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ALGORITHMS DEVELOPER/RESEARCHER

D-Wave Systems is building an ultra-fast computer based on quantum physics. Since its founding in 1999, D-Wave has laid the groundwork for turning this ambitious vision into reality. The company has received two British Columbia Technology Industry Association (BCTIA) awards (Most Promising Start-Up 2002, Most Promising Pre-Commercial Technology (2003), was selected as one of the top CIX finalist's in 2009. The company has been profiled in several publications including New Scientist, The Globe and Mail and BC Business. In December 2009 Google and D-Wave demonstrated use of the system at the NIPS 2009 conference in Vancouver.

D-Wave Systems Inc. is seeking a researcher to develop and implement algorithms for solving large scale combinatorial optimization problems on novel superconducting hardware. Our hardware exploits quantum mechanical effects to rapidly solve small scale discrete optimization problems, and we need to implement approaches which leverage this ability into the fast solution of large-scale problems.

Experience with quantum algorithms is *not* required, as the successful candidate will work in an interdisciplinary team. As part of that team, the candidate's primary responsibility will be to design and implement efficient algorithms to decompose large discrete optimization problems into sub-problems solvable natively in quantum hardware.

Required Qualifications:

- Masters Degree in computer science, operations research or equivalent experience
- Experience implementing algorithms in C/C++ or python
- Experience in combinatorial algorithms and discrete optimization

Desired Qualifications:

- Up-to-date understanding of the latest approaches in heuristic and complete methods for discrete optimization
- Some background in graph theory
- Interest in real-world applications of advanced algorithms

Interested applicants should send a resume including references to opt2010@dwavesys.com.