Steven J. Davis

updated December 20, 2018

University of California, Irvine
Department of Earth System Science
Irvine, CA 92697 USA

sjdavis@uci.edu
+1.650.704.5975
http://www.ess.uci.edu/~sjdavis/

Research Interests

Coupled human and natural systems and sustainable systems analysis, including especially: energy technology and policy; pollution and natural resources embodied in international trade; socio-economic inertia and "lock-in" of environmental problems; assessments of impacts and vulnerabilities; and the complex interactions of energy systems, agriculture, climate change and global ecology

Education

2008 — *PhD, Geological and Environmental Sciences*
Stanford University – Stanford, CA
Advisor: C. Page Chamberlain

2001 — *JD, Virginia School of Law*
University of Virginia – Charlottesville, VA

1998 — *BA, Political Science / Philosophy*
University of Florida – Gainesville, FL
Double major with honors, Phi Beta Kappa

Student and Postdoctoral Advisees

Robert Fofrich, Doctoral Student
Yue Qin, Postdoctoral Scholar
Dan Tong, Postdoctoral Scholar
Chaopeng Hong, Postdoctoral Scholar
Anna LoPresti, Masters Student (Graduated)
Christine Shearer, Former Postdoctoral Scholar (now at CoalSwarm)

Community Service and Outreach

- Journal Referee (#): *Nature (3), Science (2), Science Advances (1), Nature Climate Change (10), Nature Energy (1), Nature Geoscience (1), Nature Sustainability (2), Nature Communications (3), PNAS (3), ES&T (4), Energy & Environmental Science (1), Geophysical Research Letters (2), Energy Policy (4), Ecological Economics (1), Economic Systems Research (1), Climatic Change (3), Interdisciplinary Reviews-Climate Change, Environmental Research Letters (25), Global Biogeochemical Cycles (1), Global Environmental Change (2), Current Opinion in Environmental Sustainability (1), Climate Policy (1), Journal of Industrial Ecology (1), Journal of Cleaner Production (1), Environmental Sociology (1)*
- Contributing Author, Energy Systems Chapter, 2nd State of the Carbon Cycle Report, 2018
- Ad Hoc Reviewer, Department of Energy, National Science Foundation
- U.S. Government Reviewer, IPCC 5th Assessment Report (AR5)
- Editorial Board, *Environmental Research Letters*

Recent and Upcoming Talks and Meetings

- Fall Meeting, American Geophysical Union, December 2018
- University of California, Davis, October 2018
- Energy-Water-Climate Nexus, Cambridge University, September 2018
- Providing Energy for Development in a Carbon-Constrained World, London, August 2018
- Breakthrough Institute Dialogue, June 2018
- University of Southern California, November 2017
- University of California, San Diego, October 2017

Academic Experience

2016-present	*Associate Professor, Earth System Science*
2017-present	*Affiliated Professor, Civil and Environmental Engineering*
2012-2016	*Assistant Professor, Earth System Science* University of California, Irvine – Irvine, CA
Summers *2015-present*	*Visiting Faculty, Center for Earth System Science* Tsinghua University – Beijing, China
2015, 2017	*Young International Distinguished Professor, Institute of Applied Ecology* Chinese Academy of Sciences – Shenyang, China
2010-2012	*Visiting Scholar, Joint Institute for the Study of Atmosphere and Ocean* University of Washington – Seattle, CA
2009-2010	*Guest Investigator, Marine Policy Center* Woods Hole Oceanographic Institute – Woods Hole, MA
2008-2012	*Postdoctoral Scholar, Department of Global Ecology* Carnegie Institution of Washington - Stanford, CA
2004-2008	*Research Assistant, Stable Isotope Biogeochemistry Laboratory* Stanford University – Stanford, CA

Professional Experience

2009-2017	*Co-Founder and Chief Scientist* Near Zero – Seattle, WA
2006-2010	*Co-Founder and Executive Director* The Climate Conservancy – Stanford, CA
2002-2004	*Associate Attorney, Corporate & Securities Group* Gray, Cary, Ware & Freidenrich, LLP – Palo Alto, CA

JOURNAL PUBLICATIONS (* indicates student or postdoc author)

Google Scholar h-index: 35
ORCID 0000-0002-9338-0844
ReseacherID: F-9968-2010

in review

Yuan, M, F Tong, L Duan, JA Dowling, **SJ Davis**, NS Lewis, and K Caldeira. Nuclear power and variable renewables compete in a reliable, cost-optimal electricity system.

Ratledge, N and **SJ Davis**. Under the climate radar.

