

DANIEL A. SMYTH

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OBJECTIVE

Searching for an influential and challenging career involving computer modeling research in the engineering field beginning August of 2007

EDUCATION

DOCTORATE OF SCIENCE IN CHEMICAL ENGINEERING AUGUST 2007
Brigham Young University
GPA 3.69/4.00 – (3.09 CUMULATIVE)

BACHELOR OF SCIENCE IN CHEMICAL ENGINEERING APRIL 2002
Brigham Young University
GPA 2.92/4.00

SKILLS AND ACTIVITIES

- Voluntary Representative for The Church of Jesus Christ of Latter-day Saints in the Cleveland Ohio area from July of 1996 to July of 1998
 - Conducted presentations to help inform those interested in the Church of its views
 - Provided community service to help increase the quality of life in my area
 - Supervised/developed office procedures to help streamline intra-organization communication and reporting
- President of Castlebrook Home Owners Association board (Oct 2004 to present)
- Operating system familiarity: Unix/Linux, Windows
- Parallel processing familiarity: SGI, Linux cluster, OpenMP, MPI
- External package familiarity: PETSc, Chemkin, Cantera, CVS
- Programming language familiarity: Ansi C, Fortran, C++, Visual Basic for Applications (VBA)

EMPLOYMENT

GRADUATE RESEARCHER AUGUST 2002 – PRESENT
Brigham Young University *Provo, UT*

- Conducted research concerning a 1-D, transient, CFD code used for cook-off/ignition modeling of solid rocket propellant, including: added capability to model various ingredients, implemented Cantera, developed an adaptive mesh refinement algorithm, and increased solution accuracy, robustness, and stability. Changes resulted in an overall 25% reduction in runtime.
- Co-authored cook-off paper, publication of two more papers planned: ignition and cook-off of solid rocket propellant
- Directed undergraduate research assistants in completing sub-projects involved with my research

RESEARCH ASSISTANT APRIL 2002 – AUGUST 2002
Brigham Young University *Provo, UT*

- Developed a visualization package in Excel (VBA) for numerical output from a transient CFD code
- Worked on a transient, aluminum combustion model to more accurately predict burn time

INTERESTS

Family, reading, writing/authoring, real estate investing, athletics, music