
NIMBios Workshop on Wildlife and Virus Zoonoses, Knoxville, TN	2010
U.C. Irvine, Dept of Ecology and Evolutionary Biology, Irvine CA	2010
US Dept of Homeland Security, Chem/Bio Div. Performers Conference, Washington DC	2010
Fields Institute, Mathematics of Drug Resistance in Infectious Diseases, Toronto Canada	2010
Harvard School of Public Health, Dept of Epidemiology, Boston MA	2010
Collective Dynamics in Biological Systems, Irvine CA	2010
NIH Fogarty International Center, Bethesda MD	2010
UCLA Bioinformatics Program, Los Angeles CA	2009
Emory University, Population Biology, Ecology & Evolution, Atlanta GA	2009
US Dept of Homeland Security, Chemical and Biological Program Review, Washington DC	2009
Ecology & Evolution of Infectious Diseases (EEID) conference, Athens GA	2009
Stanford University, Seminar on Environment and Disease, Palo Alto CA	2009
UCLA School of Medicine, Dept of Biomathematics, Los Angeles CA	2009
University of California, Davis/NSF workshop on avian influenza, Davis CA	2008
Banff Int'l Research Stn, Modeling policy options during public health crises, Banff, Canada	2008
University of California, Santa Cruz, Dept of Applied Math & Stats, Santa Cruz CA	2008
NIH Fogarty International Center, Bethesda MD	2008
UCLA, Dept of Ecology and Evolutionary Biology, Los Angeles CA	2007
University of Chicago, Dept of Ecology and Evolution, Chicago IL	2007
British Society for Parasitology symposium on Parasitic Coinfections, London, England	2007
Ecological Society of America conference, San Jose CA	2007
DIMACS Workshop on Modeling Infectious Disease in Africa, Stellenbosch, South Africa	2007
Ecology & Evolution of Infectious Diseases (EEID) conference, Ithaca NY	2007
International Whaling Commission Scientific Committee, Anchorage AK	2007
Institute for Ecosystem Studies, Milbrook NY	2007
Keystone Symposium, Respiratory viruses of animals causing disease in humans, Singapore	2006
Penn State University, Ctr. for Infectious Disease Dynamics seminar, University Park PA	2006
San Francisco Dept. of Public Health, Communicable Disease Unit, San Francisco CA	2006
World Health Organization, Geneva Switzerland	2005
Modeling the dynamics of human diseases (JSRC), Snowbird UT	2005
Ecology & Evolution of Infectious Diseases (EEID) conference, Fort Collins CO	2005
U.C. Berkeley, Dept. of Environmental Sciences, Policy & Mgmt, Berkeley CA	2005
SACEMA/Wellcome workshop on modelling TB/HIV, Harare, Zimbabwe	2005
Harvard School of Public Health, Dept. of Epidemiology, Boston MA	2004
Yale School of Public Health, Dept. of Epidemiology, New Haven CT	2004
Cambridge University, Dept. of Zoology, Cambridge, UK	2004
American Institute of Mathematical Sciences, Pomona CA	2004
CONFERENCE	
International Leptospirosis Society Conference, Vancouver, Canada	2019
PRESENTATIONS	
8th California Islands Symposium, Ventura CA	2012
Epidemics ³ International Conference on Infectious Disease Dynamics, Boston MA	2011
Epidemics ² International Conference on Infectious Disease Dynamics, Athens Greece	2009

Ecological Society of America, Albuquerque NM	2009
XVI International AIDS Conference, Toronto, Canada	2006
Computational and Mathematical Pop'n Dynamics (DESTOBIO 3-MPD 7), Trento, Italy	2004
American Public Health Association, San Francisco CA	2003
Alcala 2 nd International Conf. on Mathematical Ecology (AICME), Alcala, Spain	2003

