Opportunity Title: Graduate/Post-Doc researcher - Aerothermal Experimentalist
Opportunity Reference Code: NETL-2017-03-1-Straub

Organization National Energy Technology Laboratory (NETL)

Reference Code NETL-2017-03-1-Straub

Application Deadline 3/30/2017 12:00:00 AM Eastern Time Zone

Description **SUMMARY:**

A graduate student or post-doctoral researcher is sought for a position at the National Energy Technology Laboratory - the U.S. Department of Energy's primary lab supporting fossil fuel-based energy research. An ideal candidate will have demonstrated completion of coursework pursuant to a PhD in science or engineering, and wishes to engage in a funded research project formulating the publication of a dissertation in that field. Post-doctoral candidates are also being sought. The candidate will research collaboratively with NETL Federal Research Scientists in the following area:

The candidate would design and conduct experiments in the high-temperature (1,400°K gas temperature), high-pressure NETL aero-thermal test rig to evaluate geometries and develop correlations for enhanced heat transfer for use in gas turbine vanes and blades. The candidate would work in a team of NETL researchers whose responsibilities include; identifying specific heat transfer features for test; assessing test article type (flat plate versus air foil) to enable collection of accurate and reliable test data; and simple, and in some cases major, modification to the test rig to support specific test objectives. Test design and data analysis is supported with CFD analysis. The candidate is expected to be familiar with CFD techniques and ability to perform CFD modeling is a plus. The candidate will be expected to disseminate the research by preparing and presenting technical papers and reports.

KEY REQUIREMENTS:

- Applicants must be U.S. Citizens or approved Foreign Nationals
- A qualified candidate must have expertise in heat transfer, fluid mechanics and thermodynamics, specifically with application to gas turbines.Experience with instrumentation for measurement of flow rates, pressures, and temperatures is essential.Experience with analysis and reduction of experimental data is required.
- The ideal candidate would have experience in measurement of heat flux, convective heat transfer coefficients, solids temperature using optical techniques (e.g. IR techniques), and fluid turbulence levels using PIV.
- The candidate must have good oral and written skills to enable communication of the research to the gas turbine technical community.

HOW TO APPLY:

Applicants should apply through the Oak Ridge Institute for Science and Education (ORISE) program. The ORISE Program provides opportunities for undergraduate students, recent graduates, graduate students,

Opportunity Title: Graduate/Post-Doc researcher - Aerothermal Experimentalist
Opportunity Reference Code: NETL-2017-03-1-Straub

postdoctoral researchers, and faculty researchers. NETL utilizes the ORISE program to support research within NETL's Research & Innovation Center.

- Interested applicants should complete the online application at http://www.orau.gov/netl/
- In the online application **list Douglas Straub as your requested mentor.**This will associate your application with this job posting. Interested candidates may contact Douglas Straub (douglas.straub@netl.doe.gov directly with a current CV at the earliest opportunity.
- If you have additional questions please contact Patricia Adkins-Coliane, Patricia.Adkins-Coliane@netl.doe.gov, who is the NETL ORISE program contact.

Eligibility Requirements

- **Degree:** Master's Degree or Doctoral Degree.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (12 👁)
  - **Communications and Graphics Design** (1 👁)
  - **Computer, Information, and Data Sciences** (16 👁)
  - **Earth and Geosciences** (21 👁)
  - **Engineering** (27 👁)
  - **Environmental and Marine Sciences** (14 👁)
  - **Life Health and Medical Sciences** (45 👁)
  - **Mathematics and Statistics** (10 👁)
  - **Other Non-Science & Engineering** (13 👁)
  - **Physics** (16 👁)
  - **Science & Engineering-related** (1 👁)
  - **Social and Behavioral Sciences** (28 👁)