Tong, D*, Q Zhang, Y Zheng, K Caldeira, C Shearer, C Hong*, Y Qin*, and **SJ Davis**. Committed emissions from existing energy infrastructure jeopardize 1.5 °C climate target.

Brown, PT, J Moreno-Cruz, H Saunders, Z Hausfather, **SJ Davis**, F Tong, and K Caldeira. Global temperature targets under heightened estimates of economic damage from climate change

Qin, Y*, ND Mueller, S Siebert, RB Jackson, A AghaKouchak, JB Zimmerman, J Burney, D Tong*, C Hong*, and **SJ Davis**. Flexibility, intensity, and vulnerability of global water use.

Sergi, B, I Azevedo, **SJ Davis**, and N Muller. Transboundary health damages of air pollution in the U.S.

Cruickshank, C, E Baker, K Jenni, and **SJ Davis**. Comparing in-person and online modes of expert elicitation.

Mazdiyasni, O, A AghaKouchak, F Chiang, A Mehran, H Moftakhari, C Sun, **SJ Davis**, N Mueller, K-L Hsu, and P Nguyen. Empirical teleconnections: A data-driven approach for improving seasonal forecasting.

Britten, GL, DP Tittensor, HK Lotze, C Stock, DR Barneche, FW Primeau, JT Randerson, **SJ Davis**, W Fu, and JK Moore. Multi-century climate change drives a global decline of marine fish stock productivity.

Zhao, Y, K Guan, S Shukla, M Chen, and **SJ Davis**. Changes in cropping patterns during the 2012-2015 Californian mega-drought: a case study of Kern County.

Zhao, H, Q Zhang, **SJ Davis**, X Li, Y Liu, G Geng, M Li, B Zheng, H Huo, L Zhang, DK Henze, and K He. Inequality of household consumption and air pollution deaths in China.

Hong, C*, Q Zhang, Y Zhang, **SJ Davis**, D Tong, Y Zheng, K He, and HJ Schellnhuber. Impacts of climate change on future air quality and human health in China.

2018

64. Woodard, D*, **SJ Davis**, and JT Randerson. Human carbon-cycle feedbacks to global warming may offset natural feedbacks. Proceedings of the National Academy of Sciences. doi: 10.1073/pnas.1805187115

63. Xie, W, W Xiong, J Pan, T Ali, Q Cui, J Meng, ND Mueller, L Erda, and **SJ Davis**. Decreases in global beer supply due to extreme drought and heat. Nature Plants. v. 4, p. 964-973, doi: 10.1038/s41477-018-0263-1

62. **Davis, SJ** and J Taneja. Without a back-up plan Nature Sustainability. v. 1, p. 538-539

61. SR Stephenson, W Wang, CS Zender, H Wang, **SJ Davis**, and PJ Rasch. Climatic responses to future trans-Arctic shipping. Geophysical Research Letters. doi: 10.1029/2018GL078969

60. Guan, D, J Meng, D Reiner, N Zhang, Y Shan, Z Mi, S Shao, Z Liu, and **SJ Davis**. Structural decline in China's CO_2 emissions through transitions in industry and energy systems. Nature Geoscience. v. 11, p. 551-555, doi: 10.1038/s41561-018-0161-1

59. **Davis, SJ**, NS Lewis, M Shaner, S Aggarwal, D Arent, IL Azevedo, SM Benson, T Bradley, J Brouwer, Y-M Chiang, CT Clack, A Cohen, S Doig, J Edmonds, P Fennell, CB Field, B Hannegan, B-M Hodge, MI Hoffert, E Ingersoll, P Jaramillo, KS Lackner, KJ Mach, M Mastrandrea, J Ogden, PF Peterson, DL Sanchez, D Sperling, J Stagner, JE Trancik, C-J Yang, and K Caldeira. Net-zero emissions energy systems. Science, v. 360, p. 1419

58. Shan, Y, D Guan, K Hubacek, B Zheng, **SJ Davis**, L Jia, J Liu, Z Liu, N Fromer, Z Mi, J Meng, D Xiangzheng, Y Li, J Lin, H Schroeder, H Weisz, and HJ Schellnhuber. City-level climate change mitigation in China. Science Advances, v. 4, n. 6, doi: 10.1126/sciadv.aaq0390

57. Meng, J, D Guan, **SJ Davis**, K Feng, J Liu, Z Liu, S Shao, X Wang, Q Zhang, and S Tao. The rise of South-South trade and its effect of global CO_2 emissions. Nature Communications. 1871, doi: 10.1038/s41467-018-04337-y

