

# Kevin Robert Gurney

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## EDUCATION

Ph.D. 2004 – Ecology, Colorado State University  
M.P.P 1996 – Public Policy, University of California, Berkeley  
S.M. 1990 – Meteorology, Massachusetts Institute of Technology  
B.A. 1986 – Environmental Physics, University of California, Berkeley

## PROFESSIONAL EXPERIENCE

Associate Professor, Honors Faculty, School of Life Sciences, Arizona State University, Aug 2010 – present  
Affiliated Faculty, School of Geographical Sciences and Urban Planning, Mar 2013 - present  
Graduate Faculty, School of Sustainability, Arizona State University, Jan 2013 - present  
Senior Sustainability Scientist, Global Institute of Sustainability, Arizona State Univ, Aug 2010 – present  
Associate Professor, Dept of Earth and Atmos Sci & Dept of Agronomy, Purdue University, Aug 2009 – Aug 2010  
Assistant Professor, Dept of Earth and Atmos Sci & Dept of Agronomy, Purdue University, Aug 2005 – Aug 2009  
Associate Director, Purdue Climate Change Research Center, Purdue University, Aug 2005 – Aug 2008  
Research Scientist I, Department of Atmospheric Science, Colorado State University, July 1998 – August 2005  
Staff Research Associate, Bren School of Env. Sci and Mngmnt, Univ of Ca, Santa Barbara, Apr 97 – June 98  
Senior Scientist, Institute for Energy and Environmental Research, September 1992 – January 1997  
Research Associate, Atmospheric and Environmental Research, Inc., February 1992 – September 1992  
Research Associate, Tellus Institute, February 1990 - October 1991  
Research Assistant, National Oceanic and Atmospheric Administration, Summer 1988  
Research Intern, Environmental Sciences Division, Lawrence Livermore National Laboratory, Nov 1986 - Sept 1987  
Student Assistant, Atmospheric Aerosol Research Group, Lawrence Berkeley National Lab, Feb 1985-Oct 1986

## HONORS AND AWARDS

Nominated for AGU's Macelwane Medal 2014  
Sigma Xi Young Investigator's Award 2010  
NSF CAREER Award 2009  
IPCC contributing author and reviewer (IPCC was organizational co-recipient of the 2007 Nobel Peace Prize)  
Named 2007 "Air Conservationist of the Year", from the Indiana Wildlife Federation

## UNIVERSITY SERVICE

Graduate Degree Program in Ecology executive committee 1999-2000  
Graduate Degree Program in Ecology, Front Range Student Ecology Symposium Chairman 1999-2000  
Undergraduate programs committee: 2013 - present  
Safety committee: 2010 – 2013  
Diversity Committee, Purdue University, Aug 2005 – Aug 2010

## OTHER NATIONAL OR INTERNATIONAL PROFESSIONAL SERVICE

Chapter co-lead State of the Carbon Cycle Report 2, June 2016 - present  
Expert Witness for state of Minnesota on utilization of the social cost of carbon: 2015  
North American Carbon Program All-investigators Meeting steering committee member, 2015  
Carbon cycle science steering working group (CCSWG) to the Carbon science interagency working group (CCIWG)  
Global Carbon Program Science Steering Committee: 2008 - 2013  
NASA review panel member, Instrument Incubator Program 2001  
Larimer County Environmental Advisory Board 2000-2002

NOAA Review Panel, Global Carbon Cycle Program 2005  
NOAA Global Carbon Cycle Scientific Steering Committee, 2006 - present  
NASA Review Panel, New Investigator Program, April 2006  
*Carbon Management*, Editorial Board, 2009 - present  
MCI Task Force Committee member, 2005 – present  
*Carbon Balance and Management*, Editorial Board member, 2006 - present  
Carbon Dioxide Information Analysis Center, external advisory committee member, 2007 - present  
United Nations Framework Convention on Climate Change attendee/advisor since 1996

