

Kevin Robert Gurney

School of Informatics, Computing, and Cyber Systems | Northern Arizona University
1295 S. Knoles Dr., Building 90, room 320 | Flagstaff, AZ 86011
e-mail: kevin.gurney@nau.edu

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

Professor, School of Informatics, Computing and Cyber Systems, Northern AZ Univ, Aug 2018-present
Professor, Honors Faculty, School of Life Sciences, Arizona State University, Aug 2017 – Aug 2018
Associate Professor, Honors Faculty, School of Life Sciences, Arizona State University, Aug 2010 – Aug 2017
Affiliated Faculty, School of Geographical Sciences and Urban Planning, Mar 2013 – Aug 2018
Graduate Faculty, School of Sustainability, Arizona State University, Jan 2013 – Aug 2018
Senior Sustainability Scientist, Global Institute of Sustainability, Arizona State Univ, Aug 2010 – Aug 2018
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 – Aug 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, Sept 1992 – Jan 1997
Research Associate, Atmospheric and Environmental Research, Inc., Feb 1992 – Sept 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 Lab, 11/86- 9/87
Student Assistant, Atmospheric Aerosol Research Group, Lawrence Berkeley National Lab, 2/85-10/86

HONORS AND AWARDS

Fulbright U.S. Scholar award, 2019
IPCC Lead Author, 6th Assessment Report (organizational co-recipient of 2022 Gulbenkian Prize for Humanity)
IPCC Contributing Author, 4th Assessment Report (organizational co-recipient of the 2007 Nobel Peace Prize)
Sigma Xi Young Investigator's Award 2010
NSF CAREER Award 2009
Named 2007 "Air Conservationist of the Year", from the Indiana Wildlife Federation

CURRENT FUNDING

Department of Energy Southwest Integrated Urban Field Laboratory: 9/2022 – 9/2027, \$25 million (NAU: \$4.75 million)
National Institute for Standards and Technology: 9/2023 – September 2026, \$1,559,044 (all NAU)
Builders Vision/Grantham Foundation: 9/2022 – 9/2024+, \$950,000 (all NAU)

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, ASU: 2013 - 2017
ASU Safety Committee: 2010 – 2013, 2017 - 2018
ASU Diversity Committee, Purdue University, Aug 2005 – Aug 2010

NAU CEIAS Promotion & Tenure Committee, November 2020 – present
NAU SICCS Graduate Recruiting Committee, September 2019 – present
NAU CEIAS COFS redesign committee, September 2019 – 2020
NAU SICCS BSI committee, September 2019 - present

OTHER NATIONAL OR INTERNATIONAL PROFESSIONAL SERVICE

National Academy of Sciences, Engineering and Mathematics, Board on Atmospheric Sciences and Climate, member, 11/2023 - **present**
National Academy of Sciences, Engineering and Mathematics report committee: “Greenhouse Gas Emissions Information for Decisionmaking”, 6/2022 – 11/2022
Environmental Research Letters Advisory Panel, 3/2022 - **present**
Author, 5th National Climate Assessment (NCA5), 3/2022 – 8/2023
IPCC lead author/contributing author/reviewer, 2nd through 6th Assessments
Chapter co-lead State of the Carbon Cycle Report 2, June 2016 - 2020
World Meteorological Organization, GURME Science Advisory Group, 2019 – 9/2023
International Carbon Observing System, Cities effort, 2021 - **present**
World Meteorological Organization, IG³IS Science Advisory Group, 2017 - **present**
Integrated Greenhouse Gas Information System (IG³IS) Committee Member, 2016 – **present**
VERIFY scientific advisory board, 2018 - **present**
Carbon cycle science steering working group (CCSWG) to Carbon science interagency working group (CCIWG) (retired)
Global Carbon Program Science Steering Committee: 2008 - 2013
NOAA Global Carbon Cycle Scientific Steering Committee, 2006 - present
Carbon Management, Editorial Board, 2009 - 2015
MCI Task Force Committee member, 2005 – 2017
Carbon Balance and Management, Editorial Board member, 2006 - 2013
Carbon Dioxide Information Analysis Center, external advisory committee member, 2007 - 2018
United Nations Framework Convention on Climate Change attendee/advisor 1996-**present**

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

PATENTS

Gurney, K., D. Huntzinger, T. Moiz, N Parker, R. Rushforth, B.L. Ruddell. *Systems and methods for modeling flow of resources in a supply chain*, 7/30/2024, US patent number: 12051028

PEER-REVIEWED PUBLICATIONS

Total cites: 17424 (Google Scholar, 10/14/2024)

h-index: 62 (Google Scholar, 10/14/2024)

2024

166. Javadpour, M., A. Sharifi, **K.R. Gurney** (2024) Mapping the relationship between urban form and CO2 emissions in three US cities using the Local Climate Zones (LCZ) framework, *J. Env. Management*, <https://doi.org/10.1016/j.jenvman.2024.122723>.
165. **Gurney, K.R.**, P. Dass, A. Kato, B. Mitra, M. Nematchoua (2024) Scope 2 estimates of carbon dioxide emissions from electricity consumption at the US census block group scale, *Sci. Data*, *accepted*.
164. **Gurney, K.R.**, B. Aslam, P. Dass, L. Gawuc, T. Hocking, J.J. Barber, A. Kato (2024) Assessment of the Climate Trace global powerplant CO₂ emissions, *Environ. Res. Lett.*, *accepted*.
163. Pitt, J.R. I. Lopez-Coto, A. Karion, K.D. Hajny, J. Tomlin, R. Kaeser, T. Jayarathne, B.H. Stirm, C.R. Floerchinger, C.P. Loughner, R. Commene, C.K. Gately, L.R. Huttyra, **K.R. Gurney**, G.S. Roest, J. Liang, S.