56. Zheng, B, Q Zhang, **SJ Davis**, P Ciais, C Hong, M Li, F Liu, D Tong, H Li, and K He. Infrastructure shapes differences in the carbon intensities of Chinese cities. Environmental Science & Technology. doi: 10.1021/acs.est.7b05654

55. **SJ Davis**. Predicting unpredictability. Nature Energy, v. 3, p. 257-258

54. Victor, DG, A Abdullah, D Auston, W Brase, K Brown, **SJ Davis**, C Kappel, A Meier, M Modera, RZ Pass, D Phillips, J Sager, D Weil, and the TomKat Natural Gas Exit Strategies Working Group. Turning Paris into Reality at the University of California. Nature Climate Change, v. 8, p. 174-185

53. Shaner, M, **SJ Davis**, NS Lewis, and K Caldeira. Geophysical constraints on the reliability of solar and wind power. Energy and Environmental Science, v. 11, p. 914-925

52. Tong, D*, Q Zhang, **SJ Davis**, F Liu, B Zheng, G Geng, T Xue, M Li, C Hong, Z Lu, DG Streets, D Guan, and K He. Targeted emission reductions from global super-polluting power plant units. Nature Sustainability, v. 1, p. 59-68

2017

51. Caro, D, **SJ Davis**, E Kebreab, and F Mitloehner. Land-use change emissions from soybean feed embodied in Brazilian pork and poultry meat. Journal of Cleaner Production, doi: 10.1016/j.jclepro.2017.11.146

50. Zhao, H, X Li, X Jiang, Q Zhang, J Lin, GP Peters, M Li, G Geng, B Zheng, H Huo, L Zhang, **SJ Davis**, and K He. Effects of atmospheric transport and trade on air pollution deaths in China. Atmospheric Chemistry and Physics, v. 17, p. 10367-10381

49. Madadgar, S, A AghaKouchak, A Farahmand, L Li, and **SJ Davis.** Probabilistic estimates of drought impacts on agricultural production. Geophysical Research Letters, doi: 10.1002/2017GL073606

48. Clack, CT, SA Qvist, J Apt, M Bazilian, A Brandt, K Caldeira, **SJ Davis**, V Diakov, M Handschy, P Hines, P Jaramillo, DM Kammen, JCS Long, MG Morgan, A Reed, V Sivaram, J Sweeney, GR Tynan, DG Victor, JP Weyant, and JF Whitacre. Evaluation of a proposal for reliable low-cost grid power with 100% wind, water, and solar. Proceedings of the National Academy of Sciences, v. 114, n. 26, p. 6722-6727

47. Mazdiyasni, O, A AghaKouchak, **SJ Davis**, S Madadgar, A Mehran, E Ragno, M Sadegh, A Sengupta, S Ghosh, CT Dhanya, and M Niknejad. Increasing probability of mass-mortality during Indian heatwaves. Science Advances, v. 3, n. 6, e1700066

46. Shearer*****, C, R Fofrich*, and **SJ Davis**. Future CO_2 emissions and electricity generation from proposed coal-fired power plants in India. Earth's Future, v. 5, p. 408-416

45. Zhang, Q, X Jiang, D Tong, **SJ Davis**, H Zhao, G Geng, T Feng, B Zheng, Z Lu, DG Streets, J Lin, R Ni, D Guan, M Brauer, RV Martin, H Huo, Z Liu, D Pan, H Kan and K He. Transboundary health impacts of transported global air pollution and international trade. Nature, v. 543, p. 705-709

2016

44. Xi, F, **SJ Davis**, P Ciais, D Crawford-Brown, D Guan, C Pade, T Shi, J Lv, L Ji, L Bing, J Wang, W Wei, K-H Yang, I Galan, Y Zhang and Z Liu. Substantial global carbon uptake by cement carbonation. Nature Geoscience, v. 9, p. 880-883

43. Jones, CD, P Ciais, **SJ Davis**, P Friedlingstein, T Gasser, GP Peters, J Rogelj, DP van Vuuren, JG Canadell, A Cowie, RB Jackson, M Jonas, E Kriegler, E Littleton, JA Lowe, J Milne, G Shrestha, P Smith, A Torvanger and A Wiltshire. Simulating the Earth system response to negative emissions. Environmental Research Letters, v. 11, p. 095012 (*ERL Highlight of 2016*)

42. Lin, J, D Tong, **SJ Davis**, R Ni, X Tan, D Pan, H Zhao, Z Lu, DG Streets, T Feng, Q Zhang, Y Yan, Y Hu, J Li, Z Liu, K He, Y Huang and D Guan. Globalized climate forcing of aerosols via international trade. Nature Geoscience, v. 9, p. 790-794