ADVISING

Postdoctoral Fellows	<p>Dylan Morris (PhD in Ecology and Evolutionary Biology, Princeton U.) 2020-.</p> <p>Amandine Gamble (PhD in Population biology, U of Montpellier) 2019-.</p> <p>Benny Borremans (PhD in Biology, U of Antwerp), <i>Marie Curie Fellow</i> 2016-2020.</p> <p>Lei Dai (PhD in Physics, MIT), 2015-2018. (jointly advised with Ren Sun), <i>Jane Coffin Childs Foundation Fellow</i>, 2015-2018. Presently employed at Chinese Academy of Sciences.</p> <p>Michael Buhnerkempe (PhD in Biology, Colorado State U.), <i>RAPIDD Fellow</i>, 2013-2016. Presently employed as Research Assistant Professor at Southern Illinois University.</p> <p>Adam Kucharski (PhD in Mathematics, Cambridge University), MRC visiting fellow, 2014. Presently Associate Professor at London School of Hygiene & Tropical Medicine.</p> <p>Katherine Prager (DVM/PhD in Ecology, UC Davis), 2010-2012. In July 2012, promoted to Research Associate position in my group.</p> <p>Ruian Ke (PhD in Mathematics, Imperial College), 2010-2013. Presently employed as Staff Scientist at Los Alamos National Laboratory.</p> <p>Claude Loverdo (PhD in Physics, U. of Paris), 2010-2013. Presently employed as tenured researcher at CNRS in Paris, with appointment at Sorbonne U.</p> <p>Chris Streliaoff (PhD in Physics, U. of Illinois Urbana-Champaign), 2010-2012. Presently employed as physics teacher at Berkeley High School.</p> <p>Juliet Pulliam (MPH/PhD in Ecology & Evol. Biol., Princeton U.), <i>RAPIDD Fellow</i>, 2010-2011. Presently employed as Director of South African Center for Epidemiological Modelling and Analysis, Stellenbosch, South Africa.</p> <p>Seth Blumberg (MD/PhD in Physics, U. of Michigan), <i>RAPIDD Fellow</i>, 2009-2012. Presently employed as Postdoctoral Fellow at UCSF.</p>
Doctoral Students	<p>Miran Park, EEB, <i>NSF Graduate Research Fellow</i>, 2010-2017. Presently employed at Slack.</p> <p>Monique Ambrose, EEB, <i>NSF Graduate Research Fellow</i>, 2012- 2018. Presently senior researcher at Institute for Disease Modeling.</p> <p>Katelyn Gostic, EEB, <i>NIH Predoctoral Fellow</i>, 2013-2019. Presently postdoc at U. Chicago.</p> <p>Angela Guglielmino, EEB, 2012-present (advanced to candidacy May 2015)</p> <p>Sarah Helman, EEB, 2014-present (advanced to candidacy September 2017)</p> <p>Ana Carolina de Ribeiro Gomez, EEB, 2014- present (advanced to candidacy September 2018)</p> <p>Christian Mason, Biomathematics, 2015-present.</p> <p>Riley Mummah, EEB, 2016-present. (advanced to candidacy September 2020)</p> <p>Celine Snedden, EEB, 2018-present.</p> <p>Cayley Bowles, UCLA-CalTech MD/PhD program, Summer 2015 rotation.</p> <p>Philip Bulterys, UCLA-CalTech MD/PhD program, <i>Soros Fellow</i>, Summer 2011 rotation.</p>
Master's Students	<p>Brianna Tarnower, Environmental Health Sciences, 2009-2012. (Co-advised with formal faculty advisor, R. Ambrose.) Graduated May 2012. Now working for Quantum Spatial, Portland OR.</p> <p>Derek Arrowood, Ecology and Evolution of Medicine, 2017-2019.</p> <p>Amanda Tokuyama, EEB, 2018-present.</p> <p>Oshiomah Oyageshio, Ecology and Evolution of Medicine, 2018-2020. Presently a PhD student in UC Davis Population Biology program.</p> <p>Carly Leary, Ecology and Evolution of Medicine, 2019-present.</p> <p>Elizabeth Blackmore, Ecology and Evolution of Medicine, 2020-present.</p>

