

Samuel Britt

Materials Engineer – Systems Developer

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EDUCATION

- 2011– **M.S., Georgia Institute of Technology, Atlanta, GA.**
Computer Science, Specialization in Systems Software. Current GPA: 3.5
Expected completion: May 2013.
- 2009–2011 **Post-Graduate Research, Georgia Institute of Technology, Atlanta, GA.**
Completed 2 years of a 4-year Ph.D. program in Materials Engineering. GPA: 3.9
Modeling and simulation research in mechanics of $\alpha+\beta$ titanium alloys.
- 2004–2009 **B.S. with Highest Honors, Georgia Institute of Technology, Atlanta, GA.**
Materials Science and Engineering. GPA: 4.0

SKILLS & TECHNOLOGIES

- Proficient in Python (and SciPy), C, Git, Mercurial, Linux, Vim, L^AT_EX.
- Exposure to C++, Java, MATLAB, FORTRAN, SQL, OpenMPI, Android development, GDB, Eclipse.

EXPERIENCE

- 2012 **Teaching Assistant, Database Systems, Georgia Institute of Technology, Atlanta, GA.**
- Advised students in class of over 240. Graded student projects.
 - Held one-on-one meetings 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.
- 2012 **User-Level Threading Library, Class Project, Georgia Institute of Technology, Atlanta, GA.**
- Designed a user-level threading library with interface for allowing user-defined scheduling algorithms. In a group, implemented the library in C.
 - Our solution was so successful it was chosen to be the project basis for future offerings of the course.
- 2009–2011 **Post-Graduate Research, Georgia Institute of Technology, Atlanta, GA.**
Studied the mechanical response and texture evolution of $\alpha+\beta$ titanium alloys via multiscale modeling and simulation.
- Developed new, thermally activated constitutive model based on unique properties of the titanium microstructure.
 - Implemented material model in FORTRAN to enhance finite element simulation software.
 - Built microstructure generation code and post-processing routines using C++, MATLAB, and Python.
 - Presented results regularly at the meetings of the Center for Computational Materials Design.
 - Administered the computer clusters used by all students in the research group.
- 2005–2009 **Engineering Intern, Southern Research Institute, Birmingham, AL.**
Five terms as an engineering co-op, performing high-temperature materials research for the aerospace industry.
- Designed a facility capable of thermogravimetry and dilatometry of carbon-phenolics up to 650 °C under pressures up to 4.15 MPa.
 - Investigated the kinetics of phenolic resin pyrolysis using isothermal and nonisothermal thermogravimetry at temperatures up to 1100 °C. Co-authored a report that was presented at the 56th JANNAF Propulsion Meeting.
 - 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. Upcoming: Internet Computing, Aerospace Real Time Control Software.
- Modeling & Simulation Statistics & Numerical Methods, Parallel 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.