41. Seto, KC, **SJ Davis**, RB Mitchell, E Stokes, G Unruh, D Urge-Vorsatz. Carbon lock-In: Types, causes, and policy implications. Annual Reviews of Environment and Resources, v. 41, p. 19.1-19.28

40. Shearer*****, C, M West, K Caldeira and **SJ Davis**. Quantifying expert consensus against the existence of a secret, large-scale atmospheric spraying program. Environmental Research Letters, v. 11, p. 084011 (*ERL Highlight of 2016*)

39. **Davis, SJ** and NS Diffenbaugh. Dislocated interests and climate change. Environmental Research Letters, v. 11, p. 034009

38. Feng, K, **SJ Davis**, L Sun and K Hubacek. Correspondence: Reply to 'Reassessing the contribution of natural gas to US CO_2 emission reductions since 2007.' Nature Communications, v. 7, p. 10693

37. Smith, P, **SJ Davis**, F Creutzig, S Fuss, J Minx, B Gabrielle, E Kato, RB Jackson, A Cowie, E Kriegler, D van Vuuren, J Rogelj, P Ciais, J Milne, JP Canadell, D McCollum, V Krey, G Shrestha, P Friedlingstein, T Gasser, A Grübler, WK Heidug, M Jonas, CD Jones, F Kraxner, E Littleton, J Lowe, JR Moreira, N Nakicenovic, M Obersteiner, A Patwardhan, G Peters, M Rogner, E Rubin, A Sharifi, A Torvanger, Y Yamagata, J Edmonds and C Yongsung. Biophysical and economic limits to negative CO_2 emissions. Nature Climate Change, v. 6, p. 42-50 **Cited >300 times**

2015

36. Hannam, P, Z Liao, **SJ Davis**, and M Oppenheimer. Developing country finance in a post-2020 global climate agreement. Nature Climate Change, v. 5, p. 983-987

35. Liu, Z, **SJ Davis**, K Feng, K Hubacek, S Liang, and LD Anadon. Targeted opportunities to address the climate-trade dilemma in China. Nature Climate Change, v. 6, p. 201-206

34. Rozenberg, J, **SJ Davis**, U Narloch, S Hallegatte. Climate constraints on the carbon intensity of economic growth. Environmental Research Letters, v. 10, p. 095006

33. LoPresti*****, A, A Charland, D Woodard, JT Randerson, NS Diffenbaugh, and **SJ Davis**. Rate and velocity of climate change caused by cumulative carbon emissions. Environmental Research Letters, v. 10, p. 095001

32. Liu, Z, D Guan, W Wei, **SJ Davis**, P Ciais, J Bai, S Peng, Q Zhang, K Hubacek, G Marland, R Andres, DC Brown, J Lin, H Zhao, C Hong, TA Boden, K Feng, G Peters, F Xi, J Liu, Y Li, Y Zhao, N Zeng, and K He. Reduced carbon emission estimates from fossil fuel combustion and cement production in China. Nature, v. 524, p. 335-338 **Cited >100 times**

31. Kimball, S, M Lulow, Q Sorenson, K Balazs, Y Fang, **SJ Davis**, and T Huxman. Cost-effective ecological restoration. Restoration Ecology, doi: 10.1111/rec.12261

30. Pongratz, J, E Hansis, and **SJ Davis**. Relevance of methodological choices for accounting of land use change carbon fluxes. Global Biogeochemical Cycles, v. 29, p. 1230-1246.

29. Feng, K, **SJ Davis**, L Sun, and K Hubacek. Drivers of the US CO_2 emissions 1997-2013. Nature Communications, v. 6, p. 7714.

28. Zhao, HY, Q Zhang, **SJ Davis**, DB Guan, Z Liu, H Huo, JT Lin, WD Liu, and KB He. Assessment of China's virtual air pollution transport embodied in trade by a consumption-based emission inventory. Atmospheric Chemistry and Physics, v. 15, p. 5443-5456

27. Liu, J, H Mooney, V Hull, **SJ Davis**, J Gaskell, T Hertel, J Lubchenco, KC Seto, P Gleick, C Kremen, and S Li. Systems integration for global sustainability. Science, v. 347, p. 963 **Cited >300 times**

2014

26. Caro, D, A LoPresti*****, **SJ Davis**, S Bastianoni, and K Caldeira. CH_4 and N_2O emissions embodied in international trade of meat. Environmental Research Letters, v. 9, p. 114005

25. **Davis, SJ** and C Shearer*. A crack in the natural-gas bridge. Nature, v. 514, p. 436-437