- gourdji, K.L. Mueller, J.R. Whetstone, P.B. Shepson (2024) Underestimation of Thermogenic Methane Emissions in New York City, *Env. Sci. Tech.*, <https://doi.org/10.1021/acs.est.3c10307>.
162. Vogel, E., K.J. Davis, K. Wu, N.L. Miles, S.J. Richardson, **K.R. Gurney**, V. Monteiro, G.S. Roest (2024) Using eddy-covariance to measure the effects of COVID-19 restrictions on CO₂ emissions in Indianapolis, IN, *Carbon Management*, 15(1), <https://doi.org/10.1080/17583004.2024.2365900>.
161. Kato, A., K. Gurney, and P. Dass (2024) Hestia SW-IFL Onroad Fossil Fuel Carbon Dioxide (FFCO₂) product: Road segment-level annual FFCO₂ emissions across Arizona (2017-2021), version 1.0, doi: <https://doi.org/10.15485/2335384>
160. Urrace, R., Janssens-Maenhout, G., Alamos, N., Berna-Pena, L., Crippa, M., Dassas, S., Dellaert, S., Denier van der Gon, H., Dowell, M., Gobron, N., Granier, C., Grassi, G., Guevara, M., Guizzardi, D., **Gurney, K.**, Huneus, N., Keita, S., Kuenen, J., Lopez-Norena, A., Puliafito, E., Roest, G., Rossi, S., Soulie, A., Visschedijk, A. (2024) CoCO₂-MOSAIC 1.0: a global mosaic of regional, gridded, fossil and biofuel CO₂ emission inventories, *Earth Systems Science Data*, [essd.copernicus.org/articles/16/501/2024/](https://doi.org/10.5194/essd-copernicus.org/articles/16/501/2024/)
- 2023**
159. Roest, G., K. Gurney, E. Vogel, and H. Kenion. Hestia Fossil Fuel Carbon Dioxide (FFCO₂) Data Product - Indianapolis, Version 3.2, 20m Grid at Flux Towers. Penn State Data Commons, 2023. <https://doi.org/10.26208/H62I-4004>.
158. Zeng, Z-C., Pongetti, T., Newman, S., Oda, T., **Gurney, K.**, Yung, Y., Palmer, P., Yjng, Y.L., Sander, S.P. (2023) Decadal decrease in Los Angeles methane emissions is much smaller than bottom-up estimates, *Nature Communications*, 14:5353, <https://doi.org/10.1038/s41467-023-40964-w>.
157. Roest, G., **K.R. Gurney**, Rayner, P.J. (2023) Utility-based energy consumption to improve urban building-scale CO₂ emissions, *in preparation*
156. **Gurney, K.R.**, B. Mitra, G. Roest, P. Dass, Y. Song, T. Moiz (2023) Impact and rebound of near real-time United States fossil fuel carbon dioxide emissions from COVID-19 and large differences with global estimates, *in preparation*.
155. Kato, A., **K.R. Gurney**, J. Whetstone (2023) Exploring differences in FFCO₂ emissions in the United States: Comparison of the Vulcan data product and the EPA national GHG inventory, *Environmental Research Letters*, 18, 124043, <https://doi.org/10.1088/1748-9326/ad0b22>
154. Luqman, M., P.J. Rayner, **K.R. Gurney** (2023) On the impact of urbanization on CO₂ emissions, *Urban Sustainability*, 3, 6, <https://doi.org/10.1038/s42949-023-00084-2>
- 2022**
153. Huo, D., X Huang, X. Dou, X., Ciais, P., Li, Y., Deng, Z, Wang, Y., Cui, D. Benkhelifa, F., Sun, T., Zhu, B., Roest, G., **Gurney, K.R.**, Ke, P., Guo, R., Lu, C., Lin, X., Lovell, A., Appleby, K., DeCola, P.L., Davis, S.J., Liu, Z. (2022) Carbon Monitor Cities near-real-time daily estimates of CO₂ emissions from 1500 cities worldwide, *Scientific Data*, 9, 533, <https://doi.org/10.1038/s41597-022-01657-z>
152. Keller, E., T. Hilton, A. Benson, S. Karalliyadda, S. Xie, **K.R. Gurney**, J. Turnbull. (2022) Mahuika-Auckland: A spatially and temporally resolved fossil fuel CO₂ emissions data product for Auckland, New Zealand, *Geosci. Data*, <https://doi.org/10.1002/gdj3.181>
151. Wu, K., K. Davis, N. Miles, S. Richardson, T. Lauvuax, D. Sarmiento, N. Balashov, K. Keller, J. Turnbull, **K. Gurney**, J. Liang, G. Roest (2021) Source decomposition of eddy-covariance CO₂ flux measurements for evaluating a high-resolution urban CO₂ emissions inventory, *Environ. Res. Lett.*, 17(7) 074035, <https://doi.org/10.1088/1748-9326/ac7c29>
150. Hajny, K.D., R. Kaeser, T. Jayarathne, J. Tomlin, J. Pitt, P.B. Shepson, B.H. Stirm, C. Floerchinger, C. Gatly, M. Sargent, S. Wofsy, **K.R. Gurney**, A. Karion, I. Lopez-Coto, A. Turner (2021) Estimating Anthropogenic CO₂ Emissions from New York City Using Aircraft Measurements and Dispersion Modeling, *Elementa: Science of the Anthropocene* (2022) 10 (1): 00121, <https://doi.org/10.1525/elementa.2021.00121>. (Published June 28)
149. Pitt, J.R., I. Lopez-Coto, K.D. Hajny, J. Tomlin, R. Kaeser, T. Jayarathne, B.H. Stirm, C.R. Floerchinger, C.P. Loughner, R. Commane, C.K. Gatly, L.R. Hutyrá, **K.R. Gurney**, G.S. Roest, J. Liang, S. Gourdji, A. Karion, J.R. Whetstone, P.B. Shepson (2022) New York City Greenhouse Gas Emissions Estimated with Inverse Modelling of Aircraft Observations, *Elem Sci Anth*, 10:1. DOI: <https://doi.org/10.1525/elementa.2021.00082>.

148. **Gurney, K.R.**, S. Killis, K. Seto, S. Lwasa, D. Moran, K. Riahi, M. Keller, P. Rayner, M. Luqman (2022) Greenhouse Gas Emissions from Global Cities Under SSP/RCP Scenarios, 1990 to 2100, *Global Environmental Change*, 73, 102478, <https://doi.org/10.1016/j.gloenvcha.2022.102478>
147. Moran, D. et al. (2021) Estimating CO₂ Emissions for 108,000 European Cities, *Earth System Science Data*, 14, 845–864, <https://doi.org/10.5194/essd-14-845-2022>.

2021

146. Laughner, J.L., J.L. Neu, D.S. Schimel, P.O. Wennberg, K. Barsanti, K.W. Bowman, A. Chatterjee, B. Croes, H. Fitzmaurice, D.K. Henze, J. Kim, E.A. Kort, Z. Liu, K. Miyazaki, A.J. Turner, S. Anenberg, J. Avise, H. Cao, D. Crisp, J.A. de Gouw, A. Eldering, J.C. Fyfe, D.L. Goldberg, **K.R. Gurney**, S. Hasheminassab, F.M. Hopkins, C. Ivey, D.B.A. Jones, N.S. Lovenduski, R.V. Martin, G.A. McKinley, L. Ott, B. Poulter, M. Ru, S. P. Sander, N. Swart, Y.L. Yung, Z-C. Zeng (2021) Societal shifts due to COVID-19 reveal large-scale complexities and feedbacks between atmospheric chemistry and climate change, *Proceedings of the National Academy of Sciences*, 118(46), <https://doi.org/10.1073/pnas.2109481118>.
145. Stokes, E., M.O. Roman, Z. Wang, C. Kyba, S.D. Miller, T. Starch, **K.R. Gurney** (2021) Retired satellites: A chance to shed light (commentary), *Science*, 373 (6562), <https://doi.org/10.1126/science.abl9965>
144. **Gurney, K.R.** and P. Shepson (2021) The power and promise of improved climate data infrastructure, *Proceedings of the National Academy of Sciences*, 118 (35), www.pnas.org/content/118/35/e2114115118
143. Yadav, V., S. Ghosh, K. Mueller, A. Karion, G. Roest, S. Gourdji, I. Lopez-Coto, **K.R. Gurney**, K. Verhulst, J. Kim, M. Stock, E. DiGangi, S. Prinzivalli, C. Fain, R. Keeling, R. Weiss, R. Duren, C. Miller, J. Whetstone (2021) The impact of COVID-19 on CO₂ emissions in the Los Angeles and Washington DC/Baltimore metropolitan areas, *Geophys. Res. Lett.* <https://doi.org/10.1029/2021GL092744>
142. Laughner, J.L., J.L. Neu, D.S. Schimel, P.O. Wennberg, K. Barsanti, K.W. Bowman, A. Chatterjee, B. Croes, H. Fitzmaurice, D.K. Henze, J. Kim, E.A. Kort, Z. Liu, K. Miyazaki, A.J. Turner, S. Anenberg, J. Avise, H. Cao, D. Crisp, J.A. de Gouw, A. Eldering, J.C. Fyfe, D.L. Goldberg, **K.R. Gurney**, S. Hasheminassab, F.M. Hopkins, C. Ivey, D.B.A. Jones, N.S. Lovenduski, R.V. Martin, G.A. McKinley, L. Ott, B. Poulter, M. Ru, S. P. Sander, N. Swart, Y.L. Yung, Z-C. Zeng (2021) The 2020 COVID-19 pandemic and atmospheric composition: back to the future, *Earth and Space Science Open Archive*, <https://doi.org/10.1002/essoar.10506081.1>
141. **Gurney, K.R.**, B. Mitra, G. Roest, P. Dass, Y. Song, T. Moiz (2021) Impact and rebound of near real-time United States fossil fuel carbon dioxide emissions from COVID-19 and large differences with global estimates, <https://eartharxiv.org/repository/view/2266/>.
140. Mueller, K. T. Lauvaux, **K.R. Gurney**, P. DeCola, S. Gourdji, G. Roest, J. Whetstone (2021) An Emerging GHG estimation approach can help cities achieve their climate and sustainability goals, *Environ. Res. Lett.*, <https://doi.org/10.1088/1748-9326/ac0f25>
139. Berelson, W.M., N. Rollins, A.J. West, G. Ban-Weiss, J. Ko, **K.R. Gurney**, and R. Cohen (2021) Atmospheric Radon, CO₂ and Methane Define a Decrease in Los Angeles CO₂ Emissions during COVID-19 Shutdown, *under review at Env.Sci & Tech*.
138. Addington, O., Z-C. Zeng, T. Pongetti, R-L. Shia, **K.R. Gurney**, J. Liang, G. Roest, Y.L. Yung, S.P. Sander (2021) Estimating Nitrous Oxide (N₂O) Emissions for the Los Angeles Megacity Using Mountaintop Remote Sensing Observations, *Remote Sensing of the Environment*, 259, 112351, <https://doi.org/10.1016/j.rse.2021.112351>.
137. Miles, N.L., K.J. Davis, S.J. Richardson, T. Lauvaux, D.K. Martins, A.J. Deng, N. Balashov, **K.R. Gurney**, J. Liang, G. Roest, J.A. Wang, and J.C. Turnbull (2021): The influence of near-field fluxes on seasonal CO₂ enhancements: Results from the Indianapolis Flux Experiment (INFLUX). *Carbon Balance Management*, 16:4, <https://doi.org/10.1186/s13021-020-00166-z>.
136. **Gurney, K.R.**, J. Liang, G. Roest, Y. Song, K. Mueller, T. Lauvaux (2021) Under-reporting of greenhouse gas emissions in U.S. cities, *Nature Communications*, 12(1), 1-7, <https://www.nature.com/articles/s41467-020-20871-0>