## PROFESSIONAL SOCIETY

American Geophysical Union member since 1990  
Sigma Xi member since 2000  
Phi Kappa Phi lifetime member since 2004  
Ecological Society of America member since 2004

## PEER-REVIEWED PUBLICATIONS

### 2017

105. Mendoza, D., J. Lin, **K.R. Gurney**, D. Mallia, D. Catharine, L. Mitchell, R. Bares, E. Crosman, S. Hoch, R. Patarasuk, D. O’Keeffe, Y. Song, J. Huang, P. Rao, M. Buchert, P.E. Dennison, J. Reynolds, J.R. Ehleringer (2017) Comparing a high resolution urban CO<sub>2</sub> emission inventory against atmospheric observations in Salt Lake City: a parameter sensitivity analysis, *in preparation*.
104. Bowman, K., J. Liu, A. Bloom, N. Parazoo, M. Lee, Z. Jiang, D. Menemenlis, M. Gierach, G. Collatz, **K.R. Gurney** (2016) Global and Brazilian carbon response to El Nino Modoki 2011-2010, *accepted at Earth and Space Science*
103. Cui, X., S. Newman, X. Xu, A.E. Andrews, J. Miller, S. Lehman, Y.-K. Hsu, S. Jeong, J. Zhang, C. Priest, M. Campos-Pineda, **K.R. Gurney**, M.L. Fischer, *under review at Journal of Geophysical Research - Atmosphere*
102. Schimel, D., B. Moore, P. Sellers et al. (2017) Observing the Carbon-Climate System, *under review at the Bulletin of the American Meteorological Society*
101. Mitchell, L., J.C. Lin, D.R. Bowling, D.E. Pataki, C. Strong, A.J. Schauer, R. Bares, S.E. Bush, B.B. Stephens, D. Mendoza, D. Mallia, L. Holland, **K.R. Gurney**, J.R. Ehleringer (2017) Long-term urban carbon dioxide observations reveal spatial and temporal dynamics related to urban characteristics and growth, submitted to the *Proceedings of the National Academy of Sciences*.
100. Liu, J., K. Bowman, D. Schimel, N. Parazoo, Z. Jiang, M. Lee, A. Bloom, D. Wunch, **K.R. Gurney**, D. Menemenlis, M. Gierach, D. Crisp, A. Eldering (2016) Contrasting carbon cycle responses of tropical continents to the 2015-16 El Nino, *accepted to Science*.
99. Cambaliza, M.O.L., P.B. Shepson, J. Bogner, D.R. Caulton, B. Stirm, C. Sweeney, S.A. Montzka, K.R. Gurney, K. Spokas, O.E. Salmon, T.N. Lavoie, A. Hendricks, K. Mays, J. Turnbull, B.R. Miller, T. Lauvaux, K. Davis, A. Karion, B. Moser, C. Miller, C. Obermeyer, J. Whetstone, K. Prasad, N. Miles, S. Richardson (2017) Quantification and source apportionment of the methane emission flux from the city of Indianapolis, *Elem. Sci. Anth.*, <https://www.elementalscience.org/articles/10.12952/journal.elementa.000037/>
98. Deng, A., T. Lauvaux, K.J. Davis, B.J. Gaudet, N. Miles, S.J. Richardson, K. Wu, D.P. Sarmiento, R.M. Hardesty, T.A. Bonin, W.A. Brewer, **K.R. Gurney** (2017) Toward reduced transport errors in a high resolution urban CO<sub>2</sub> inversion system, *Elem. Sci. Anth.*, <https://www.elementalscience.org/articles/10.1525/elementa.133/>
97. Liang, J., **K.R. Gurney**, D. O’Keeffe, M. Hutchins, R. Patarasuk, J. Huang, Y. Song, P. Rao (2017) [Optimizing the spatial resolution for urban CO<sub>2</sub> flux studies using the Shannon entropy](https://doi.org/10.3390/atmos8050090), *Atmosphere*, **8**(90), doi:10.3390/atmos8050090
96. Oda, T., T. Lauvaux, D. Lu, J. Tang, P. Rao, N.L. Miles, S.J. Richardson, **K.R. Gurney**, K.J. Davis (2017) On the impact of the granularity of space-based urban CO<sub>2</sub> emissions in urban atmospheric inversions: A case study for Indianapolis, IN, *Elem. Sci. Anth.*, <https://www.elementalscience.org/articles/10.1525/elementa.146/>
95. Hedalius, J.K., S. Feng, C.M. Roehl, D. Wunch, P.W. Hillyard, J.R. Podolske, L.T. Iraci, R. Patarasuk, P. Rao, D. O’Keeffe, **K.R. Gurney**, R. Lauvaux, P. Wennberg (2017) Emissions and topography effects on column CO<sub>2</sub> (XCO<sub>2</sub>) variation, with a focus on the Southern California Megacity, *JGR-Atmospheres*, doi:10.1002/2017JD026455.
94. Davis, K.J., A. Deng, T. Lauvaux, N.L. Miles, S.J. Richardson, D. Sarmiento, **K.R. Gurney**, R.M. Hardesty, A. Brewer, P.B. Shepson, M.O. Cambaliza, C. Sweeney, J. Turnbull, J. Whetstone, A. Karion (2017) The Indianapolis Flux Experiment (INFLUX): A test-bed for developing anthropogenic greenhouse gas measurements, *Elem Sci Anth*, **5**(21), <https://www.elementalscience.org/article/10.1525/elementa.188/>

