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| **TITLE:** | MFIX-Exa Computational Scientist |
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| **DEPARTMENT:** | U.S. Department of Energy/National Energy Technology Laboratory (NETL) |
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| **NETL CONTACT:** | Jordan Musser; jordan.musser@netl.doe.gov |
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| **DUTY LOCATION:** | Morgantown, WV |

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| **ACADEMIC LEVEL:** | **X** | PhD | **X** | MS |  | BS |  | Undergrad |  | Faculty |

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| **POSITION**  **INFORMATION:** | 1-year appointment; full time (40 hours per week) with the possibility of extension |
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| **CLOSING DATE:** | March 31, 2019 |
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| **WHO MAY BE**  **CONSIDERED:** | United States Citizens, LPRs, & Foreign Nationals with appropriate approval which includes F-1 OPT with EAD (STEM extension not valid), J-1 Exchange Visitor, and LPR with EAD |

**SUMMARY:**

The Multiphase Flow Sciences (MFS) Team at the National Energy Technology Laboratory (NETL) invites outstanding candidates to apply for an appointment to develop and implement algorithms for computational fluid dynamics-discrete element method (CFD-DEM) on exascale high performance computers. Opportunities are available immediately, but there is flexibility in start dates.

The ideal candidate will hold a PhD in computer science, mathematics, or engineering and have experience in CFD-DEM, and/or molecular dynamics (MD) code development. Exceptional postmasters candidates will also be considered for this position. Programming expertise in C++, Fortran, C, or another programming language is required. Experience with parallel computing, including MPI and OpenMP is required. Experience with GPU programming is highly desired. Familiarity with MFIX (www.mfix.netl.doe.gov) and multi-phase flow is not required.

The specific assignments include: code profiling, algorithm development and implementation, writing reports/papers and making presentations to report the results of the research. The development team is geographically disperse making excellent communication skills a must.

**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, postdoctoral researchers, and faculty researchers to apply classroom knowledge in a real-world setting to learn about NETL’s core mission areas.

* Interested applicants should complete the online application at <http://www.orau.gov/netl/>. For questions or issues, please email both [Terry.Howard@orau.org](mailto:Terry.Howard@orau.org) and [Kerri.Fomby@orau.org](mailto:Kerri.Fomby@orau.org) .
* In the online application, **list** **Jordan Musser as your requested mentor.** This will associate your application with this research opportunity. Please send a CV to jordan.musser@netl.doe.gov
* If you have additional questions, please contact Patricia Adkins-Coliane, [Patricia.adkins-coliane@netl.doe.gov](mailto:Patricia.adkins-coliane@netl.doe.gov), who is the NETL Graduate Education Program Manager.

The participant(s) will be assigned to the program solely for the educational benefit it provides. The assigned project should not include activities that are reserved for federal employees nor should it require a participant to perform inherently governmental functions such as: supervise or mentor federal employees or federal contractor staff, hire or fire anyone; have budget, program management, or signature authority; carry an official job title; or function in any way as a representative of the federal government.