

Kevin Robert Gurney

School of Informatics, Computing, and Cyber Systems | Northern Arizona University
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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

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, Cities Special Report, 2024-present
IPCC Lead Author, 6th Assessment Report (organizational co-recipient of 2022 Gullbenkian 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

Dept of Energy Southwest Integrated Urban Field Laboratory: 12/2022–12/2027, \$25 million CANCELED
National Institute for Standards and Technology: 9/2023 – September 2026, \$1,559,044 CANCELED
Builders Vision/Grantham Foundation: 9/2022 – 9/2024+, \$950,000
Department of Energy, SWIFL supplement funding award: 12/2024 – 12/2025+, \$428,853

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 – 2023
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

US Global Change Research Program, Carbon Cycle Science Plan, lead author, September 2024 - present
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 – 3/2023
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
European Geophysical Union member since 2020
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: 24695 (Google Scholar, 8/19/2026)

h-index: 69 (Google Scholar, 8/19/2026)

2026

192. **Gurney, K.R.**, B. Aslam, P. Dass, S.S.H. Podhili, A. Kato (2026) The urban share and regional urban dynamics of global greenhouse gas emissions, *under review at Nat. Comm.*
191. Chakraborty, T.C., B.N. Sulman, et al. (2026) A Roadmap for Improved Urban Representation in Process-Based Land Surface Models, *submitted to AGU Advances*.
190. Wang, C., W Tang, C He, A. Guenther, R.M. Garland, X-M. Hu, D. Tong, **K.R. Gurney**, C. Granier, B.C. McDonald, M. de Fátima Andrade (2026) High-resolution emission source mapping: A bottleneck for