93. Miles, N., S.J. Richardson, T. Lauvaux, K.J. Davis, A. Deng, J. Turnbull, A. Karion, C. Sweeney, **K.R. Gurney**, R. Patarasuk, I. Razlivanov, M.O. Cambaliza, P.B. Shepson (2017) [Quantification of urban atmospheric boundary layer greenhouse gas dry mole fraction enhancements: Results from the Indianapolis Flux Experiment \(INFLUX\)](#), *Elem Sci Anth*. 2017;5:27. DOI: <http://doi.org/10.1525/elementa.127>
92. Nathan, B., T. Lauvaux, J. Turnbull, C. Sweeney, **K.R. Gurney** (2017) Investigations Into the Use of Multi-Species Measurements for Source Apportionment of the Indianapolis Fossil Fuel CO<sub>2</sub> Signal, *accepted to Elementa*
91. Heimbürger, A.M.F., P.B. Shepson, B.H. Stirm, C. Susdorf, J. Turnbull, M.O.L. Cambaliza, O.E. Salmon, A.-E.M. Kerlo<sup>1</sup>, T.N. Lavoie, R.M. Harvey, K.J. Davis, T. Lauvaux, A. Karion, C. Sweeney, W.A. Brewer, R.M. Hardesty, **K.R. Gurney**, J. Whetstone (2017) Precision Assessment for the Aircraft Mass Balance Method for Measurement of Urban Greenhouse Gas Emission Rates, *Elem Sci Anth*, **5**(26). <https://doi.org/10.1525/elementa.134>
90. Wu, K., T. Lauvaux, K.J. Davis, A. Deng, I. Lopez Coto, **K.R. Gurney**, R. Patarasuk (2017) Joint inverse estimation of fossil fuel and biogenic CO<sub>2</sub> fluxes in an urban environment: An observing system simulation experiment, *accepted to Elementa*
89. **Gurney, K.R.**, J. Liang, R. Patarasuk, D. O’Keeffe, M. Hutchins, T. Lauvaux, J.C. Turnbull, P.B. Shepson, K.J. Davis, J. Whetstone (2017) Reconciling the differences between a bottom-up and inverse-estimated FFCO<sub>2</sub> emissions estimate in a large US urban area, *Elem Sci Anth*. 2017;5:44. DOI: <http://doi.org/10.1525/elementa.137>.
88. Huang, J. and **K.R. Gurney** (2017) Impact of climate change on U.S. building energy demand: Financial implications for consumers and energy suppliers, *Energy and Buildings*, **139**, 747-754.
87. Huang, J. and **K.R. Gurney** (2017) Large increases in U.S. peak electricity demand events due to more frequent, intense heat waves, in preparation for the *Proceedings of the National Academy of Sciences*.
86. Rao, P., **K.R. Gurney**, R. Patarasuk, Y. Song, C.E. Miller, R. Duren, A. Eldering (2017) [Spatio-temporal variations in on-road CO<sub>2</sub> emissions in the Los Angeles Megacity](#), *AIMS Geosci*, **3**(2), 239-267
85. Fischer, M.L., N. Parazoo, K. Brophy, X. Cui, S. Jeong, J. Liu, R. Keeling, T.E. Taylor, **K.R. Gurney**, T. Oda, H. Graven (2017) Simulating Estimation of California Fossil Fuel and Biosphere Carbon Dioxide Exchanges Combining In-situ Tower and Satellite Column Observations, *J. Geophys. Res.*, 10.1002/2016JD025617

