

# Samuel Britt

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*From materials engineering to software development through a passion for technology.*

## EDUCATION

- 2011–  
current **M.S., Computer Science with Specialization in Systems Software** Current GPA: 3.7.  
Georgia Institute of Technology, Atlanta GA  
Expected completion: May 3, 2013.
- 2009–2011 **Graduate Research Assistant, Materials Science & Engineering, Mechanics of Materials** GPA: 3.9.  
Georgia Institute of Technology, Atlanta GA  
Modeling and simulation research in the mechanics of  $\alpha+\beta$  titanium alloys.
- 2004–2009 **B.S. with Highest Honors, Materials Science & Engineering** GPA: 4.0.  
Georgia Institute of Technology, Atlanta GA

## SKILLS & TECHNOLOGIES

- Proficient: C, Python (and SciPy), Git, Mercurial, UNIX, Linux, Vim,  $\LaTeX$ .  
Familiar: C++, Java, MATLAB, FORTRAN, SQL, GDB, OpenMPI, Bash, Eclipse, Android development.

## EXPERIENCE

- 2012 **User-Level Threading Library, Class Project, Georgia Institute of Technology, Atlanta, GA.**  
- Developed a C threading library that allowed user-defined thread scheduling. The professor selected the library to be used in future course offerings.
- 2012 **Xen Asynchronous Split-Driver Simulator, Class Project, Georgia Institute of Technology, Atlanta, GA.**  
- In a group, developed a multithreaded, multiprocess Linux application in C to simulate shared memory ring buffers used for asynchronous IO in Xen. Required use of semaphores, mutexes, and condition variables.
- 2012–2013 **Teaching Assistant, Database Systems, Georgia Institute of Technology, Atlanta, GA.**  
- Held one-on-one meetings in class of over 240 students to teach high-level concepts such as entity-relationship data modeling, as well as technical help in implementing database-driven applications using MySQL and PHP.
- 2009–2011 **Graduate Research Assistant, Materials Simulation, Georgia Institute of Technology, Atlanta, GA.**  
Studied the mechanical response and texture evolution of  $\alpha+\beta$  titanium alloys via multiscale modeling and simulation.  
- Contributed new, thermally activated constitutive model based on unique properties of the titanium microstructure.  
- Implemented crystal plasticity material model, microstructure generation code, and post-processing routines using FORTRAN, C++, MATLAB, and Python.  
- Presented results regularly at the meetings of the Center for Computational Materials Design via talks and posters.  
- Administered the Red Hat cluster used by the research group, developing Bash scripts to automate many tasks.
- 2005–2009 **Engineering Co-op, Composites Research, Southern Research Institute, Birmingham, AL.**  
Five terms as an engineering co-op, performing high-temperature materials research for the aerospace industry.  
- Investigated the kinetics of phenolic resin pyrolysis using isothermal and nonisothermal thermogravimetry at temperatures up to 1100 °C. Co-authored a report presented at the 56<sup>th</sup> JANNAF Propulsion Meeting.  
- Designed facility for thermogravimetry and dilatometry at temperatures up to 650 °C and pressures up to 4.15 MPa.  
- Coordinated effort to develop, build, and test a facility capable of tensile permeability tests up to 1900 °C.

## ADVANCED COURSEWORK

- Computer Science Adv. Operating Systems, Real-Time & Embedded Systems, Computability and Algorithms, HPC Architecture, Applied Cryptography, Internet Computing, Software Engineering: Analysis & Testing.
- Modeling & Simulation Statistics & Numerical Methods, Parallel & Vector Scientific Computing, Adv. Constitutive Relations of Solids, Continuum Mechanics, Quantitative Characterization of Materials.
- Materials Engineering Mechanical Behavior of Composites, Thermodynamics of Materials, Kinetics of Phase Transformations, Studies in structure-property relationships of alloys, ceramics, polymers, semiconductors, and composites.

## SCHOLARSHIPS & AWARDS

- Henry Ford Award**, for the most outstanding academic record in the junior engineering class.
- President's Scholarship**, Tech's premier merit-based scholarship awarded to approximately 2 % of students.
- National Merit Scholarship**, awarded to the top 0.6 % of the 1.4 million or so high school applicants.