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Department of Computer Science & Engineering
Texas A&M University
College Station, TX

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Dear Faculty Search Committee:

I am writing to apply to the position of Professor of Practice in the Department of Computer Science and Engineering at the Texas A&M University. I am currently a Computer Scientist in the Center for Applied Computer Science (CASC) at the Lawrence Livermore National University (LLNL). Previously, I earned my Ph.D. with Dr. Nancy Amato at TAMU.

My vision is to create a learning environment that resembles the multifaceted teams across the nation's finest industrial and research institutions, fully engaging the students' imagination and ability to solve problems individually and as a team.

My experience to date has laid the foundation for these goals. I earned my doctorate at TAMU under Dr. Nancy Amato, where I developed parallel algorithms and data structures. On the basis of this work, I received a fellowship at LLNL to finish writing my dissertation, and developed load balancing algorithms for full scale simulations, along with models to make decisions on when and how to load balance. Upon graduation, I started a staff position in CASC, and established myself as an expert in programming models, interprocess communication, and performance analysis and tools. Working with multidisciplinary multi-physics simulation teams, I helped develop the RAJA programming model, enabling single source (formerly CPU-only) applications to achieve 15x speedup by utilizing GPUs. We also stood up a toolchain for application performance measurement (Caliper), visualization (Spot), and programmatic analysis (Hatchet). As PI for the Hatchet project, I lead a team of researchers working with four professors across the nation to develop performance analysis and visualization tools for the near term and ideas for the future. I also drive collaborations with Sierra (currently #3 on Top500 list) and El Capitan (next LLNL supercomputer) vendors on programming models, interprocess communication mechanisms, and tools to make it possible for LLNL teams to utilize these supercomputers to their fullest. To that goal, I am also active in the research community, including participating in the MPI Forum and the premier conferences in the field.

I believe my national lab experience would contribute to the diverse research environment in the CSE department at TAMU, and I would be excited to form collaborations with several groups thoughout the University.

Sincerely,

Olga Pearce, Ph.D.