## 2016

84. **Gurney, K.R.**, J. Huang and K. Coltin (2016) [Bias present in US federal agency power plant CO<sub>2</sub> emissions data and implications for the US clean power plan](#), *Env. Res. Lett.*, **11**, 064005, doi: 10.1088/1748-9326/11/6/064005.
83. Huang, J. and **K.R. Gurney** (2016) [Impacts of climate change on US building energy consumption: importance of building type, building technology, and space-time](#), *Energy*, **111**, 137-153.
82. Huang, J. and **K.R. Gurney** (2016) [The hidden spatiotemporal vulnerability of US building energy demand to climate change](#), *Climatic Change*, doi:10.1007/s10584-016-1681-6.
81. Lauvaux, T., N.L. Miles, A. Deng, S.J. Richardson, M.O. Cambaliza, K.J. Davis, B. Gaudet, **K.R. Gurney**, J. Huang, D. O’Keeffe, Y. Song, A. Karion, T. Oda, R. Patarasuk, D. Sarmiento, P. Shepson, C. Sweeney, J. Turnbull, and K. Wu (2016) [High resolution atmospheric inversion of urban CO<sub>2</sub> emissions during the dormant season of the Indianapolis Flux Experiment \(INFLUX\)](#), *Journal of Geophysical Research*, **121**, doi:10.1002/2015JD024473
80. Newman, S., X. Xu, **K.R. Gurney**, Y.-K. Hsu, K.-F. Li, X. Jiang, R. Keeling, S. Feng, D. O’Keeffe, R. Patarasuk, K.W. Wong, P. Rao, M.L. Fischer, and Y.L. Yung (2016) [Toward consistency between trends in bottom-up CO<sub>2</sub> emissions top-down atmospheric measurements in the Los Angeles megacity](#), *Atmos. Chem. Phys.*, **16**, 3843-3863.
79. Patarasuk, P., **K.R. Gurney**, D. O’Keeffe, Y. Song, J. Huang, P. Rao, M. Buchert, J. Lin, D. Mendoza, J.R. Ehleringer (2016) [Application of high-resolution fossil fuel CO<sub>2</sub> emissions quantification to urban climate policy in Salt Lake County, Utah USA](#), *Urban Ecosystems*, **19**(3), 1013-1039. DOI 10.1007/s11252-016-0553-1
78. Tian, H., C. Lu, P. Ciais, A.M. Michalak, J.G. Canadell, E. Saikawa, D.N. Huntzinger, **K.R. Gurney**, S. Sitch, B. Zhang, J. Yang, P. Bousquet, L. Bruhwiler, G. Chen, E. Dlugokencky, P. Friedlingstein, J. Melillo, S. Pan, B. Poulter, R. Prinn, M. Saunio, C.R. Schwalm, S.C. Wofsy (2016) [Biogenic CH<sub>4</sub> and N<sub>2</sub>O emissions overwhelm land CO<sub>2</sub> sink, contributing to climate change](#), *Nature*, doi: 10.1038/nature16946.
77. Feng, S., T. Lauvaux, S. Newman, P. Rao, R. Ahmadov, A. Deng, L. I. Díaz-Isaac, R. M. Duren, M. L. Fischer, C. Gerbig, **K.R. Gurney**, J. Huang, S. Jeong, Z. Li, C. E. Miller, D. O’Keeffe, R. Patarasuk, S. P. Sander, Y. Song, K. W. Wong, and Y. L. Yung (2016) [LA Megacity: a High-Resolution Land-Atmosphere Modelling System for Urban CO<sub>2</sub> Emissions](#), *Atmospheric Chemistry and Physics*, **16**, 9010-9045.
76. Wong, K.W., T.J. Pongetti, T. Oda, P. Rao, **K.R. Gurney**, S. Newman, R. Duren, C.E. Miller, Y.L. Yung, and S.P. Sander (2016) Monthly trends of top-down methane emissions in Los Angeles Basin from 2011 to 2015, *Atmospheric Chemistry and Physics*, **16**, 13121-13130

