Post Doc in Urban Methane Dynamics

**Job Description:** We seek an outstanding individual to contribute to a collaboration between Google, the Environmental Defense Fund and Colorado State University that is having direct impact on the amount of methane being emitted from cities. In this project, we use methane sensors mounted on Google Street View (GSV) cars to find natural gas leaks in cities and quantify the leakage rate. The acquisition, analysis and communication of this data bring project members into regular interactions with utilities, public utility commissions, NGO’s and scientists from diverse fields. A web page describing the project can be found here: [https://www.edf.org/climate/methanemaps](https://www.edf.org/climate/methanemaps)

The position asks for some core responsibilities managing day-to-day data quality from the incoming GSV cars (<25%), but the majority of work will be related to publication-oriented efforts including analysis of existing data, conducting new experiments related to the project and science communication.

The research opportunities are exceptionally broad and collaborative. The core responsibility includes data analysis of natural gas leakage and other spatial patterns in an ArcGIS framework. This analysis will happen in collaboration with our colleagues in computer science who are developing and testing a new automated system for analyzing the very large datasets associated with this project. The post doc will lead publication of this data analysis, which could range in emphasis from environmental justice to pipeline infrastructure management to development of new public policy for greenhouse gas management.

There are two additional research opportunities within this project. The first is in collaboration with colleagues in atmospheric physics who seek to use principles on the formation of gas plumes at fine spatial scales to develop better algorithms for predicting leak magnitude. The second includes the collaborative use of sampling statistics to estimate the true population size of natural gas leaks in cities.

The ideal candidate will have strong quantitative skills, proven time and project-management skills, ability to work in a team environment, and excellent communication abilities in English. We expect that strong applicants may have training in Environmental Sciences, Physical Sciences, Atmospheric Sciences, Gas Systems Engineering, Geoscience/Earth System Sciences, Biological Sciences, Statistics, or the like.

The position is for 1 year with potential for renewal with satisfactory performance.

**Required qualifications:** Ph.D. or equivalent by the time of job start in Environmental Sciences, Physical Sciences, Atmospheric Sciences, Gas Systems Engineering, Geoscience/Earth System Sciences, Biological Sciences, Statistics, or other appropriate field.
Preferred qualifications:

- Documented ability to bring projects to completion, especially as publications
- Excellent quantitative skills
- Evidence of intellectual leadership
- Familiarity with diverse data analysis frameworks, especially ArcGIS, and Java but other modern programming languages/software (e.g., Python, SQL family, R, Matlab) are viewed favorably
- Experience working collaboratively in a group setting
- Excellent communication skills in English, both written and oral
- Experience working with industry, non-governmental organizations and/or government agencies
- Experience with one or more of the following: natural gas systems, atmospheric dynamics/micrometerology, advanced statistics, methods of spatial data analysis
- Indicated capacity and interest for developing new research directions
- Valid US drivers license

To apply: upload cover letter, curriculum vitae (resumes will not be accepted), a 2-page research statement and three letters of reference to https://jobs.colostate.edu/postings/30199 Letters of reference can be uploaded directly by letter writers, following instructions on the web page.

For full consideration, applications must be received by January 31, 2016.

Diversity statement: Colorado State University does not discriminate on the basis of race, age, color, religion, national origin or ancestry, sex, gender, disability, veteran status, genetic information, sexual orientation, or gender identity or expression. Colorado State University is an equal opportunity/equal access/affirmative action employer fully committed to achieving a diverse workforce and complies with all Federal and Colorado State laws, regulations, and executive orders regarding non-discrimination and affirmative action. The Office of Equal Opportunity is located in 101 Student Services.

Colorado State University is committed to providing a safe and productive learning and living community. To achieve that goal, we conduct background investigations for all final candidates being considered for employment. Background checks may include, but are not limited to, criminal history, national sex offender search and motor vehicle history.

About the area: Colorado State University, which has a total enrollment of over 26,000 full-time students, is located in Fort Collins, 60 miles north of Denver. The community of about 140,000 is situated along the front range of the Rocky Mountains. Other major employers in the community are Hewlett-Packard, LSI
Logic, Celestica, Agilent Technologies, Advanced Energy, Kodak, Anheuser-Busch, and Poudre Valley Hospital. There are also several state and federal research agencies in Fort Collins that contribute to the intellectual environment of the university. The University of Colorado in Boulder, the University of Colorado Health Science Center and Denver University in Denver, and the University of Wyoming in Laramie, are all within a one-hour drive. In addition to the cultural activities sponsored by the University, the community offers a center for performing arts, a symphony orchestra, repertory theater, choral society, and dance company. The city operates an indoor Olympic-size pool and ice arena, other indoor and outdoor pools, five public golf courses, and sponsors, through its Parks and Recreation Department, many leisure-time activities. Rocky Mountain National Park and Roosevelt National Forest are within 30 miles of Fort Collins. Fort Collins has an excellent school district and is considered one of the best places in the US to raise a family. Finally, Fort Collins is a perennial in the top 10 best places to live. Last year Money Magazine ranked Fort Collins as the sixth “Best Place to Live” in America.