24. Shearer*****, C, J Bistline, M Inman, and **SJ Davis**. The effect of natural gas supply on US renewable energy and CO_2 emissions. Environmental Research Letters, v. 9, p. 094008 (*ERL Highlight of 2014*)

23. Raupach, MR, **SJ Davis**, GP Peters, RM Andrew, JG Canadell, P Ciais, P Friedlingstein, F Jotzo, DP van Vuuren, and C Le Quéré. Sharing a quota on cumulative carbon emissions. Nature Climate Change, v. 4, p. 873-879 **Cited >100 times**

22. **Davis, SJ** and RH Socolow. Commitment accounting of CO_2 emissions. Environmental Research Letters, v. 9, p. 084018 (*ERL Highlight of 2014* and selected in 2016 as one of ERL's 10th Anniversary *"Ten Milestone Articles"*)

21. **Davis, SJ**, J Burney, J Pongratz, and K Caldeira. Methods for attributing land-use emissions to products. Carbon Management, v. 5, n. 2, p. 233-245

20. Caro, D, **SJ Davis**, S Bastianoni, and K Caldeira. Global and regional trends in greenhouse gas emissions from livestock. Climatic Change, v. 126, p. 203-216

19. Guan, D, J Lin, **SJ Davis**, D Pan, K He, C Wang, DJ Wuebbles, DG Streets, and Q Zhang. Reply to Lopez et al.: Consumption-based accounting helps mitigate global air pollution. Proceedings of the National Academy of Sciences, v. 111, n. 26, p. E2631

18. Lin, J, D Pan, **SJ Davis**, Y Kuang, Q Zhang, K He, C Wang, D Streets, and D Guan. China's international trade and air pollution in the United States. Proceedings of the National Academy of Sciences, v. 111, n. 5, p. 1736-1741 (*Winner of 2014 Cozzarelli Prize*) **Cited >200 times**

2013

17. Andrew, R, **SJ Davis**, and GP Peters. Climate policy and dependence on traded carbon. Environmental Research Letters, v. 8, no. 3, p. 034011

16. Feng, K, **SJ Davis**, X Li, D Guan, L Sun, Z Liu, and K Hubacek. Outsourcing CO_2 within China. Proceedings of the National Academy of Sciences, v. 110, p. 11654-11659 **Cited >200 times**

15. Haverd, V., MR Raupach, PR Briggs, JG Canadell, **SJ Davis**, RM Law, CP Meyer, GP Peters, C Pickett-Heaps, and B Sherman. The Australian terrestrial carbon budget. Biogeosciences, v. 10, p. 851-869

14. **Davis, SJ**, L Cao, K Caldeira, and MI Hoffert. Rethinking wedges. Environmental Research Letters, v. 8, n. 1, p. 011001

2012

13. Peters, GP, **SJ Davis**, and R Andrews. A synthesis of carbon in international trade. Biogeosciences, v. 9, p. 3247-3276 **Cited >100 times**

12. Dickinson, WR, TF Lawton, M Pecha, **SJ Davis**, GE Gehrels, and RA Young. Provenance of the Paleogene Colton Formation (Uinta basin) and Cretaceous–Paleogene provenance evolution in the Utah foreland: Evidence from U-Pb ages of detrital zircons, paleocurrent trends, and sandstone petrofacies. Geosphere, v. 8, p. 854-880

11. Andres, RJ, TA Boden, F-M Breon, P Ciais, **SJ Davis**, D Erickson, JS Gregg, A Jacobson, G Marland, J Miller, T Oda, JGJ Olivier, MR Raupach, P Rayner, and K Treanton. A synthesis of carbon dioxide emissions from fossil-fuel combustion. Biogeosciences, v. 9, p. 1845-1871 **Cited >100 times**

10. Chamberlain, CP, HT Mix, A Mulch, MT Hren, ML Kent-Corson, **SJ Davis**, TW Horton, and SA Graham. The Cenozoic climatic and topographic evolution of the western North American Cordillera. American Journal of Science, v. 312, p. 213-262

2011

9. **Davis, SJ**, GP Peters, and K Caldeira. The supply chain of CO_2 emissions. Proceedings of the National Academy of Sciences, v. 108, n. 45, p. 18554-18559. See also, http://supplychainCO2.stanford.edu/ **Cited >300 times**

8. Caldeira, K and **SJ Davis**. Accounting for carbon dioxide emissions: A matter of time. Proceedings of the National Academy of Sciences, v. 108, n. 21, p. 8533-8534