2020

135. Mallia, D., L. Mitchell, L. Kunik, B. Fasoli, R. Bares, **K.R. Gurney**, D. Mendoza, J.C. Lin (2020) Constraining urban CO₂ emissions using mobile observations derived from a novel light-rail public transit platform, *Environ., Sci. & Tech.*, <https://dx.doi.org/10.1021/acs.est.0c04388>.

134. Song, Y., **K.R. Gurney** (2020) The relationship between on-road FFCO₂ emissions and socio-economic/urban form factors for global cities: significance, robustness, and implications, *Sustainability*, 12, 6028; <https://doi.org/10.3390/su12156028>.
133. Roest, G., **K.R. Gurney**, S.M. Miller, and J. Liang (2020) Informing urban climate planning with high resolution data: the Hestia fossil fuel CO₂ emissions for Baltimore, Maryland, *Carbon Balance and Management*, 15:22, <https://doi.org/10.1186/s13021-020-00157-0>.
132. **Gurney, K.R.**, Y. Song, J. Liang, G. Roest (2020) Towards accurate, policy-relevant fossil fuel CO₂ emission landscapes, *Env. Sci. & Tech*, 54, 16, 9896-9907, <https://doi.org/10.1021/acs.est.0c01175>.
131. Ruti, P., O. Tarasova, J. Keller, C. Carmichael, O. Hov, S. Jones, D. Terblanche, C. Anderson, A. Barros, P. Bauer, V. Bouchet, G. Brasseur, B. Brunet, P. DeCola, V. Dike, M.D. Kane, C. Gan, **K. Gurney**, S. Hamburg, W. Hazeleger, M. Jean, D. Johnston, A. Lewis, P. Li, X. Liang, V. Lucarini, A. Lynch, E. Manaenkova, J.-C. Nam, S. Ohtake, N. Pinardi, J. Polcher, E. Ritchie, A.E. Sakya, C. Saulo, A. Singhee, A. Sopaheluwakan, A. Steiner, A. Thorpe, M. Yamji (2020) Advancing Research for Seamless Earth System Prediction, *Bulletin of the American Meteorological Society*, <https://doi.org/10.1175/BAMS-D-17-0302.1>, January 20, 2020.
130. **Gurney, K.R.**, J. Liang, R. Patarasuk, Y. Song, J. Huang, and G. Roest (2020) Vulcan: High-Resolution Annual Fossil Fuel CO₂ Emissions in USA, 2010-2015, Version 3. ORNL DAAC, Oak Ridge, Tennessee, USA. <https://doi.org/10.3334/ORNLDAAC/1741>.
129. **Gurney, K.R.**, J. Liang, R. Patarasuk, Y. Song, J. Huang, G. Roest (2020) The Vulcan Version 3.0 High-Resolution Fossil Fuel CO₂ Emissions for the United States. *Journal of Geophysical Research: Atmospheres*, 125, 19, e2020JD032974. <https://doi.org/10.1029/2020JD032974>.
128. Basu S., S.J. Lehman, J.B. Miller, A.E. Andrews, C. Sweeney, **K.R. Gurney**, X. Xu, J. Southon, P. Tans (2020) Estimating US Fossil Fuel CO₂ Emissions from Measurements of ¹⁴C in Atmospheric CO₂, *Proceedings of the National Academy of Sciences*, June 16, 2020 117 (24) 13300-13307; first published June 1, 2020 <https://doi.org/10.1073/pnas.1919032117>.
127. Ahn, D., J. Hansford, S. Howe, X. Ren, R. Salawitch, N. Zeng, M. Cohen, B. Stunder, O. Salmon, P.B. Shepson, **K.R. Gurney**, T. Oda, I. Lopez-Coto, J. Whetstone, R.R. Dickerson (2020) Fluxes of Atmospheric Greenhouse-Gases in Maryland (FLAGG-MD): Emissions of Carbon Dioxide in the Baltimore, MD-Washington, DC area, *J. Geophys. Res.*, <https://doi.org/10.1029/2019JD032004>.
126. Strandgren, J., D. Krutz, J. Wilzewski, C. Paproth, I. Sebastien, **K.R. Gurney**, J. Liang, A. Roiger, A. Butz (2020) Towards space-borne monitoring of localized CO₂ emissions: an instrument concept and first performance assessment, *Atmospheric Measurement Techniques*, 13, 2887-2904, <https://amt.copernicus.org/articles/13/2887/2020/>.
125. Lauvaux, T., **K.R. Gurney**, N.L. Miles, K.J. Davis, S.J. Richardson, A. Deng, B.J. Nathan, T. Oda, J.A. Wang, L.R. Hutyla, J.C. Turnbull (2020) Policy-relevant assessment of urban greenhouse gas emissions, *Environ. Sci. Technol.* 54, 16, 10237-10245 <https://doi.org/10.1021/acs.est.0c00343>
124. Park, C., Park, S.-Y., K.R. Gurney, C. Gerbig, J.P. DiGangi, Y. Choi, H.W. Lee (2020) Numerical simulation of atmospheric CO₂ concentration and flux over the Korean Peninsula using WRF-VPRM model during Korus-AQ 2016 Campaign, *PLoS ONE*, 15(1): e0228106, <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0228106>
- 2019**
123. Turnbull, J.C., A. Karion, K.J. Davis, T. Lauvaux, N.L. Miles, S.J. Richardson, C. Sweeney, K. McKain, S.J. Lehman, **K.R. Gurney**, R. Patarasuk, J. Liang, P.B. Shepson, A. Heimbürger, R. Harvey, J. Whetstone (2019), Synthesis of Urban CO₂ Emission Estimates from Multiple Methods from the Indianapolis Flux Project (INFLUX), *Environ. Sci. & Technol.*, 53, 287-295, <https://doi.10.1021/acs.est.8b05552>
122. Luqman, M., P. Rayner, **K.R. Gurney** (2019) Combining measurements of Built-up area, Nighttime Light and Travel distance for detecting change in Urban Boundaries: Introducing BUNTUS Algorithm, *Remote Sensing*, 11(24), 2969; <https://doi.org/10.3390/rs11242969>.
121. Nathan, B., T. Lauvaux, J. Turnbull, **K.R. Gurney** (2019) Model output for determining sector-based CO₂ emissions in both pseudodata and real-data inversion analyses of Indianapolis for January-April 2015, datacommons@psu, doi:10.26208/rbrk-5q41.
120. Feng, S., T. Lauvaux, K.J. Davis, K. Keller, P. Rayner, T. Oda, **K.R. Gurney**, Y. Zhou, C. Williams, A. E. Schuh, J. Liu, I. Baker (2019) Ensemble model output of North American atmospheric CO₂ simulation (full WRF-chem output), Data set. Available online from The Pennsylvania State University Data Commons, University Park, Pennsylvania, USA, doi:10.26208/7a4p-q224.

