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

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 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: 12/2022 – 12/2027, $25 million (NAU: $3.75 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)
Department of Energy, SWIFL supplement funding award: 12/2024 – 12/2025, $428,853 (all NAU)
Pending:
Schmidt Virtual Institute for the Carbon Cycle (VICC) - $10,000,000 (5 years)

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: 22014 (Google Scholar, 6/2/2025)

h-index: 65 (Google Scholar, 6/2/2025)

2025

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, under review at *Elementa: Science of the Anthropocene*.

174. Dass, P., K.R. Gurney, Y. Song, A. Kato, B. Aslam, L. Gawuc (2025) Advancing high-resolution U.S. onroad fossil fuel carbon dioxide emissions estimates, *under review at J. of Cleaner Production*.
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, *under review at Scientific Data*.
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, *under review at Geophys. Res. Lett*.
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. Hutyra, C. Gately, C. Granier, J. Whetstone, and B. McDonald (2025) Development of the United States GReenhouse gas And Air Pollutants Emissions System (GRA²PES), *under review at JGR*.

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 CO_2 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. Hutyra, **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.**, Huneeus, 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 ($FFCO_2$) 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 CO_2 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 $FFCO_2$ 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 CO_2 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 CO_2 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 CO_2 flux measurements for evaluating a high-resolution urban CO_2 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. Gately, M. Sargent, S. Wofsy, **K.R. Gurney**, A. Karion, I. Lopez-Coto, A. Turner (2021) Estimating Anthropogenic CO_2 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. Gately, L.R. Hutyra, **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. Kilkis, 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 CO_2 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 CO_2 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

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, CO_2 and Methane Define a Decrease in Los Angeles CO_2 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 (N_2O) 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 CO_2 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 CO_2 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 $FFCO_2$ 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 CO_2 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 CO_2 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 CO_2 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 CO_2 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 CO_2 Emissions from Measurements of ^{14}C in Atmospheric CO_2, *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 CO_2 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. Hutyra, 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 CO_2 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. Heimburger, R. Harvey, J. Whetstone (2019), Synthesis of Urban CO_2 Emission Estimates from Multiple Methods from the Indianapolis Flux Project (INFLUX), *Environ. Sci. & Technol.,* 53, 287-295, https://doi.10.1021/acs.est.8b05552

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GRADUATE STUDENTS

Huilin Sun (current, School of Informatics, Cyber Systems, and Computing)

Bilal Aslam (current, School of Informatics, Cyber Systems, and Computing)

Shanthi Podhili (current, School of Informatics, Cyber Systems, and Computing Master degree)

Mahi Washim (current, School of Earth and Sustainability Master degree)

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 Liau (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 605: Professional Communication in Informatics and Computing, 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: Professional Development 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