- understanding urban climate and air quality, *Environ. Res. Lett.* **21** 151003, <https://doi.org/10.1088/1748-9326/ae8feb>.
189. Cahuich Lopez, M., C.P. Loughner, F. Ngan, A. Karion, L. Hu, I. Lopez-Coto, K. Mueller, J.K. Marrs, A. Andrews, J. Miller, B.C. McDonald, C. Harkins, C. Lyu, M. Li, **K.R. Gurney**, M. Cohen, H. Diamond, A. Stein, J. Whetstone (2026) Development and Evaluation of an Urban Atmospheric Inverse Modeling Framework for the Washington, DC and Baltimore, MD Metropolitan Area: Initial Results from an Inert Tracer Case Study, *Journal of Geophysical Research: Atmospheres*, 131, e2025JD045557. <https://doi.org/10.1029/2025JD045557>
 188. Lamarque, J-F., P. Friedlingstein, B. Osias, S. Strongin, V. Balaji, K.W. Bowman, J.G. Canadell, P. Ciais, H. Cullen, K.J. Davis, S.C. Doney, **K.R. Gurney**, A.R. Karspeck, C.D. Koven, G. McKinley, G.P. Peters, J. Pongratz, B. Stephens, and C. Sweeney (2026) Improved Comparability and System-Wide Verification to Support a Scalable Carbon Credit Market, *EGUsphere Perspective*, *in review*.
 187. Kato, A., **K.R. Gurney**, P. Sadavarte (2026) Hestia Fossil Fuel Carbon Dioxide (FFCO₂) Data Product – NE corridor domain, Version 2.0, 1km grid (v2.0) [Data set]. Zenodo. <https://doi.org/10.5281/zenodo.19405812>
 186. Dass, P., **K.R. Gurney**, L. Gawuc, A. Kato, B. Aslam, S. Podhili (2026) High-resolution anthropogenic heat flux from fossil fuel combustion and electricity consumption for the U.S., *under review at Scientific Data*.
 185. Montfort, S., Li, G., Nachtigall, F., Aslam, B., Dass, P., Creutzig, F., **Gurney, K.**, & Binder, C. R. (2026). Machine-learning augmented global analysis of urban emission trends, 2010-2022. Zenodo. <https://doi.org/10.5281/zenodo.19350859>.
 184. Kato, A., **K.R. Gurney**, P. Dass, L. Gawuc, E.A.G. Schuur, B. Aslam, H.I. Rowe, (2026) Hestia-Phoenix: high resolution 2010-2022 fossil fuel CO₂ emissions for Phoenix-Mesa Urban Area, Arizona, USA, *under review at Environmental Research Letters*.
 183. **Gurney, K., R.**, Aslam, B., P. Dass (2026) Assessing the accuracy of the Climate Trace global vehicular CO₂ emissions, *Environmental Research Letters*, <https://doi.org/10.1088/1748-9326/ae6355>.
 182. Sun, H., **K.R. Gurney**, P. Dass, A. Kato, L. Gawuc, B. Aslam (2025) Assessment of spatial downscaling used in global greenhouse gas emission estimates, *under review at J. Cleaner Production*.
 181. Dass, P., **Gurney, K.R.**, Gawuc, L., Kato, A., & Aslam, B. (2026). Annual U.S. Vulcan Anthropogenic Heat Flux data product, 1km grid and city totals [Dataset]. Zenodo. <https://doi.org/10.5281/zenodo.17861115>
 180. Dass, P., **K.R. Gurney**, Y. Song, A. Kato, B. Aslam, L. Gawuc (2026) Advancing high-resolution U.S. onroad fossil fuel carbon dioxide emissions estimates, *Journal of Cleaner Production*, **555**, 148150. <https://doi.org/10.1016/j.jclepro.2026.148150>.
 179. Barkley, Z.R., K.J. Davis, M.L. Miles, S. Baray, F. Vogel, J. Kim, R.R. Weiss, J.C. Lin, **K.R. Gurney**, J.C. Turnbull, H.A. Young (2026) Using Tower-based Observational Networks to Assess the Impact of COVID-19 Lockdowns on Greenhouse Gas Emissions in Six North American Cities, *accepted to JGR: Atmos.*
- ## 2025
178. Lopez, M.C., C.P. Loughner, F. Ngan, A. Karion, L. Hu, I. Lopez-Coto, K.L. Mueller, J.K. Marrs, A. Andrews, J.B. Miller, B. McDonald, C. Harkins, C. Lyu, M. Li, **K.R. Gurney**, M. Cohen, H. Diamond, A.F. Stein, J. Whetstone (2025) Development and Evaluation of an Urban Atmospheric Inverse Modeling Framework for the Washington, DC and Baltimore, MD Metropolitan Area: Initial Results from an Inert Tracer Case Study, *submitted to JGR-Atmos.*
 177. Schafer, N.B. J. Peischl, E.C. Apel, B. Barletta, D.R. Blake, P. Dass, J.P. DiGangi, G.S. Diskin, C. Francoeur, A. Fried, J.B. Gilman, **K. Gurney**, C. Harkins, R.S. Hornbrook, X. Lan, A. Lamplugh, M. Li, S. Meinardi, J.B. Nowak, G. Petron, D. Richter, M. Selby, V. Selimovic, V. Treadaway, J. Walega, P. Weibring, C. Womack, S.S. Brown (2025) Trends in CH₄ Emission Sources in the Los Angeles Basin from 2010 to 2023 Using Airborne Measurement, *Environ. Sci. Tech.*, <https://doi.org/10.1021/acs.est.5c09817>.
 176. Barkley, Z. R., Davis, K. J., Miles, N. L., Vogel, F., Baray, S., Kim, J., Weiss, R. F., Lin, J. C., **Gurney, K. R.**, Turnbull, J. C., & Young, H. A. Six City Influence Functions: Feb-April 2017-2020. Penn State Data Commons, 2025 <https://doi.org/10.26208/4KQ2-ZF05>
 175. Kenion, H., et al. (2025) Detection of local-scale changes in greenhouse gas emissions in urban environments using micrometeorological methods and comparison to a high-resolution inventory, *accepted to Elementa: Science of the Anthropocene*.