119. Kunik, L. D.V. Mallia, **K.R. Gurney**, D.L. Mendoza, T. Oda, J.C. Lin (2019) Bayesian inverse estimate of urban CO₂ emissions: results from a synthetic data simulation over Salt Lake City, UT, *Elementa: Science of the Anthropocene*, 7: 36. DOI: <https://doi.org/10.1525/elementa.375>.
118. Wang, Y., P. Ciais, G. Broquet, F-M. Breon, T. Oda, F. Lespinas, Y. Meijer, A. Loescher, G. Janssens-Maenhout, B. Zheng, H. Xu, S. Tao, **K.R. Gurney**, G. Roest, D. Santaren, Y. Su (2019) A global map of emission clumps for future monitoring of fossil fuel CO₂ emissions from space, *Earth Syst. Sci. Data*, 11, 1-17, <https://essd.copernicus.org/articles/11/687/2019/>.
117. He, L., Z-C Zeng, T. Pongetti, C. Wong, J. Liang, **K. Gurney**, S. Newman, V. Yadav, K. Verhulst, C. Miller, R. Duren, C. Frankenberg, P. Wennberg, R-L. Shia, Y. Yung (2019) Atmospheric methane emissions correlate with natural gas consumption from residential and commercial sectors in Los Angeles, *Geophys. Res. Lett.*, 46, 8563-8571, <https://doi.org/10.1029/2019GL083400>.
116. **Gurney, K.R.**, Liang, J, D.O. O’Keeffe, R. Patarasuk, M. Hutchins, J. Huang, P. Rao, and Y. Song (2019) Comparison of Global Downscaled Versus Bottom-Up Fossil Fuel CO₂ Emissions at the Urban Scale in Four US Urban Areas, *J. Geophys. Res.-Atmos.*, 124, 2823-2840, <https://doi.org/10.1029/2018JD028859>.
115. **Gurney, K.R.**, R. Patarasuk, J. Liang, D. O’Keeffe, P. Rao, Y Song (2019) The Hestia Fossil Fuel CO₂ Emissions Dataset for the Los Angeles Basin, *Earth System Science Data*, 11, 1-27, <https://essd.copernicus.org/articles/11/1309/2019/>.
114. Feng, S., T. Lauvaux, K. Keller, K.J. Davis, P. Rayner, T. Oda, **K.R. Gurney** (2019) A road map for improving the treatment of uncertainties in high-resolution regional carbon flux inverse estimates, *Geophys. Res. Lett.*, 46. <https://doi.org/10.1029/2019GL082987>.
113. Cui, X., S. Newman, X. Xu, A.E. Andrews, J. Miller, S. Lehman, S. Jeong, J. Zhang, C. Priest, M. Campos-Pineda, **K.R. Gurney**, H. Graven, J. Southon, M.L. Fischer (2019) Atmospheric Observation-based Estimation of Fossil Fuel CO₂ Emissions from Regions of Central and Southern California, *Science of the Total Environment*, 664, 381-391, <https://doi.org/10.1016/j.scitotenv.2019.01.081>.
112. Nangini, C, A. Peregón, P. Ciais, U. Weddige, F. Vogel, J. Wang, F-M. Breon, S. Bachra, Y. Wang, **K. Gurney**, Y. Yamagata, K. Appleby, S. Telahoun, P.G.. Canadell, A. Grubler, S. Dhakal, F. Creutzig (2019) A global dataset of city CO₂ emissions and ancillary data related to emission for 343 cities, *Scientific Data*, 6, Article number: 180280. <https://doi.org/10.1038/sdata.2018.280>.
111. Martin, C.R., N Zeng, A. Karion, K. Mueller, S. Ghosh, I. Lopez-Coto, **K.R. Gurney**, T. Oda, K. Prasad, Y. Liu, R.R. Dickerson, J. Whetstone (2019) Investigating Sources of Variability and Error in Simulations of Carbon Dioxide in an Urban Region, *Atmos. Env.*, 199, 55-69. <https://doi.org/10.1016/j.atmosenv.2018.11.013>.

2018

110. Hedelius, J., J. Liu, T. Oda, S. Maksyutov, C.M. Roehl, L.T. Iraci, J.R. Podolske, P.W. Hillyard, J. Liang, **K.R. Gurney**, D. Wunch, P.O. Wennberg (2018) Southern California Megacity CO₂, CH₄, and CO flux estimates using ground and space-based remote sensing and a Lagrangian model, *Atmos. Chem. and Physics*, 18, 16271-16291, <https://doi.org/10.5194/acp-18-16271-2018>
109. Nathan, B.J., T. Lauvaux, J. Turnbull, S.J. Richardson, N.L. Miles, **K.R. Gurney** (2018) Source Sector Attribution of CO₂ Emissions in an Urban Multi-species Bayesian Inversion System, *J. Geophys. Res.* 123(23), 13611-13621. <https://doi.org/10.1029/2018JD029231>
108. Liu, J., K. Bowman, D. Schimel, N. Parazoo, Z. Jiang, M. Lee, A. Bloom, D. Wunch, **K.R. Gurney**, D. Menemenlis, M. Girerach, D. Crisp, A. Eldering (2018) Responses to Comment on “Contrasting carbon cycle responses of the tropical continents to the 2015-2016 El Niño”, *submitted to Science*.
107. Park, C., Park, C. Gerbig, S. Newman, R. Ahmadov; S. Feng, **K.R. Gurney**, G.R. Carmichael, S-Y. Park, H-W. Lee, M. Goulden, J. Stutz, J. Peischl, T. Ryerson (2018) CO₂ transport, variability and budget over the Southern California Air Basin using high resolution WRF-VPRM model during CalNex 2010 Campaign, *Journal of Applied Meteorology and Climatology*, 57 (6), 1337-1352. <https://doi.org/10.1175/JAMC-D-17-0358.1>.
106. Lin, J. L. Mitchell, E. Crosman, D. Mendoza, M. Buchert, R. Bares, B. Fasoli, D. Bowling, D. Pataki, D. Catharine, C. Strong, **K.R. Gurney**, R. Patarasuk, M. Baasandorj, A. Jacques, S. Hoch, J. Horel, J. Ehleringer (2018) CO₂ and carbon emissions from cities: linkages to air quality, socioeconomic activity and stakeholders in the Salt Lake City urban area, *Bulletin of the American Meteorological Society*, November 2018, 2325-2339. <https://doi.org/10.1175/BAMS-D-17-0037.1>

105. Salmon, O.E., P.B. Shepson, X. Ren, H. He, R.R. Dickerson, B.H. Stirm, S.S. Brown, D.L. Fibiger, E.E. McDuffie, T.L. Campos, **K.R. Gurney**, J.A. Thornton (2018) Top-down Estimates of NO_x and CO Emissions from Washington, D.C.-Baltimore During the WINTER Campaign, *Journal of Geophysical Research*, <https://doi.org/10.1029/2018JD028539>.
104. Graven, H., M.L. Fischer, T. Lueker, S. Jeong, T.P. Guilderson, R.F. Keeling, R. Bambha, K. Brophy, W. Callahan, X. Cui, C. Frankenberg, **K.R. Gurney**, B.W. LaFranchi, S.J. Lehman, H. Michelsen, J.B. Miller, S. Newman, W. Paplawsky, N.C. Parazoo, C. Sloop, S.J. Walker (2018) Assessment of Fossil Fuel CO₂ Emission in California Using Atmospheric Observations and Models, *Environ. Res. Lett.*, 13 065007. <https://doi.org/10.1088/1748-9326/aabd43>.
103. Liu, J, K. Bowman, N. Parazoo, A. Anthony, D. wunch, J. Zhe, **K.R. Gurney**, D. Schimel (2018) Detecting drought impact on terrestrial biosphere carbon fluxes over contiguous US with satellite observations, *Env. Res. Lett.*, 13 (9) 095003. <https://doi.org/10.1088/1748-9326/aad5ef>.
102. Nathan, B., T. Lauvaux, J. Turnbull, **K.R. Gurney** (2018) Investigations Into the Use of Multi-Species Measurements for Source Apportionment of the Indianapolis Fossil Fuel CO₂ Signal, *Elem Sci Anth.* 6(1):21. DOI: <http://doi.org/10.1525/elementa.131>
101. Wu, K., T. Lauvaux, K.J. Davis, A. Deng, I. Lopez Coto, **K.R. Gurney**, R. Patarasuk (2018) Joint inverse estimation of fossil fuel and biogenic CO₂ fluxes in an urban environment: An observing system simulation experiment, *Elem. Sci. Anth.* 6(1):17. DOI: <http://doi.org/10.1525/elementa.138>
100. 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 (2018) Long-term urban carbon dioxide observations reveal spatial and temporal dynamics related to urban characteristics and growth, *Proceedings of the National Academy of Sciences*. March 5, 2018, <https://doi.org/10.1073/pnas.1702393115>
- 2017**
99. Bowman, K., J. Liu, A. Bloom, N. Parazoo, M. Lee, Z. Jiang, D. Menemenlis, M. Gierach, G. Collatz, **K.R. Gurney** (2017) Global and Brazilian carbon response to El Nino Modoki 2011-2010, *Earth and Space Science*, 4, 637-660. <https://doi.org/10.1002/2016EA000204>
98. 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 (2017) [Contrasting carbon cycle responses of tropical continents to the 2015-16 El Nino](https://doi.org/10.1126/science.1258000), *Science*, 358, 191.
97. 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.elementascience.org/articles/10.12952/journal.elementa.000037/>
96. 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 CO₂ inversion system, *Elem. Sci. Anth.*, <https://www.elementascience.org/articles/10.1525/elementa.133/>
95. Liang, J., **K.R. Gurney**, D. O'Keefe, M. Hutchins, R. Patarasuk, J. Huang, Y. Song, P. Rao (2017) Optimizing the spatial resolution for urban CO₂ flux studies using the Shannon entropy, *Atmosphere*, 8(90), <https://doi.org/10.3390/atmos8050090>
94. 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 CO₂ emissions in urban atmospheric inversions: A case study for Indianapolis, IN, *Elem. Sci. Anth.*, <https://www.elementascience.org/articles/10.1525/elementa.146/>
93. 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'Keefe, **K.R. Gurney**, R. Lauvaux, P. Wennberg (2017) Emissions and topography effects on column CO₂ (XCO₂) variation, with a focus on the Southern California Megacity, *JGR-Atmospheres*, <https://doi.org/doi:10.1002/2017JD026455>.
92. 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.elementascience.org/article/10.1525/elementa.188/>