75. Zhang, X., **K.R. Gurney**, P.J. Rayner, D.F. Baker, and Y. Liu (2016) [Sensitivity of simulated CO<sub>2</sub> concentration to sub-annual variations in fossil fuel CO<sub>2</sub> emissions](#), *Atmospheric Chemistry and Physics*, **16**, 1907-1918

#### 2015

74. **Gurney, K.R.**, R. Patarasuk, I. Razlivanov, Y. Song, D. O'Keeffe, J. Huang, Y. Zhou, P. Rao (2015) [Comment on "Analysis of high-resolution utility data for understanding energy use in urban systems"](#), *J. Ind. Ecol.*, DOI: 10.1111/jiec.12358

73. **Gurney, K.R.**, P. Romero-Lankao, K. Seto, C. Kennedy, N., Grimm, J., Ehleringer, P. Marcotullio, S. Pincetl, J.J. Feddema, S. Hughes, M.V. Chester, L. Hutyra, J. Sperling, and D. Runfola (2015) [Climate change: Track urban emissions on a human scale](#), *Nature (Comment)*, **525**, 179-181 (10 September 2015), doi: 10.1038/525179a

72. Ogle, S., K. Davis, T. Lauvaux, A. Schuh, D. Cooley, T. O. West, L. S. Heath, N. Miles, S. Richardson, F. Jay Breidt, **K.R. Gurney**, and S. Denning (2015) An Approach for [Verifying Greenhouse Gas Emissions Inventories with Atmospheric CO<sub>2</sub> Measurement Data](#), *Env. Res. Lett.* **10**, doi:10.1088/1748-9326/10/3/034012

71. Turnbull, J., C. Sweeney, A. Karion, T. Newberger, P. Tans, S. Lehman, K.J. Davis, N.L. Miles, S.J. Richardson, T. Lauvaux, M.O. Cambaliza, P. Shepson, **K.R. Gurney**, Y. Song, I. Razlivanov, A. Zondervan (2015) [Towards quantification of fossil fuel CO<sub>2</sub> and trace gas emissions from an urban area: Results from the INFLUX experiment](#), *Journal of Geophysical Research, Atmos*, **120**. DOI: 10.1002/2014JD022555.

70. **Gurney, K.R.** (2015) [What is the role for carbon cycle science in the proposed EPA power plant rule?](#) *Earth Perspectives*, **2**:1, DOI: 10.1186/s40322-015-0028-1.

69. Cambaliza, O.M., P. B. Shepson, J. Bogner, D. R. Caulton, B. Stirm, C. Sweeney, S.A. Montzka, **K.R. Gurney**, K. Spokas, O.E. Salmon, T.N. Lavoie, A. Hendricks, K. Mays, J. Turnbull, B.R. Miller, T. Lauvaux, K. Davis, A. Karion, B. Moser, C. Miller, C. Obermeyer, J. Whetstone, K. Prasad, N. Miles, S. Richardson (2015) [Quantification and source apportionment of the methane emission flux from the city of Indianapolis](#), *Elementa: Science of the Anthropocene*, doi: 10.12952/journal.elementa.000037.