2010

7. **Davis, SJ**, D Matthews, and K Caldeira. Future CO_2 emissions and climate change from existing energy infrastructure. Science, v. 329, p. 1330-1335 **Cited >500 times**

6. **Davis, SJ**, WR Dickinson, GE Gehrels, JE Spencer, TF Lawton, and AR Carroll. The Paleogene California River: Evidence of Mojave-Uinta paleodrainage from U-Pb ages of detrital zircons. Geology, v. 38, p. 931-934

5. Burney, J, **SJ Davis**, and DB Lobell. Greenhouse gas mitigation by agricultural intensification. Proceedings of the National Academy of Sciences, v. 107, n. 26, p. 12052-12057 **Cited >700 times**

4. **Davis, SJ** and K Caldeira. Consumption-based accounting of CO_2 emissions. Proceedings of the National Academy of Sciences, v. 107, n. 12, p. 5687-5693 **Cited >1.1k times**

2009

3. **Davis, SJ**, HT Mix, BA Wiegand, AR Carroll, and CP Chamberlain. Synorogenic evolution of large-scale drainage patterns: Isotope paleohydrology of sequential Laramide basins. American Journal of Science, v. 309, p. 549-602

2. **Davis, SJ**, A Mulch, AR Carroll, TW Horton, and CP Chamberlain. Paleogene Landscape Evolution of the central North American Cordillera: Developing topography and hydrology in the Laramide Foreland. GSA Bulletin, v. 121, p. 100-116

1. **Davis, SJ**, BA Wiegand, AR Carroll, and CP Chamberlain. The effect of drainage reorganization on paleoaltimetry studies: An example from the Paleogene Laramide Foreland. Earth and Planetary Science Letters, v. 275, p. 258-268

ONLINE PUBLICATIONS

2016 Inman, M, DL Sanchez, MD Mastrandrea, **SJ Davis**, and K Fries. An Unprecedented Push for Low-carbon Energy Innovation. A report published by Near Zero: http://www.nearzero.org/reports/mission-innovation

2014 Shearer, C, M Inman, and **SJ Davis**. Keystone XL: The Climate Impact: An Expert Elicitation. A report published by Near Zero: http://www.nearzero.org/reports/KXL/

2012 Inman, M and **SJ Davis**. How Low Will Solar Photovoltaic Prices Go?: An Expert Discussion. A report published by Near Zero: http://www.nearzero.org/reports/pv-learning/

Inman, M and **SJ Davis**. Energy High in the Sky: Expert Perspectives on Airborne Wind Energy Systems. A report published by Near Zero: http://www.nearzero.org/reports/AirborneWind/

2011 **Davis, SJ**. Department of Energy Funding Priorities: An Expert Discussion. A report published by Near Zero: http://www.nearzero.org/reports/doe-priorities

2009 **Davis, SJ**, Reducing the Carbon Footprint of Fat Tire® Amber Ale by Changing Agricultural Practices: Potential and Limitations. A report by The Climate Conservancy.

2008 **Davis, SJ**. The Carbon Footprint of Earthbound Farm® Mixed Baby Greens. A report by The Climate Conservancy.

Davis, SJ. The Carbon Footprint of Fat Tire® Amber Ale. A report by The Climate Conservancy: http://www.ess.uci.edu/~sjdavis/pubs/Fat_Tire_2008.pdf

2007 **Davis, SJ**, Toward a Product-Level Standard: Life Cycle Analysis of Greenhouse Gas Emissions. The London Accord.

PROFESSIONAL AFFILIATIONS

- State Bar of California (*inactive status*)
- American Association for the Advancement of Science
- American Geophysical Union

TEACHING

- ESS 70A Sustainable Energy Systems
- ESS 158 Sustainable Systems Analysis
- ESS 100 Climate Solutions (Bending the Curve)
- ESS 192 Careers in Earth System Science
- ESS 178 Solving the Carbon-Climate-Energy Problem (no longer taught)
- ESS 60C Global Environmental Issues (no longer taught)

AWARDS AND GRANTS

2018 James B. Macelwane Medal (American Geophysical Union), Conferred AGU Fellow

2017 Ecological Society of America Sustainability Science Award http://www.esa.org/esablog/meetings/esa-2017-annual-meeting/jianguo-liu-2017-sustainability-science-award/

2016 NSF/USDA Innovations at the Nexus of Food, Energy and Water Systems (INFEWS), "Monitoring and managing food, energy, and water systems under stress: The California crucible." (PI: **SJ Davis**), *$2.88M total, $1.88M to UC Irvine:* http://www.nsf.gov/awardsearch/showAward?AWD_ID=1639318