91. 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. <http://doi.org/10.1525/elementa.127>
90. Heimbürger, A.M.F., P.B. Shepson, B.H. Stirm, C. Susdorf, J. Turnbull, M.O.L. Cambaliza, O.E. Salmon, A.-E.M. Kerlo¹, 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>
89. **Gurney, K.R.**, J. Liang, R. Patarasuk, D. O’Keeffe, M. Hutchins, T. Lauvaux, J.C. Turnbull, P.B. Shepson (2017) Reconciling the differences between a bottom-up and inverse-estimated FFCO₂ 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. <https://doi.org/10.1016/j.enbuild.2017.01.077>
87. Rao, P., **K.R. Gurney**, R. Patarasuk, Y. Song, C.E. Miller, R. Duren, A. Eldering (2017) Spatio-temporal variations in on-road CO₂ emissions in the Los Angeles Megacity, *AIMS Geosci*, **3**(2), 239-267. DOI: [10.3934/geosci.2017.2.239](https://doi.org/10.3934/geosci.2017.2.239)
86. 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.*, <https://doi.org/10.1002/2016JD025617>
- 2016**
85. Schimel, D., P. Sellers, B. Moore, A. Chatterjee, D. Baker, J. Berry, K. Bowman, D. Crisp, S. Crowell, S. Denning, R. Duren, P. Friedlingstein, M. Geirach, **K.R. Gurney**, K. Hibbard, R. Houghton, D. Huntzinger, G. Gurttt, K. Jucks, T. Yokota (2020) Observing the Carbon-Climate System. arXiv preprint arXiv:1604.02106
84. **Gurney, K.R.**, J. Huang and K. Coltin (2016) Bias present in US federal agency power plant CO₂ emissions data and implications for the US clean power plan, *Env. Res. Lett.*, **11**, 064005, <https://doi.org/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. <https://doi.org/10.1016/j.energy.2016.05.118>
82. Huang, J. and **K.R. Gurney** (2016) The hidden spatiotemporal vulnerability of US building energy demand to climate change, *Climatic Change*, <https://doi.org/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 CO₂ emissions during the dormant season of the Indianapolis Flux Experiment (INFLUX), *Journal of Geophysical Research*, **121**, <https://doi.org/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 CO₂ emissions top-down atmospheric measurements in the Los Angeles megacity](https://doi.org/10.1029/2015JD024473), *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 CO₂ emissions quantification to urban climate policy in Salt Lake County, Utah USA, *Urban Ecosystems*, 19(3), 1013-1039. <https://doi.org/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 CH₄ and N₂O emissions overwhelm land CO₂ sink, contributing to climate change, *Nature*, <https://doi.org/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 CO₂ 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 CO₂ concentration to sub-annual variations in fossil fuel CO₂ 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. Hutyrá, 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 CO₂ 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 CO₂ 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-CH₄: 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. Hutyrá, 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 CO₂ concentration to regridding of fossil fuel CO₂ 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 CO₂ 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. Peregon, 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. Luysaert, 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 CO₂ 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 ¹⁴CO₂](#), *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 CO₂ 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 CO₂ 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 CO₂ 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 CO₂ 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 CO₂ Emissions Estimation](#), *Energy Policy*, **55**, 386-395.

2012

52. **Gurney, K.R.**, Razlivanov, I., Song, Y. Zhou, Y., Benes, B., M. Abdul-Massih (2012) [Quantification of fossil fuel CO₂ on the building/street scale for a large US city](#) *Environ. Sci. & Tech.*, **46**, 12194-12202, dx.doi.org/10.1021/es3011282
51. Castillo, K.G. and **K.R. Gurney** (2013) [A Sensitivity Analysis of Surface Biophysical, Carbon, and Climate Impacts of Tropical Deforestation Rates in CCSM4-CNDV](#), *J. of Climate*, **26** (3), 805-821.
50. Castillo, K., Raymond, L. and **K.R. Gurney** (2012) [REDD+ in Developing Countries: Thinking Outside the Carbon Box](#), *Carbon Management*, **3**(5), 457-466.
49. Cragg, M.I, Y. Zhou, **K.R. Gurney**, and M.E. Kahn (2013) [Carbon Geography: The Political Economy of Congressional Support for Legislation Intended to Mitigate Greenhouse Gas Production](#), *Economic Inquiry*, DOI: 10.1111/j.1465-7295.2012.00462.x
48. **Gurney, K.R.**, Castillo, C.K.G., X. Zhang, and B. Li (2012) [A positive carbon feedback to ENSO and volcanic aerosols in the tropical terrestrial biosphere](#), *Glob. Biogeochem. Cyc.* **26**, GB1029, doi:10.1029/2011GB004129
47. Brioude, J., G. Petron, G.J. Frost, R. Ahmadov, W.M. Angevine, E.-Y. Hsie, S.-W. Kim, S.-H. Lee, S.A. McKeen, M. Trainer, F.C. Fehsenfeld, J.S. Holloway, J. Peischl, T.B. Ryerson, **K.R. Gurney** (2012) [A new inversion method to calculate emission inventories without a prior at mesoscale: Application to the anthropogenic CO₂ flux from Houston, Texas](#), *J. Geophys. Res.* **117**, D05312, 15 pp., doi:10.1029/2011JD016918
46. Castillo, C.K.G and **K.R. Gurney** (2012) [Surface biophysical-climate impacts of tropical deforestation with time-dependence: Sensitivity to deforestation rates](#), *J. of Earth Interactions*, **16**, 1-23, 10.1175/2011EI390.1

2011

45. Zhou, Y., Weng, Q., **Gurney, K.R.**, Shuai, Y. and X. Hu (2011) [Estimation of the relationship between remotely sensed anthropogenic heat discharge and building energy use](#), *International Society for Photogrammetry and Remote Sensing*, **67**, 65-72.
44. **Gurney, K.R.** (2011) [Observing Human CO₂ Emissions](#), *Carbon Management*, **2** (3), 223-226.
43. Andryscio, N., Rosen, P., Popescu, V., Benes, B., and **K.R. Gurney** (2011) [Experiences in Disseminating Educational Visualizations](#), *International Symposium on Visual Computing*, **2**, 239-243.
42. **Gurney, K.R.** and W. Eckels, (2011) [Trend estimates in regional land-atmosphere carbon exchange and their seasonal drivers derived from atmospheric CO₂ inversions](#), *Tellus B*, **25**, DOI: 10.1029/2010GB003813.
41. Zhou, Y., and **K. R. Gurney** (2011), [Spatial relationships of sector-specific fossil fuel CO₂ emissions in the United States](#), *Glob. Biogeochem. Cycles*, **25**, GB3002, doi:10.1029/2010GB003822.
40. Hayes, D.J., A.D. McGuire, D.W. Kicklighter, **K.R. Gurney**, T.J. Burnside, and J.M. Melillo, (2011) [Is the northern high latitude land-based CO₂ sink weakening?](#), *Glob Biogeochem. Cyc.*, **25**, 10.1029/2010GB003813.
39. Anderson, R.G., Canadell, J.G., Randerson, J.T., Jackson, R.B., Hungate, B.A., Baldocchi, D.D., Ban-Weiss, G.G., Bonan, G.B., Caldeira, K., Cao, L., Diffenbaugh, N.S., **Gurney, K.R.**, Kueppers, L.M., Law, B.E., Luyssaert, S., O'Halloran, T.L. (2011) [Biophysical considerations in forestry for climate protection](#), *Front. Ecol. Environ.* doi:10.1890/090179.

