Future Technologies
Computational Science Postdoctoral Fellow

Description

The Future Technologies Group (FTG) has an immediate opening for a postdoctoral researcher to work on research in energy efficient graph analysis and data mining.

This project will explore methods to increase the energy efficiency of parallel graph algorithms and data mining tasks. A new family of algorithms will be developed to drastically reduce the energy footprint and running time of the graph and sparse matrix computations that form the basis of various data mining techniques. The appointee will be part of an experienced research team and will be supported through a long-term DOE research grant. Deliverables will include prototype software implementations and publications targeted at top-tier research conferences and journals.

Key Success Factors:

- PhD degree in computer science, computational science or a related technical field is required.
- Expertise in one or more of the following areas: graph algorithms, data mining, network science, sparse matrix computations, machine learning, and discrete mathematics.
- Experience with performance analysis, modeling, and benchmarking;
- Demonstrated ability to work independently as well as collaboratively;
- Excellent written and oral communication skills.

Additional desired qualifications:

- Experience with parallel computing via OpenMP, Cilk, TBB, and/or MPI.
- Experience implementing and optimizing data mining and/or graph analysis methods.
- Experience implementing sparse matrix routines like sparse matrix-vector multiplication and sparse matrix-matrix multiplication.
- Combinatorial and/or statistical algorithms in general.

For more details please visit:

http://go.lbl.gov/75939

For Berkeley Lab Careers information visit:

http://jobs.lbl.gov

Berkeley Lab is an affirmative action/equal opportunity employer committed to the development of a diverse workforce.