

**The Combustion Institute**

5001 Baum Boulevard, Suite 644

Pittsburgh, Pennsylvania 15213-1851 USA

Ph: (412) 687-1366

Fax: (412) 687-0340

Office@CombustionInstitute.org

CombustionInstitute.org

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## **Postdoctoral Position in Chemical Kinetics at Columbia University**

There is an open postdoctoral position opening in the Burke group at Columbia University. The position entails statistical analysis of experimental and theoretical chemical kinetic data within multiscale, multiphysics models. These efforts are in pursuit of benchmark accuracy chemical kinetic data for direct use in complex kinetic mechanisms and indirect use in the evaluation and development of ab initio theoretical kinetics calculations. The successful candidate will be expected to contribute to (1) methodological development and software implementation of the MultiScale Informatics approach to broaden the range of physics and data encapsulated via the approach and (2) its application to specific chemical systems, with an emphasis on those involving non-equilibrium kinetic sequences.

### **Essential Requirements**

The topic is highly interdisciplinary and we do not expect the successful candidate will have previous expertise in all relevant areas. However, the ideal candidate would have expertise in as many of the following areas as possible – phenomenological kinetic modeling, electronic structure calculations, statistical rate theories and the master equation, uncertainty quantification, modeling of experimental data for chemical kinetics and/or dynamics, and computer programming – and an interest in gaining expertise in the other areas.

The position requires a Ph.D. in engineering, chemistry, physics, or a related area; experience with Python and/or other object-oriented programming languages; strong written and verbal communication skills; and proven expertise in computational chemical kinetics.

### **How to Apply**

Applicants should email their CV (including contact information for two or more references) with the subject line "Open Postdoctoral Position at Columbia University" along with a brief cover letter describing their qualifications and interests.

### **Contact**

Michael Burke / [mpburke@columbia.edu](mailto:mpburke@columbia.edu) / 212-851-0782 / <https://burke.me.columbia.edu/>

## **About Columbia University**

Columbia University is located in the Manhattan borough of New York City. Our laboratory and office space are located in the Northwest Corner Building, a new interdisciplinary science and engineering building associated with Columbia's Data Science Institute, on Columbia's main campus.

### ***The Combustion Institute Disclaimer***

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