Undergraduate Students

Michelle Barton, UCLA Biology, Spring 2009.
 Prianna Ahsan, UCLA Computational & Systems Biology, Winter 2013-Spring 2015.
Whitcome Summer Research Fellow, 2013
 Yosra Adie, UCLA Ecology & Evolutionary Biology, Winter 2013-Summer 2014.
 Suruchi Salgar, UCLA Ecology & Evolutionary Biology, Winter 2014- Fall 2018.
 Rita Neat, UCLA Physiology, Winter 2014- Spring 2015.
 Melody Hsin-Yun Ho, UCLA Ecology & Evolutionary Biology, Winter 2014-2016.
 Thais Mega Correa, UCLA Nursing/MIMG, Fall 2014-2016.
 Samuel Wu, UCLA Computational & Systems Biology, Winter 2015-Summer 2015.
 Melissa Barcelona, UCLA Ecology & Evolutionary Biology, Summer 2015.
 Regina Lee, UCLA Computational & Systems Biology, Winter 2017-Spring 2018.
 Carolina Sanchez, UCLA Biology/Anthropology, Fall 2017-2019
 Sustainable LA Mammal Project: 30-35 undergraduates involved in all aspects of project, Spring 2017-present.
 Rogelio Bazan, UCLA Biology, Spring 2019-present.
 Maren Lechner, UCLA Ecology, Behavior and Evolution, Spring 2019-present.
 Lucas Marques, UCLA Physiological Sciences, Spring 2019-present.
 Julie Roshala, UCLA Psychobiology, Spring 2019-present.
 Bianca Ryans, UCLA Biology, Spring 2019-present.
 Eleni Sklavenitis, UCLA Biology, Spring 2019-present.
 Martha Valencia, UCLA Biology, Spring 2019-present.
 Hubert Lee, UCLA Physiological Science, Spring 2020-present.
 Aubrey Butler, UCLA Biology, Spring 2020-present.
 Philip Lee, UCLA Computational & Systems Biology, Fall 2020-present.

External Students

Aurélien Puiseux, École Normale Supérieure, Biology. Summer Internship, 2011.
 Anna Naranjo, UC Davis, UC LEADS Scholar, Summer 2013.
 Erisa Apantaku, Princeton Ecology and Evolutionary Biology, Summer 2013- Summer 2014.
 Ana Solis, Santa Monica College, SMC/UCLA Undergraduate Research Scholar, Summer 2015.

SERVICE

Professional service

Chair, NIH RAPIDD Working Group on Pathogen Invasion Dynamics, 2011-2015
 Chair, NIH RAPIDD Working Group on Pathogen Emergence and Escape, 2009-2011
 Advisor to DARPA on new biological programs, 2015-2017; 2020
 NIH workshop on Emergence of New Epidemic Viruses, August 2015
 Invited faculty member, Faculty of 1000 Biology, 2010-present
 Participant, NSF Research Coordination Network on infectious disease evolution, 2014-present
 Participant, NSF Research Coordination Network on ecology of marine infections, 2012-present
 NIH/NSF workshop on future directions in the ecology of infectious diseases, April 2010
 DTRA Thought Leaders workshop on 'Anticipating the Species Jump', March 2011
 Integrated Island Fox Recovery Team, Fox Health Group, 2011-present

Workshops and meetings organized

Co-organizer of DoD/NSF-funded workshop, "Leptospirosis in California coastal wildlife",
 December 14-15, 2017, Sausalito, CA
 Co-organizer of NIH/RAPIDD workshop, "Modeling and predicting influenza phenotypes",
 March 19-21, 2015, Cambridge, UK
 Organizer of NIH/RAPIDD workshop, "Pathogen invasion dynamics", Sept 3, 2014, Bethesda,
 MD
 Co-organizer of NIH/RAPIDD workshop, "Phylogenetics of slow-evolving pathogens in the
 genomic era: limits and opportunities", September 4-6, 2013, Glasgow, UK

Organizer of NIH/RAPIDD workshop, "Pathogen invasion dynamics: reservoirs, spillover and evolutionary dimensions", June 12 2013, Bethesda MD

Organizer of NIH/RAPIDD workshop, "Population dynamics of emerging pathogens", February 1 2012, Bethesda MD

Organizing committee, NSF/DIMACS Workshop on Genetics and Disease Control, August 8-12, 2011, University of Cape Coast, Ghana

Co-organizer of NOAA/NMFS funded workshop, "Leptospirosis in California sea lions", April 13-14 2011, UCLA

Organizer of NIH/RAPIDD workshop, "Transmission dynamics of leptospirosis", April 11-12 2011, UCLA

Co-organizer of NIH/RAPIDD workshop, "Estimating pathogen transmission among host species", December 13-15 2010, Bethesda MD

Co-organizer of NIH/RAPIDD workshop, "The Transmission and Evolutionary Dynamics of Influenza in Poultry and Swine in Southern China", April 16-20, 2010, Hong Kong Univ.