TomKat UC Carbon Neutrality Project, "Reaching the other side of the bridge: Challenges in eliminating natural gas as an energy source" (PI: **SJ Davis**), *$55,000:* https://www.nceas.ucsb.edu/projects/12746#

UC Irvine award for Outstanding Contributions to Undergraduate Education

Alfred P. Sloan Foundation, Does the elicitation mode matter? Comparing different methods for eliciting expert judgment. (PI: Erin Baker, UMass Amherst), *$20,000*

2015 Gordon & Betty Moore Foundation, Funding for Workshop: "Critical Barriers to Progress in Sustainability Science," (PI: **SJ Davis**), *$30,000*

PNAS Cozzarelli Prize

2014 Research Support from Near Zero, (PI: **SJ Davis**), *$100,000*

Research Support from Aspen Global Change Institute, (PI: **SJ Davis**), *$11,000*

2013 NSF Coupled Human and Natural Systems (CHANS) Fellowship*, $1,500*

2012 Research Support from Near Zero, (PI: **SJ Davis**), *$68,276*

SELECTED MEDIA COVERAGE

2018 Scientific American, "Trouble Brewing? Climate Change Closes In on Beer Drinkers," Angus Chen: https://goo.gl/8fGP3L

Associated Press, "Global warming to leave us crying in our costlier beer," Seth Borenstein: https://goo.gl/zN9J2r

New York Times, "You've Heard of Outsourced Jobs, but Outsourced Pollution? It's Real, and Tough to Tally Up," Brad Plumer, https://goo.gl/oMqVeH

MIT Technology Review, "At this rate, it's going to take nearly 400 years to transform the energy system," https://goo.gl/gMkmPh

2017 New York Times, "India's Rising Temperatures Are Already Deadly, Study Shows,": https://goo.gl/X8Jvlv

Carbon Brief, "India's planned coal plants could 'single-handedly jeopardise' 1.5°C target," Jocelyn Timperly, https://goo.gl/93EcGG

Scientific American, "India's Energy Landscape Is Rapidly Changing," Kavya Balaraman: https://goo.gl/lcxPSR

The Economist, "Airborne particles cause more than 3m early deaths a year,": https://goo.gl/Poiyk8

Associated Press, "Dirty air from global trade kills at home and abroad," Seth Borenstein: https://goo.gl/vdK4v6

USA Today,"How your cheap Chinese-made products may be killing thousands in China," Traci Watson: https://goo.gl/9Xp6sK

New Scientist, "Western demand for goods from China is killing 100,000 a year," Chelsea Whyte: https://goo.gl/t06mbE

The Guardian, "Thousands of pollution deaths worldwide linked to western consumers – study," Hannah Devlin: https://goo.gl/atp5nV

2016 Architect Magazine, "Concrete as a Carbon Sink?," Blaine Brownell: https://goo.gl/BMiV6B

Science, "Cement soaks up greenhouse gases," Warren Cornwall: https://goo.gl/h6UmNf

New York Times, “Today’s Energy System Could Blow Paris Climate Goals,” Karl Ritter: https://goo.gl/YyGFNx

New York Times, “Scientists Just Say No to ‘Chemtrails’ Conspiracy Theory,” Henry Fountain: http://goo.gl/tn2sll

Forbes, “Scientists Published An Article On ‘Chemtrails’ (They Aren’t Real),” David DiSalvo: http://goo.gl/jO2mSq

Motherboard (Vice), “Annoyed Scientists Publish Study on Chemtrail Conspiracy Theories,” Sarah Emerson: http://goo.gl/IUtgFQ

USA Today, “Scientists disprove airplane ‘chemtrail’ theory,” Mary Bowerman: http://goo.gl/M5hE9q

NPR, *Marketplace*, “Can you grow the economy without adding pollution?” Scott Tong: http://goo.gl/2BPcb5

2015 Climate Central, “Geoengineering a ‘Risky’ Bet, Scientists Warn Negotiators” John Upton: http://goo.gl/KWumMV

NPR, *Marketplace,* “Shell pulls out of Arctic. For how long?”: http://goo.gl/wswu1O

Scientific American, “Cheap Goods from China Have High Carbon Cost” Christopher Intagliata: http://goo.gl/kSCbP0

Sinosphere (New York Times blog), “China’s Exports Are Closely Linked to Its Emissions,” Chris Buckley: http://goo.gl/74Xqx8

New York Times, “China’s Carbon Dioxide Emissions May Have Been Overstated by More Than 10%,” Chris Buckley: http://goo.gl/b4CqmP

Scientific American, “How Far Does Obama's Clean Power Plan Go in Slowing Climate Change?” David Biello: http://goo.gl/TTrvuG