#### 2014

68. L.M. Bruhwiler, E. Dlugokencky, K. Masarie, M. Ishizawa, A. Andrews, J. Miller, C. Sweeney, P. Tans, D. Worthy, S. Houweling, M. Krol, P. Bergamaschi, C. Frankenberg, E.J. Dlugokencky, I. Morino, J. Notholt, V. Sherlock, D. Wunch, V. Beck, C. Gerbig, H. Chen, E.A. Kort, T. Röckmann, I. Aben, S.X. Fang, L.X. Zhou, P.P. Tans, P. Ciais, M. Steinbacher, L. Xu, T. Luan, D. Helmig, V. Petrenko, P. Martinerie, E. Witrant, A. Zuiderweg, R. Holzinger, J. Hueber, C. Thompson, J.W.C. White, W. Sturges, A. Baker, T. Blunier, D. Etheridge, M. Rubino, C. Cressot, F. Chevallier, P. Bousquet, C. Crevoisier, A. Fortems-Cheiney, R. Parker, I. Pison, R.A. Scheepmaker, S.A. Montzka, P.B. Krummel, L.P. Steele, R.L. Langenfelds, B.W. LaFranchi, G. Pétron, J.B. Miller, S.J. Lehman, A.E. Andrews, B. Hall, B.R. Miller, W. Neff, P.C. Novelli, J.C. Turnbull, D.E. Wolfe, **K.R. Gurney**, T.P. Guilderson, M. Inoue, O. Uchino, Y. Miyamoto, Y. Yoshida, T. Yokota, T. Machida, Y. Sawa, H. Matsueda, S.C. Biraud, T. Tanaka, S. Kawakami, P.K. Patra, S. Basu, S. Guerlet, A. Butz, O. Hasekamp, P. Krummel, P. Steele, R. Langenfelds, M. Torn, S. Biraud, B. Stephens, A. Fraser, P.I. Palmer, L. Feng, H. Boesch, A. Cogan, P.J. Fraser, S. O'Doherty, R.G. Prinn (2014) CarbonTracker-CH<sub>4</sub>: an assimilation system for estimating emissions of atmospheric methane, *Atmos. Chem. Phys.* **14**, 3991-4012.

67. Romero-Lankao, P., **K.R. Gurney**, K. Seto, M. Chester, R.M. Duren, S. Hughes, L.R. Hutyra, P. Marcotullio, L. Baker, N.B. Grimm, C. Kennedy, E. Larson, S. Pincetl, D. Runfola, L. Sanchez, G. Shrestha, A. Sarzynski, J. Sperling, E. Stokes (2014) [Towards a more integrated understanding of urbanization, urban areas and the carbon cycle](#), *Earth's Future*, **2**(10), 515-532.

66. Hutyra, L., R. Duren, **K.R. Gurney**, N. Grimm, E. Kort, E. Larson, G. Shrestha (2014) [Urbanization and the carbon cycle: Current capabilities and research outlook from the natural sciences perspective](#), *Earth's Future*, **2**(10), 473-495, doi: 10.1002/2014EF000255

65. **Gurney, K.R.** (2014) [The urban landscape: recent research quantifying carbon emissions down to the street level](#), *Carbon Management*, doi: 10.1080/17583004.2014.986849.

64. **Gurney, K.R.**, Huang, J. and K. Coltin (2014) Comment on Quick, J.C. (2014) Carbon dioxide emission tallies for 210 U.S. coal-fired power plants: A comparison of two accounting methods. *J. Air Waste Manage. Assoc.* **64**: 73-79, *J. Air Waste Manage Assoc.* **64**(11):1215-1217.