2010

37. Canadell, P., Ciais P., Dhakal S., Dolman H., Friedlingstein P., **Gurney K.R.**, Held A., Jackson R.B., Le Quere C., Malone E.L., Ojima D.S., Patwardhan A., Peters G.P., Raupach M.R. (2010) [Interactions of the carbon cycle, human activity, and the climate system: a research portfolio](#), *Current Opinion in Env. Sust.*, **4** (2), 301-311.
36. Zhou, Y. and **K.R. Gurney** (2010) [A New Methodology for Quantifying Residential and Commercial Fossil Fuel CO₂ Emissions at the Building Spatial Scale and Hourly Time Scale](#), *Carbon Management*, **1**(1), 45-56.
35. McGuire, A.D., D.J. Hayes, D.W. Kicklighter, M. Manizza, Q. Zhuang, M. Chen, M.J. Follows, **K.R. Gurney**, J.W. McClelland, J.M. Melillo, B.J. Peterson, R.G. Prinn (2010) An analysis of the carbon balance of the arctic basin from 1997 to 2006, *Tellus*, **62B**(5), 455-474, DOI: 10.1111/j.1600-0889.2010.00497.x.
34. Parshall, L., **K.R. Gurney**, S.A. Hammer, D.L. Mendoza, Y. Zhou, and S. Geethakumar, (2010) [Modeling Energy Consumption and CO₂ Emissions at the Urban Scale: Methodological Challenges and Insights from the United States](#), *Energy Policy*, **38** (9), 4765-4782, doi:10.1016/j.enpol.2009.07.006.

33. Corbin, K., S. Denning, **K.R. Gurney** (2010) [Effects of Spatially and Temporally Redistributing Fossil Fuel Emissions on Atmospheric CO₂ Concentrations](#), *Tellus B*, **62**, 506–511. doi: 10.1111/j.1600-0889.2010.00480.x

2009

32. Le Quere C. M.R. Raupach, J.G. Canadell, G. Marland L. Bopp, P. Ciais, T.J. Conway, S.C. Doney, R.A. Feely, P. Foster, P. Friedlingstein, **K.R. Gurney**, R.A. Houghton, J.I. House, C. Huntingford, P.E. Levy, M.R. Lomas, J. Majkut, N. Metzler, J.P. Ometto, G.P. Peters, I.C. Prentice, J.T. Randerson, S.W. Running, J.L. Sarmiento, U. Schuster, S. Sitch, T. Takahashi, N. Viovy, G.R. van der Werf & F.I. Woodward. (2009) [Recent Trends in the sources and sinks of carbon dioxide](#), *Nature Geosciences*, **2** (12), 831-836, doi: 10.1038/ngeo689.
31. Mays, K.L., P.B. Shepson, B.H. Stirm, A. Karion, C. Sweeney, **K.R. Gurney** (2009) [Aircraft-Based Measurements of the Carbon Footprint of Indianapolis](#), *Environ. Sci. Technol.*, DOI: 10.1021/es901236b.
30. **Gurney, K.R.** (2009) China at the Carbon Crossroads, *Nature News & Views*, **458**, 979-980.
29. **Gurney, K.R.**, D. Mendoza, Y. Zhou, M Fischer, S. de la Rue du Can, S. Geethakumar, C. Miller (2009) [High resolution fossil fuel combustion CO₂ emissions fluxes for the United States](#), *Environ. Sci. Technol.*, **43**(14), 5535-5541, doi:10.1021/es900806c.
28. Andryscio, N, **K.R. Gurney**, B. Benes, & K. Corbin (2009) A system for visual exploration of CO₂ data, *IEEE Computer Graphics and Applications*, p. 6-11, Jan/Feb.

2008

27. **Gurney, K.R.**, and A.S. Denning (2008) TransCom 3: Annual Mean CO₂ Flux Estimates from Atmospheric Inversions (Level 1). Data set. Available on-line [http://daac.ornl.gov/] from Oak Ridge National Laboratory Distributed Active Archive Center, Oak Ridge, Tennessee, U.S.A. doi:10.3334/ORNLDAAAC/895.
26. Alexandrov, G.A., D. Chan, M. Chen, **K.R. Gurney**, K. Higuchi, A. Ito, C.D. Jones, A. Komarov, K. Mabuchi, D.M. Matross, F. Veroustraete, W.W. Verstraeten (2008) Chapter Nineteen Model-Data Fusion in Studies of the Terrestrial Carbon Sink, *Developments in Integrated Environmental Assessment*, **3**, 329-344.
25. Lokupitiya, R.S., D. Zupanski, A.S. Denning, **K.R. Gurney**, R. Kawa & M. Zupanski (2008) Estimation of CO₂ fluxes at regional scale using the maximum likelihood ensemble filter, *J. Geophys. Res.* **113**, D20110, doi:10.1029/2007JD009679.
24. **Gurney, K.R.** and L. Raymond (2008) [Targeting deforestation rates in climate change policy: A 'preservation pathway' approach](#), *Carbon Balance and Management*, **3** (2), doi:10.1186/1750-0680-3-2.
23. **Gurney, K.R.**, D. Baker, P. Rayner, A.S. Denning & TransCom 3 L2 modelers (2008) [Interannual variations in regional net carbon exchange and sensitivity to observing networks estimated from atmospheric CO₂ inversions for the period 1979 to 2006](#), *Glob. Biogeochem. Cyc.*, **22**, GB3025, doi:10.1029/2007GB003082.

2007

22. Goetz, S.J., M.C. Mack, **K.R. Gurney**, and R.A. Houghton, (2007) Ecosystem responses to recent climate change at Northern high latitudes: observations and model results contrasting Northern Eurasia and North America, *Environ. Res. Lett.*, **2**, 0450312 (9pp), doi:10.1088/1748-9326/2/4/045031.
21. Butler, A., D. Thompson, and **K.R. Gurney**, (2007) Observed Relationships between the Southern Annular Mode and Atmospheric Carbon Dioxide, *Glob. Biogeochem. Cyc.*, **21**, GB4014, doi: 101029/2006GB002796.
20. Stephens, B.B., **K.R. Gurney**, P.P. Tans, C. Sweeney, W. Peters, L. Bruhwiler, P. Ciais, M. Ramonet, P. Bousquet, T. Nakazawa, S. Aoki, T. Machida, G. Inoue, N. Vinnichenko, J. Lloyd, A. Jordan, O. Shibistova, R.L. Langenfelds, L.P. Steele, R.J. Francey, & A.S. Denning (2007) Weak northern and strong tropical land carbon uptake from vertical profiles of atmospheric CO₂, *Science*, **316**, 1732-1735.

2006

19. Patra, P, **K.R. Gurney** and the TransCom 3 modelers (2006) Sensitivity of inverse estimation of annual mean CO₂ sources and sinks to ocean-only sites vs all-sites obs. Networks, *GRL*, **33**, doi:10.1029/2005GL025403.
18. Baker, D. R.M . Law, **K.R. Gurney**, A.S. Denning, P.J. Rayner, and TransCom 3 modelers (2006) TransCom 3 inversion intercomparison: Impact of transport model errors on the interannual

variability of regional CO₂ fluxes, 1988-2003, *Glob. Biogeochem. Cyc.*, **20**, GB1002, doi:10.1029/2004GB002439.