National Geographic, “Climate Mission Impossible: Scientists Say Fossil Fuels Must Go Untapped,” Christina Nunez: http://goo.gl/le7JvT

2014 Scientific American, “Natural Gas Offers Little Benefit in Fight against Global Warming,” Gayathri Vaidyanathan: http://goo.gl/w8LWOQ

Science, “Abundant natural gas may do little to reduce U.S. emissions, study suggests,” Aleszu Bajak: http://goo.gl/6A62g0

The Washington Post, “Natural gas won’t save us from global warming, study confirms,” Max Ehrenfrund: http://goo.gl/4tHZYf

National Geographic, “New Reports Offer Clearest Picture Yet of Rising Greenhouse Gas Emissions,” Brian Clark Howard: http://goo.gl/CRpdXw

Dot Earth (New York Times blog), “Accounting for the Expanding Carbon Shadow From Coal-Burning Plants,” Andrew Revkin: http://nyti.ms/1tHvhqt

National Geographic, “Tons of emissions from power plants are already locked in, study says,” Joe Eaton: http://goo.gl/CrGIVt

Science, “Time to focus on committed, not current, carbon emissions, study argues,” Eli Kintisch: http://goo.gl/mYGuVG

Washington Post, “Beef pollutes more than pork, poultry, study says,” Seth Borenstein: http://wapo.st/1lmPXgA

Los Angeles Times, “Climate scientists have a beef with beef,” Geoffrey Mohan: http://fw.to/Sb7iSmR

Wall Street Journal, “U.S. Consumers Contribute, Not a Little, to Chinese Air Pollution,” Brian Spegele, http://on.wsj.com/1fansUR

Washington Post, “Study: Pollution from Chinese factories is harming air quality on U.S. West Coast,” William Wan: http://wapo.st/1eNDP3P

NPR, *Marketplace*, “American pollution: Made in China”: http://bit.ly/1kSNaj0

The Atlantic, “How the Western World Enables China's Air Pollution,” John Metcalfe: http://bit.ly/1jDhElQ

Los Angeles Times, “China's industry exporting air pollution to U.S., study says,” Tony Barboza: http://lat.ms/1h2YdRH

2013 Washington Post, “China is testing out cap-and-trade—but will it actually work?” Brad Plumer: http://wapo.st/1nL7wbb

Science, “Climate Study Highlights Wedge Issue,” v. 339, no. 6116, pp. 128-129: http://www.sciencemag.org/content/339/6116/128

Nature Climate Change, “Policy: Carbon emissions in China’s trade,” v. 3, pp. 703-704: http://bit.ly/Mamrzi

The Guardian, “China’s rich provinces outsource emissions to less developed areas,” Suzanne Goldenberg: http://bit.ly/1j95hy6

BBC, ”China outsources carbon emissions to poorer areas,” Melissa Hogenboom: http://bbc.in/1mrM0Nd

VICE, “Human Society Must Reduce Carbon Emissions to ‘Near Zero’ by 2060 or Face Catastrophic Climate Change,” Brian Merchant: http://bit.ly/1gffEOh

2012 NPR, *EarthFix*, “Counting Up Coal’s CO_2,” Ashley Ahearn: http://bit.ly/1jDRhfA

2011 The Guardian, “Groundbreaking data tracks carbon emissions back to their source,” Duncan Clark: http://bit.ly/1ht0M3Z

BBC, “Carbon: What price simplicity?,” Richard Black: http://bbc.in/1cndoW2

Nature Climate Change, “Attributing carbon emissions,” v. 1, p. 442: http://bit.ly/1e59kpU

2010 New York Times, “Counting ‘Outsourced’ Greenhouse Gas Emissions,” John Broder: http://nyti.ms/1gfg479

The Economist**,** “Trading Down: Industry’s move from the rich to the poor world is confusing the carbon accounts,” http://econ.st/1j948qd

NPR, *All Things Considered***,** “For Developing Nations, Exports Boost CO_2 Emissions,” Richard Harris: http://n.pr/1feoVbd

TIME Magazine, “When Goods Get Traded, Who Pays for the CO2?” Bryan Walsh: http://ti.me/1gSvrob

Wired Magazine, “Carbon Emissions Not at Doomsday Level…Yet,” Lisa Grossman: http://wrd.cm/1m6Wo9p

TIME Magazine “Industrial Farming Slows Climate Change?” Bryan Walsh: http://ti.me/1bj6X7Y

Nature, “Intensive farming may ease climate change,” v. 465, p.853: http://bit.ly/N7jiRM