63. Zhang, X., **K.R. Gurney**, P. Rayner, Y. Liu, S. Asefi-Najafabady (2014) [Sensitivity of simulated CO<sub>2</sub> concentration to regridding of fossil fuel CO<sub>2</sub> emissions along global coastlines](#), *Geosci. Model Dev.*, **7**, 2867-2874.

62. Asefi-Najafabady, S., P. J. Rayner, **K.R. Gurney**, A. McRobert, Y. Song, K. Coltin, C. Elvidge, K. Baugh (2014) [A new global gridded dataset of CO<sub>2</sub> emissions from fossil fuel combustion: Methodology, evaluation and analysis](#), *J. Geophys. Res.* DOI: 10.1002/2013JD021296.

61. Cambaliza, O., P. B. Shepson, D. Caulton, B. Stirm, D. Samarov, **K.R. Gurney**, J. Turnbull, K. J. Davis, A. Possolo, A. Karion, C. Sweeney, B. Moser, A. Hendricks, T. Lauvaux, K. Mays, J. Whetstone, J. Huang, I. Razlivanov, N. L. Miles,

and S. J. Richardson (2014) [Assessment of uncertainties of an aircraft-based mass-balance approach for quantifying greenhouse gas emissions](#), *Atmospheric Chemistry and Physics*, **14**, 9029-9050, doi:10.5194/acp-14-9029-2014.

## 2013

60. Ciais, P., A. J. Dolman, A. Bombelli, R. M. Duren, A. Peregón, P. Rayner, C. Miller, N. Gobron, G. Kinderman, G. Marland, N. Gruber, F. Chevallier, R. J. Andres, G. Balsamo, L. Bopp, F.-M. Bréon, G. Broquet, R. J. Dargaville, T. Battin, A. Borges, H. Bovensmann, M. Buchwitz, J. H. Butler, J. G. Canadell, R. B. Cook, R. DeFries, R. Engelen, **K.R. Gurney**, C. Heinze, M. Heimann, A. Held, M. Henry, B. E. Law, S. Luyssaert, J. Miller, T. Moriyama, C. Moulin, R. B. Myneni, C. Nussli, M. Obersteiner, D. Ojima, Y. Pan, J.-D. Paris, S. L. Piao, B. Poulter, S. Plummer, S. Quegan, P. Raymond, M. Reichstein, L. Rivier, C. Sabine, D. Schimel, O. Tarasova, R. Valentini, G. van der Werf, D. E. Wickland, M. Williams, and C. Zehner (2013) [Current systematic carbon cycle observations, and needs for implementing a policy-relevant carbon observing system](#), *Biogeosciences*, **11**, 3547-3602, doi: 10.5194/bg-11-3547-2014.
59. Peylin, P., R. M. Law, **K.R. Gurney**, F. Chevallier, A. R. Jacobson, T. Maki, Y. Niwa, P. K. Patra, W. Peters, P. J. Rayner, C. Rödenbeck, and X. Zhang (2013) [Global Atmospheric Carbon Budget: results from an ensemble of atmospheric CO<sub>2</sub> inversions](#), *Biogeosciences*, **10**, 6699-6720.
58. LaFranchi, B.W., G. Pétron, J.B. Miller, S.J. Lehman, A.E. Andrews, E. Dlugokencky, B.R. Miller, S.A. Montzka, B. Hall, W. Neff, C. Sweeney, J.C. Turnbull, D.E. Wolfe, P.P. Tans, **K.R. Gurney**, T.P. Guilderson (2013) [Constraints on emissions of carbon monoxide, methane, and a suite of hydrocarbons in the Colorado Front Range using observations of <sup>14</sup>CO<sub>2</sub>](#), *Atmos. Chem. Phys.*, **13**, 11101-11120, doi:10.5194/acp-13-11101-2013.
57. Nevison, C.D., D.F. Baker, and **K.R. Gurney** (2013) A methodology for estimating seasonal cycles of atmospheric CO<sub>2</sub> resulting from terrestrial net ecosystem exchange (NEE) fluxes using the Transcom T3L2 pulse-response functions, *Geosci Model Dev. Disc.* **5** (3), 2789-2809.
56. Zhang, X., **K.R. Gurney**, P. Peylin, Chevallier, F., Law, R., Patra, P.K., Rayner, P.J., Roedenbeck, C., Krol, M. (2013) [On the variations of regional CO<sub>2</sub> fluxes over temperate and boreal North America](#), *Glob. Biogeochem. Cyc.*, **27** doi:10.1002/gbc.20091
55. Nassar, R., L. Napier-Linton, **K.R. Gurney**, R.J. Andres, T. Oda, F. Vogel, F. Deng (2013) [Improving the temporal and spatial distribution of CO<sub>2</sub> emissions from global fossil fuel emission datasets](#), *J. Geophys. Res.*, **118**, 917-933 doi:10.1029/2012JD018196
54. Newman, S., S. Jeong, M. Fischer, X. Xu, C. Haman, B. Lefer, S. Alvarez, B. Rappenglueck, E.A. Kort, A.E. Andrews, J. Peischl, **K.R. Gurney**, C.E. Miller, and Y.L. Yung (2013) [Diurnal tracking of anthropogenic CO<sub>2</sub> emissions in the Los Angeles basin mega-city during spring, 2010](#), *Atm Chem and Physics*, **13**: 4359-4372
53. Mendoza, D., **Gurney, K.R.**, Geethakumar, S., Chandrasekaran, V., Zhou, Y., I. Razlivanov (2013) [U.S. Regional Greenhouse Gas Emissions Mitigation Implications based on High-Resolution Onroad CO<sub>2</sub> Emissions Estimation](#), *Energy Policy*, **55**, 386-395.

