Job Title: Postdoctoral scientist positions: anthropogenic CH_4 emissions estimation

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

Join an exciting Northern Arizona University research team (https://gurneylab.nau.edu/) in beautiful Flagstaff, Arizona doing cutting-edge research on quantifying GHG and local air pollution emissions at multiple scales from the building to the globe. This research uses existing systems (Vulcan - https://vulcan.rc.nau.edu/ and Hestia – https://hestia.rc.nau.edu) developed in the Gurney Lab over the past 20 years. This postdoctoral position will build-out anthropogenic methane (CH_4) emissions at multiple scales within the US domain using "bottom-up" techniques but linking and collaborating with researchers estimating CH_4 emissions from the "top-down". The CH_4 sources under consideration are landfills, wastewater, oil and gas infrastructure, and pipeline leakage. Emissions quantification is represented down to the emitting asset scale.

Candidates must have received a PhD in a field related to the positions (spanning Informatics, Civil Engineering, Ecological/Environmental Sciences, Atmospheric Science, Data Science, Geography) from an accredited college or university. The applicant will be expected to publish peer-reviewed journal articles and work in a team environment, effectively communicating with the research team.

Job duties include data collection on emitting assets, developing/improving model systems for flux estimation, and coding within the existing Vulcan/Hestia software to deploy the flux estimation. Postdoctoral scientist will be responsible for an asset-level and gridded inventory output (in conjunction with the existing Vulcan/Hestia systems output) and will also supervise a graduate student in assisting in all aspects of the project.

Necessary skills: Experience with numerical modeling and geospatial statistics with strong numerical analysis abilities, R (python secondary) programming experience required, experience with large volume data environments and related coding.

Desired skills: Knowledge and experience working with CH_4 flux reporting/quantification and analysis, carbon accounting/footprinting experience, large code base development, landfill modeling, knowledge of top-down/bottom-up effort in GHG quantification.

Given the multidisciplinary nature of the research, a highly self-directed, creative and self-motivated individual is sought. These positions are fulltime appointments with an anticipated start date between 9/1/2023 and 1/1/2024. The appointment will be made initially for one year with possibility of extension for additional years. Current funding includes a 5-year time horizon. Salary range is $55,000-$69,000 dependent on experience, with associated University benefits.

Official application portal to position is now open. Go to: here, (https://tinyurl.com/2v6pveub) and search for position number 607225. For a quick unofficial response, send a cover letter describing your research experience and interests and a curriculum vita to: Prof. Kevin Gurney, kevin.gurney@nau.edu.

The initial closing date for receipt of applications is 6/19/2023; but applications will be reviewed on an ongoing basis until a suitable candidate is hired.

A background check is required for employment. Northern Arizona University is an equal opportunity/affirmative action employer committed to excellence through diversity. Women and minorities are encouraged to apply.

Gurneylab: We are a research group working on air emissions (GHG and local) quantification in cutting-edge detail aimed at both scientific and policy challenges. Our day-to-day involves data science, numerical modeling, many forms of numerical analysis, all driven by solving problems in climate change science/policy and urbanization science (and many other topical filaments!). We are a diverse, social group housed in the modern informatics building on the beautiful Flagstaff campus.

NAU/Flagstaff: NAU is located in Flagstaff, Arizona - a beautiful mountain town of ~75,000 at 7000' on the heavily forested Colorado plateau at the foot of the San Francisco Peaks (12,500'). A 4 season climate with downhill skiing/snowboarding in Winter and hiking, mountain biking in the summer. We are 75 minutes from the Grand Canyon, 2 hours from Lake Powell/Colorado River, and 45 minutes from Sedona. We have a growing international community with great restaurants, numerous microbreweries, Lowell Observatory, and a laid-back mountain lifestyle.