2005

17. Michalak, A.M., Hirsch, A., Bruhwiler, L., **Gurney, K.R.**, Peters, W., Miller, J.B., and Tans, P.P. (2005) Maximum likelihood estimation of covariance parameters for Bayesian atmospheric trace gas surface flux inversions, *J. Geophys. Res.*, **110**, D24017, doi:10.1029/2005JD005970.
16. Yuen, C-W., Higuchi, K., and TransCom-3 Modelers (2005) Impact of Fraserdale CO₂ Observations on Annual Flux Inversion of the North America Boreal Region, *Tellus*, **57B**, 203-209.
15. **Gurney, K.R.**, Y.H.Chen, T. Maki, S.R. Kawa, A. Andrews, Z. Zhu (2005) [Sensitivity of Atmospheric CO₂ Inversion to Seasonal and Interannual Variations in Fossil Fuel Emissions](#), *J. Geophys. Res.* **110** (D10), 10308-10321.

2004

14. **Gurney, K.R.** (2004) Towards robust regional estimates of carbon sources and sinks using atmospheric transport models - the TransCom 3 Experiment, *World Resource Review*, **16** (2), 243-258.
13. **Gurney, K.R.**, R.M. Law, A.S. Denning, P.J. Rayner, B. Pak, and the TransCom 3 L2 modelers (2004) [Transcom 3 Inversion Intercomparison: Control results for the estimation of seasonal carbon sources and sinks](#), *Glob. Biogeochem. Cyc.*, **18**, GB1010, doi:10.1029/2003GB002111.

2003

12. Dilling, L., S. Doney, J. Edmonds, **K.R. Gurney**, R. Harriss, D. Schimel, B. Stephens, & G. Stokes (2003) The role of carbon cycle observations and knowledge in carbon management," *Annu. Rev. Env. Resour.*, **28**, 521-58.
11. Patra, P.K., S. Maksyutov, and TransCom 3 modelers (2003) Sensitivity of optimal extension of CO₂ observation networks to model transport, *Tellus*, **55B**, 498-511.
10. Maksyutov, S., T. Machida, H. Mukai, P. Patra, T. Nakazawa, G. Inoue, and TransCom 3 modelers (2003) Effect of recent observations on Asian CO₂ flux estimates with transport model inversions, *Tellus*, **55B**, 522-529, 2003.
9. Law, R., Y.H. Chen, **K.R. Gurney**, P. Rayner, A.S. Denning, and TransCom 3 modelers (2003) TransCom3 CO₂ inversion intercomparison: 2. Sensitivity of annual mean results to data choices, *Tellus*, **55B** (2), 512-521, 2003.
8. **Gurney, K.R.**, R.M. Law, A.S. Denning, P.J. Rayner, D. Baker, P. Bousquet, L. Bruhwiler, Y.H. Chen, P. Ciais, S. Fan, I.Y. Fung, M. Gloor, M. Heimann, K. Higuchi, J. John, E. Kowalczyki, T. Maki, S. Maksyutov, P. Peylin, M. Prather, B. Pak, J. Sarmiento, S. Taguchi, T. Takahashi, C.W. Yuen (2003) Transcom 3 CO₂ Inversion Intercomparison: 1. Annual mean control results and sensitivity to transport and prior flux information, *Tellus*, **55B**, 555-579.

Before 2003

7. Engelen, R.J., A. Scott Denning, **K.R. Gurney**, and TransCom 3 modelers (2002) On Error Estimation in Atmospheric CO₂ Inversions, *J. of Geophys. Res.*, **107** (D22), 4635.
6. **Gurney, K.R.**, R.M. Law, A.S. Denning, P.J. Rayner, D. Baker, P. Bousquet, L. Bruhwiler, Y.H. Chen, P. Ciais, S. Fan, I.Y. Fung, M. Gloor, M. Heimann, K. Higuchi, J. John, T. Maki, S. Maksyutov, K. Masarie, P. Peylin, M. Prather, B.C. Pak, J. Randerson, J. Sarmiento, S. Taguchi, T. Takahashi, C.W. Yuen (2002) [Towards robust regional estimates of CO₂ sources and sinks using atmospheric transport models](#), *Nature*, **415**, 626-630, February 7.
5. Engelen, R.J., A.S. Denning, **K.R. Gurney**, and G.L. Stephens (2001) Global observations of the carbon budget: I. Expected satellite capabilities in the EOS and NPOESS eras, *J. of Geophys. Res.*, **106** (D17), 20055-20068.
4. Denning, A.S. M. Holzer, **K.R. Gurney**, M. Heimann, R.M. Law, P.J. Rayner, I.Y. Fung, S. Fan, S. Taguchi, P. Friedlingstein, Y. Balkanski, M. Maiss, and I. Levin, (1999) Three-dimensional transport and concentration of SF₆: A model intercomparison study (Transcom 2), *Tellus*, **51B**, 266-297.
3. **Gurney, K.R.** (1998) Evidence for increasing ultraviolet irradiance at Point Barrow, Alaska, *Geophys. Res. Lett.*, **25** (6), 903-906, March 15.
2. **Gurney, K.R.** (1991) National Greenhouse Accounting, *Nature*, **353**, 23.

1. **Gurney, K.R.**, A.D.A Hansen, and H. Rosen (1998) Methane and Carbon Dioxide Increases in the Urban Boundary Layer: Inferences from Whole Column Infrared Absorbance Measurements *Geophys. Res. Lett.*, **15**, 32-35.

BOOKS

National Academies of Sciences, Engineering, and Medicine. 2022. Greenhouse Gas Emissions Information for Decision Making: A Framework Going Forward. Washington, DC: The National Academies Press. <https://doi.org/10.17226/26641>.

Makhijani A. and **K.R. Gurney**, "Mending the Ozone Hole: Science, Technology and Policy," MIT Press, 1995.

BOOK CHAPTERS

Alexandrov, GA, D Chan, M Chen, **K.R. Gurney**, K Higuchi, A Ito, CD Jones, A Komarov, K Mabuchi, DM Matross, F Veroustraete, WW Verstraeten (2008) "Model-data fusion in studies of the terrestrial carbon sink" in *Environmental Modelling, software and decision support: State of the art and new perspective*, Jakeman, AJ, AA Voinov, AE Rizzoli, SH Chen (eds), Elsevier, October 2008, ISBN: 978-0-08-056886-7

Parshall, L., S.A. Hammer, **K.R. Gurney** (2012) Chapter 4: Energy consumption and CO₂ emissions in urban counties in the United States with a case study of the New York Metropolitan area, in *Cities and Climate Change, Responding to an Urgent Agenda*, Hoornweg, D., M. Freire, M.J. Lee, P. Bhada-Tata, and B. Yuen (eds), World Bank, Wash, DC.

Gurney, K. R., P. Romero-Lankao, S. Pincetl, M. Betsill, M. Chester, F. Creutzig, K. Davis, R. Duren, G. Franco, S. Hughes, L. R. Hutyrá, C. Kennedy, R. Krueger, P. J. Marcotullio, D. Pataki, D. Sailor, and K. V. R. Schäfer (2018) Chapter 4: Understanding urban carbon fluxes. In *Second State of the Carbon Cycle Report (SOCCR2): A Sustained Assessment Report*. [Cavallaro, N., G. Shrestha, R. Birdsey, M. A. Mayes, R. G. Najjar, S. C. Reed, P. Romero-Lankao, and Z. Zhu (eds.)]. U.S. Global Change Research Program, Washington, DC, USA, pp. 189-228, [doi: 10.7930/SOCCR2.2018.Ch4](https://doi.org/10.7930/SOCCR2.2018.Ch4)

OTHER PUBLICATIONS (a sample)

Bernow, S., M. Becker, B. Biewald, **K.R. Gurney**, R. Hornby, D. Marron, R. Rosen, and D. Singh, "Environmental Impacts of Long Island's Energy Choices: The Environmental Benefits of Demand-Side Management", Tellus Institute, September, 1990.

Makhijani, A., **K.R. Gurney** and Annie Makhijani, "Saving Our Skins: The Causes and Consequences of Ozone Layer Depletion and Policies for its Restoration and Protection", IEER, February 19, 1992.

Ko, M.K.W., N.D. Sze, D.T. Chang, G.I. Molnar, and **K.R. Gurney**, "Estimates of the Lifetimes and Global Warming Potentials of Chemical Compounds", AER, Inc., March 1992.