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BIO 182: General Biology II (undergraduate)

EAS 113/NRES 290/AGRY 290: Introduction to Environmental Sciences (undergraduate)

EAS 425: Carbon neutrality at Purdue (undergraduate/graduate)

EAS 591T: Principals of Terrestrial Ecosystem Ecology (graduate)

EAS 591A: Anthropogenic Climate Change (graduate)

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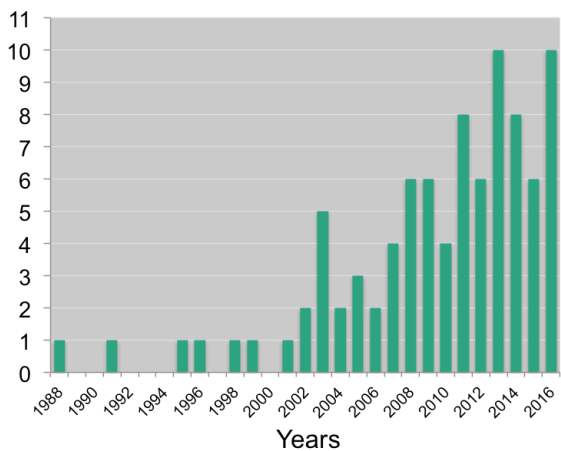
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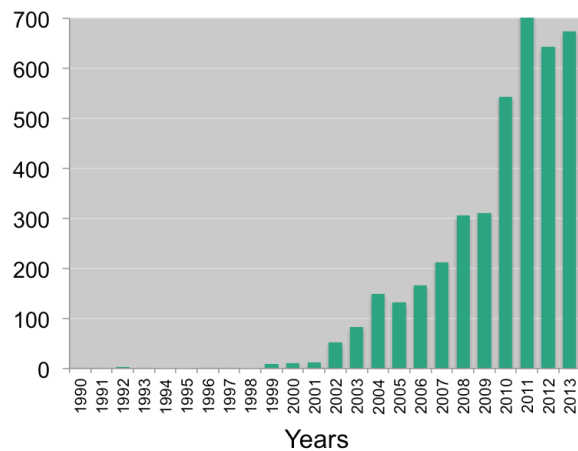
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