Co-organizer of NIH/RAPIDD workshop, "Methods for the Study of Spillover and Stuttering Transmission of Stage III Zoonoses", April 1-3 2010, UCLA

Organizer of NIH/RAPIDD workshop, "Zoonotic dynamics, spillover and evolutionary escape", April 28-29 2009, Penn State University

Co-organizer of workshop, "Virus adaptation on multi-host fitness landscapes", July 17 2008, Penn State University

Co-organizer of NIH/RAPIDD workshop, "Zoonotic dynamics: modeling species jumps and pathogen emergence", March 24-26 2008, Penn State University

Co-organizer of workshop, "Estimating contact networks from data relevant to pathogen transmission", April 18-20 2007, Penn State University

Co-organizer, seminar series for Penn State Center for Infectious Disease Dynamics, 2007-2008

University service (at UCLA)

UC Office of the President, COVID-19 Testing and Tracing Task Force, 2020

Division of Life Sciences, LS Core Curriculum Re-design committee, 2013-2017

Division of Life Sciences, Physics Curriculum Re-design committee, 2013-2014

Division of Life Sciences, Mathematics Curriculum Re-design committee, 2012-2014

Institute for Quantitative and Computational Bioscience search committee, 2014-2015

Computational and Systems Biology IDP, Faculty Advisory committee, 2015-present

Dept of EEB, Graduate Student Advisor, 2020.

Dept of EEB, Search committee for Quantitative EEB position, 2018-2019.

Dept of EEB, Chair of EEB/QCB Search Committee, Quantitative Ecology and Evolution of Microbes, 2017-2018.

Dept of EEB, Graduate Program Curriculum Workgroup, 2017-present.

La Kretz Center for California Conservation Science, *Ad hoc* group on strategic planning, 2017.

Faculty Screening Committee for Pritzker Emerging Environmental Genius Award, 2017, 2018.

Dept of EEB, Chair, *Ad hoc* Committee on Department Hiring Plan, 2016.

Dept of EEB, Department Chair Search Committee, 2015-2017.

Dept of EEB, Personnel Committee, 2015-2018, 2019-2020

Dept of EEB, Faculty sponsor of Hacky Hours student computational support group, 2016-.

Dept of EEB, Curriculum committee, 2012-2016

Dept of EEB, Departmental Written Qualifying Exam coordinator, 2013-2015

Dept of EEB, Seminar committee, 2011-2012, 2012-2013

Dept of EEB, Search committee for Microbial Evolutionary Ecologist, 2010-2011

Dept of EEB, Graduate Admissions & Support Committee, 2009

Dept of EEB, *Ad hoc* committee on LS1 Curriculum, 2009

Dept of EEB, Legislative Assembly Representative, 2009-2012

Faculty Executive Committee, Global Bio Lab, 2010-2013

Hellman Awards Selection committee, 2014, 2018

'Teaching Math to Life Science Students in the 21st Century' Advisory committee, 2014

Review and editorial service

Associate Editor, *PLoS Computational Biology*, 2015-2021 (handle 6-10 papers/yr)
Editorial Board, *Epidemics*, 2012- (handle 2-4 papers/yr)
Editorial Board, *PLoS Currents Outbreaks*, 2015-2018.
Guest Editor, *Phil. Trans. Royal Society B* issue on 'Dynamic and Integrative Approaches to Pathogen Spillover', 2019
Guest Editor, *PNAS*, 2016 (handled one paper)
Guest Editor, *PLoS Pathogens*, 2017 (handled one paper)
Guest Editor, *Epidemics* Special Issue on 'Challenges in Infectious Disease Dynamics', 2015
Guest Editor, *PLoS Computational Biology*, 2013-2015 (handle 2 papers/yr)
NSF Review Panel, Advancing Theory in Biology program, June 2010
Ad hoc proposal reviewer for NSF (9), Wellcome Trust (3), NIH (4), National Geographic Society, Institut Pasteur (1), Marsden Fund, Royal Society of New Zealand, UK Medical Research Council (3), Leverhulme Trust, Research Grants Council of Hong Kong (2), US Army Research Office
Ad hoc reviewer for MacArthur Fellows program (3)
Theme issue proposal reviewer for Philosophical Transactions of the Royal Society, B
Book proposal reviewer for Princeton University Press, Oxford University Press

Manuscript reviewer:

Nature, Science, PNAS, PLoS Biology, PLoS Medicine, The Lancet, eLife, Nature Ecology and Evolution, American Journal of Epidemiology, American Naturalist, Biology Letters, Bioscience, BMC Infectious Diseases, Climate Research, Conservation Biology, Ecology, Ecology Letters, Epidemics, Epidemiology, Evolution, Frontiers in Ecology and Evolution, International Journal of Infectious Diseases, Journal of Animal Ecology, Journal of Applied Ecology, Journal of the Royal Society Interface, Journal of Theoretical Biology, Mathematical Biosciences, Molecular Ecology, Nature Communications, Oikos, Parasitology, Phil Trans of the Royal Society B, PLoS Computational Biology, PLoS Currents Outbreaks, PLoS Neglected Tropical Diseases, PLoS Pathogens, Proceedings of the Royal Society B, Scientific Reports, Theoretical Ecology, Theoretical Population Biology, Trends in Ecology and Evolution, Trends in Microbiology, Trends in Parasitology

Technical reviewer for Princeton Monograph, "Consumer-Resource Dynamics" (2003).

Graduate committees and examinations

PhD Committee member (in addition to my own students)

Laurel Klein (EEB, graduated 2014)
Christopher Johnson (EEB, graduated 2013)
Marisa Tellez (EEB, graduated 2014)
Adriana Maldonado (EEB, graduated 2015)
Nicole Munoz (EEB, graduated 2015)
Gabriela Cybis (Biomathematics, graduated 2014)
Devaughn Fraser (EEB, graduated 2017)
Nicholas Wu (Molecular Biology IDP, graduated 2015)
Nicole Hoff (Epidemiology, graduated 2014)
Doug Morier (Epidemiology, graduated 2014)
Ranjan Muthukrishnan (EEB, graduated 2013)
Claire Narraway (EEB, graduated 2015)
Margaret Simon (EEB, graduated 2017)
Douglas Hootton (EEB, departed)
Yushen Du (Molecular & Medical Pharmacology, graduated 2017)
Sarah Joy Bittick (EEB, graduated 2017)
Evan McCartney-Melstad (EEB, graduated 2016)
Mandev Gill (Biostatistics, graduated 2016)
Sarah Tolley (EEB, graduated 2019)

Brenton Spies (EEB)
Tiffany Yap (Environmental Science and Engineering, graduated 2016)
Hayley Ashbaugh (Epidemiology, graduated 2017)
Shayna Sura (EEB)
Emily Ryznar (EEB)
Robert Cooper (EEB)
Guilherme Casas Goncalves (EEB)
Benjamin Ha (EEB)
Angie Ghanem (Epidemiology, graduated 2020)
Lauren Smith (EEB)
Ashlyn Ford (EEB)
Allison Rosen (Epidemiology)
Ben Tonelli (EEB)

Master's Committee member

Brianna Tarnower (Environmental Health Sciences, graduated 2012)
Edward Clint (Anthropology, graduated 2014)
Madeline Tiee (EEB, graduated 2015)
Yasir Tarabichi (Master of Science in Clinical Research, graduated 2015)
Theodoros Kelesidis (Master of Science in Clinical Research, graduated 2016)
Catherine Le (Master of Science in Clinical Research, graduated 2019)
Teia Noel (Master of Science in Bioinformatics, graduated 2019)
Max Murray (EEB, graduated 2019)
Ricky Wolff (EEB)
Emoni Cook (EEB)

External PhD Committee member or examiner

Sarah Ackley, Dept of Epidemiology, UCSF, 2018
Kathryn Hacker, Dept of Epidemiology of Microbial Diseases, Yale University, 2017
Carel Pretorius, Dept of Physics, Stellenbosch University, Stellenbosch South Africa, 2009

Student outreach

Faculty panelist, Eco-Evo Careers, Publication Strategies, May 2018
Faculty panelist, EEB Professional Development for Graduate Students, November 2017
Speaker, Math and Biology Society, November 2015
Speaker and panelist, Eco-Evo Careers Lunch, May 2015
Delta Gamma Fraternity Professor Dinner, November 2014, November 2015
Dinner for 12 Strangers, March 2014
Interview subject for student film project, EEB 96 Communicating Science, January 2014
Lunch with EEB Faculty, October 2013

Public outreach

Expert panel on COVID-19 safety for parents, Santa Monica-Malibu Unified School District, 2021
Expert panel on COVID-19 safety, Santa Monica-Malibu Classroom Teachers Association, 2021
Extensive outreach via media and direct contacts during COVID-19 pandemic
Discussion panel for screening of 'World War Z', UCLA Evolutionary Med. Fright Night, 2013
Discussion panel for screening of 'Contagion', UCLA Evolutionary Medicine Month, 2012