Makhijani, A. and **K.R. Gurney**, "Petition Under the Clean Air Act to the Administrator of the EPA for Reclassification of HCFC-22, HCFC-141b, and HCFC-142b as Class I Compounds, and Other Matters Related to the Protection of the Ozone Layer", Submitted to the Administrator of the EPA, April 14, 1992.

Franke, B., **K.R. Gurney**, A. Makhijani and M. Hoenig, "Uranium Doses to Workers at The Feed Materials Production Center -- Six Case Studies", IEER, December 23, 1992.

Gurney, K.R. (1996) "Saving the Ozone Layer Faster", *Technology Review*, January, 1996.

Gurney, K.R. "The Economics of Mitigating Climate Change: Boom or Bust?," Briefing Paper for the Union of Concerned Scientists, Sound Science Initiative, July 1997.

Gurney, K.R. "Warm, Dangerous Wind is Blowing Across the Planet," Op/Ed, The Santa Barbara News-Press, November 2, 1997.

Gurney K.R. and J. Neff, "Carbon Sequestration Potential in Canada, Russia, and the United States Under Article 3.4 of the Kyoto Protocol," World Wildlife Fund, June 2000.

Gurney, K.R., R. Law, P. Rayner, and S. Denning, "TransCom 3 Experimental Protocol," Department of Atmospheric Science, Colorado State University, paper no. 707, July 2000.

Gurney, K.R. (2003) Book review of Fay and Golomb, "Energy and the Environment", *EOS Trans. Amer. Geophys. Union*, **84** (17), 2003.

Gurney, K.R. "Post-2012 LULUCF Options", white paper prepared for World Wildlife Fund, February 2006.

Gurney, K.R. "How 'sinks' nearly sunk the Kyoto Protocol", Insights Last Word, Purdue University, Fall/Winter 2006.

Gurney, K.R. "Resizing China's footprint on climate," Op/Ed, *South China Morning Post*, 12/31/2007.

Gurney, K.R., W. Ansley, D. Mendoza, B. Seib, G. Petron, G. Frost, J. Gregg, M. Fischer, D. Pataki, K. Ackerman, S. Houweling, K. Corbin, R. Andres and T.J. Blasing, (2007) Research needs for process-driven, finely resolved fossil fuel carbon dioxide emissions, *EOS Trans. Amer. Geophys. Union*, **88** (49), 542-543.

Gurney, K.R., Raymond, L., Cason, T. and H. Rowe, "A chance to compete fairly in marketplace", Op/Ed, *Indianapolis Star*, 5/31/2009.

Gurney, K.R., H.I Rowe, and M. Rikkers, "Forging a comprehensive strategy on climate change, Guest Commentary, *Telluride Daily Planet*, 8/25/2009

Gurney, K.R. (2010) "Stop Listening to Scientists?", letter, *Science*, 327, p. 780, February 12.

Gurney, K.R., "Midwest should embrace clean-energy opportunities," Op/Ed, *The Fort Wayne Journal Gazette*, 5/11/2010.

Canadell, P., Ciais P., **Gurney K.R.**, Le Quere C., Piao, S., Raupach M.R., and C. Sabine (2011) An international effort to quantify regional carbon fluxes, *EOS Trans. Amer. Geophys. Union*, **92** (10), 81-88.

Gurney, K.R. (2013) Turning Point, Kevin Gurney, *Nature*, **500**, 245, 8 August.

Gurney, K.R. (2013) Beyond Hammers and Nails: Mitigating and Verifying Greenhouse Gas Emissions, *EOS Trans. Amer. Geophys. Union*, **94** (22), 199-200, May 28.

Gurney, K.R. and D. O'Keeffe (2013) Crowdsourcing power plant carbon dioxide emissions data, *EOS Trans. Amer. Geophys. Union*, **94**(43), 385-386.

Over 300 public talks and poster presentations

POSTDOCTORAL SCHOLARS

Anna Kato (current)
 Bhaskar Mitra (2020-2022, unknown)
 Yang Song (2019-2021, unknown)
 Pawlok Dass (current)
 Geoffrey Roest (-2022, Crosswalk Labs)
 Jianming Liang (2015-2018, research scientist, ESRI)
 Preeti Rao (2013-2016, Research Scientist, University of Michigan)
 Xia Zhang (2009-2014, postdoctoral researcher at San Diego State University)
 Igor Razlivanov (2011-2013, current position unknown)
 Salvi Asefi-Najafabady (2012-2015, Faculty research associate at University of Virginia)
 Risa Patarasuk (2013-2016, postdoctoral research, UC Irvine)
 Yuyu Zhou (2008-2010, Assistant Professor at Iowa State University)

GRADUATE STUDENTS

Huilin Sun (starting Fall, 2022, School of Informatics, Cyber Systems, and Computing)
Bilal Aslam (current, School of Informatics, Cyber Systems, and Computing)
 Taha Moiz (2022, Ph.D., School of Sustainability)
 Darragh O'Keeffe (2017, M.A., School of Sustainability)
 Maya Hutchins (discontinued, Ph.D. track, Geographical Science & Urban Planning)
 Ryan Anderson (2015, M.A., Sustainability)
 Scott Norby-Castillo (2016, M.A., Sustainability)
 Jianhua Huang (2016 Ph.D., Life Sciences)
 Yang Song (2018 Ph.D., Life Sciences)
 Vicky Liao (2013, M.S., co-advised with SGSUP)
 Kevin Coltin (2013, M.S., co-advised with SMSS, current: Analyst, Adv. Analytics & Modeling, Deloitte)
 Daniel Mendoza (2012, Ph.D., current: postdoc, Dept. Geology, Univ. of Utah)
 Charlotte Castillo (2012, Ph.D., , Ross Fellowship, Fullbright scholar, current: Professor at Manila Observatory, Ateneo de Manila University)
 Vandhana Chandrasekaran (2011, M.S., co-advised with Computer Sci., current: Assoc. Advisory at PwC)
 Advait Godbole (2011, M.S., current: unknown)
 Nalin Sahni (2010, M.S., co-advised with Civil Engineering, current: unknown)

Sarath Geethakumar (2010, M.S., co-advised with Comp. Sci., current: Senior Director, Mobile & Product Security, American Express)

Warren Eckels (2009, M.S., current: Adjunct Instructor at Ivy Tech Community College)

COURSES TAUGHT

Guest lecturer in numerous courses, School of Informatics, Computing, and Cyber Systems, NAU

INF 501: Research Methods in Informatics and Computing, School of Informatics, Computing, and Cyber Systems, NAU

INF 601: Research Methods in Informatics and Computing, School of Informatics, Computing, and Cyber Systems, NAU

Guest lecturer in numerous courses, School of Life Sciences, School of Sustainability, ASU

Collated all climate change related courses currently offered at ASU in order to centralize a climate change course offering – upcoming.

BIO 320: Fundamentals of Ecology (undergraduate), ASU

BIO 182: General Biology II (undergraduate), ASU

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

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

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

EAS 591A: Anthropogenic Climate Change (graduate) , Purdue University

Guest lecturer, Department of Atmospheric Science, Colorado State University, 1999 – 2005

Faculty lecturer and field instructor, Cruising for Conservation, Coastal Marine Education and Research Academy (CMERA), 2016

Instructor, SPATIAL Isotopes in Biogeochemistry & Ecology course, 2013-2017

PH.D. COMMITTEE SERVICE

Kat Fowler, Northern Arizona University, Ph.D. candidate, Advisor: Dr. Benjamin Ruddell

Janet Reyna, Arizona State University, Ph.D. candidate, Advisor: Dr. Mikhail Chester

Amy Hawes, Dept of Atmospheric Sci, Colorado State University, Ph.D. candidate, Advisor: Dr. Dave Thompson

Kathy Corbin, Dept of Atmospheric Sci, Colorado State University, Ph.D. Candidate, Advisor: Dr. Scott Denning

Ryan Sriver, Dept of Earth and Atmospheric Sciences, Purdue University, Advisor: Dr. Matt Huber

Megan Walker, Dept of Earth and Atmospheric Sciences, Purdue University, Advisor: Dr. Noah Diffenbaugh

Jinyun Tang, Dept of Earth and Atmospheric Sciences, Purdue University, Advisor: Dr. Qianlai Zhuang