173. Kato A., **K.R. Gurney** (2025): Hestia-SWIFL: hourly anthropogenic fossil fuel CO₂ and heat on the 2km WRF grid, version 1.0. Southwest Urban Corridor Integrated Field Laboratory (SW-IFL), ESS-DIVE repository. doi:10.15485/2568160 <https://data.ess-dive.lbl.gov/datasets/doi:10.15485/2568160>
172. **Gurney, K.R.**, P. Dass, A. Kato, L. Gawuc, B. Aslam, H. Sun (2025). Vulcan version 4.0 high-resolution annual fossil fuel and cement production carbon dioxide emissions in the United States for the 2010-2022 time period [Data set]. Zenodo. <https://doi.org/10.5281/zenodo.15446748>.
171. **Gurney, K.R.**, P. Dass, A. Kato, L. Gawuc, B. Aslam, H. Sun (2025) Vulcan version 4.0 high-resolution annual carbon dioxide emissions in the U.S. for the 2010-2022 time period, *Scientific Data*, 12:1946, <https://doi.org/10.1038/s41597-025-06391-w>.
170. Dass, P., **K.R. Gurney**, Song, Y., Kato, A., Aslam, B., & Gawuc, L. (2025) Vulcan v4-Onroad (DARTE grid) (1.1) [Data set]. Zenodo. <https://doi.org/10.5281/zenodo.15021740>
169. Asimow, N.G., M.Y. Patel, Y. Zhu, A.R. Winter, **K.R. Gurney**, W.M. Berelson, A.J. Turner, R.C. Cohen (2025) Differences in Regional Home Heating Behavior in Three U.S. Cities Revealed by Ground-Based Sensor Network, *Geophys. Res. Lett.*, 52, e2025GL115772. <https://doi.org/10.1029/2025GL115772>.
168. Lyu, C., C.Harkins, M. Li, K. Mueller, J. Prothero, A. Karion, B. Verreyken, J. Miller, S. Lehman, J. Peischl, J. Gilman, C. Warneke, M. Coggon, C. Stockwell, S. Brown, K. Zuraski, A. Lamplugh, **K. R. Gurney**, L. Gawuc, P. Dass, R. Hoesly, S. J. Smith, T. Oda, L. Hutya, C. Gately, C. Granier, J. Whetstone, and B. McDonald (2025) Development of the United States Greenhouse gas And Air Pollutants Emissions System (GRA²PES), *Journal of Geophysical Research: Atmospheres*, 130(20), e2025JD043597. <https://doi.org/10.1029/2025JD043597>

2024

167. 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>.
166. **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*, 11:1344, <https://doi.org/10.1038/s41597-024-04180-5>.
165. **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.*, **19**, 114062, <https://iopscience.iop.org/article/10.1088/1748-9326/ad8364>.
164. 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. Commane, C.K. Gately, L.R. Hutya, **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>.
163. 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>.
162. 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>
161. 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/

2023

160. 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/H62J-4004>.
159. 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>.
158. Roest, G., **K.R. Gurney**, Rayner, P.J. (2023) Utility-based energy consumption to improve urban building-scale CO₂ emissions, *in preparation*

157. **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, *EarthArXiv*, April, 20, 2021, <https://doi.org/10.31223/X5GC9Z>
156. 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>
155. Luqman, M., P.J. Rayner, **K.R. Gurney** (2023) On the impact of urbanization on CO₂ emissions, *Urban Sustainability*, **3**, 6, <https://10.1038/s42949-023-00084-2>

2022

154. 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>
153. 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>
152. 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://10.1088/1748-9326/ac7c29>
151. Hajny, K.D., R. Kaeser, T. Jayarathne, J. Tomlin, J. Pitt, P.B. Shepson, B.H. Stirm, C. Floerchinger, C. Gatelly, 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)
150. 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. Gatelly, L.R. Huttyra, **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>.
149. **Gurney, K.R.**, S. Kilgis, 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>
148. 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

147. 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>.
146. 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>
145. **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
144. Yadav, V., S. Ghosh, K. Mueller, A. Karion, G. Roest, S. Gourdji, I. Lopez-Coto, **K.R. Gurney**, K. Verhlust, 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>
143. Wu, K., K. Davis, N. Miles, S.J. Richardson, T. Lauvaux, D.P. Sarmiento, N.V. Balashov, K. Keller, J. Turnbull, **K.R. Gurney**, J. Liang, G. Roest (2021) Evaluating a high-resolution urban fossil CO₂

- emissions inventory using eddy-covariance flux measurements and source partitioning, *ESS Open Archive*. October 21, 2021. DOI: [10.1002/essoar.10508434.1](https://doi.org/10.1002/essoar.10508434.1)
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*.
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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

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

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