

BRENTAN ALEXANDER

- > Scientist
- > Entrepreneur
- > Engineer



ABOUT ME

Seeking opportunities to solve demanding and interesting engineering problems. I have devoted my career to solving complex problems in the fields of electrochemistry, fluid flow, heat and mass transport, combustion, and thermodynamics.

RECENT EXPERIENCE

CHIEF SCIENCE OFFICER

NEW ENERGY RISK

January 2015 – Current

I lead the technical due diligence process of potential insurance opportunities in the clean energy arena by investigating the technical risks of client processes and technologies.

FOUNDER / CHIEF EXECUTIVE OFFICER

SWIFT CALCS

March 2015 – Current

Swift Calcs simplifies and accelerates engineering design and analysis. I built Swift Calcs to be an intuitive alternative to paper, spreadsheets, and cumbersome software packages.

SENIOR MECHANICAL ENGINEER

WRIGHTSPEED

March 2014 – January 2015

Lead thermal engineer. Achieved equal cooling system performance with significant drop in load. Identified and solved anomalies of our motors/inverters to improve reliability.

FOUNDER / DIRECTOR / PRESIDENT OF BOARD

ENERGYFOLKS

2011 – Current

Built web-tools helping thousands of young professionals in energy connect and find jobs. Selected by DOE to administer National Student Energy Business Competition.

ASSOCIATE

EXPONENT

June 2013 – March 2014

I worked with major clients to test, analyze, and evaluate thermal systems, consumer appliances, and utility-scale energy systems. Explained technical concepts to clients.

EDUCATION

Ph.D., MECHANICAL ENGINEERING

STANFORD UNIVERSITY

2009 – 2012

NDSEG fellow. Performed fundamental research and modeling of solid oxide fuel cells.

M.S., MECHANICAL ENGINEERING

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

2007 – 2008

Awarded Rosenhow Heat and Mass Transfer Fellowship for microfluidics research.

B.S., MECHANICAL ENGINEERING

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

2003 – 2007

4.9/5.0 GPA, 5.0/5.0 within major. Outstanding research and thesis award.

SELECTED SKILLS

- Computation | Matlab, MS Excel, MathCAD, hand calcs
- Simulation | Star-CCM+ (CFD), Comsol Multiphysics (FEA/CFD)
- Design | Solidworks, Creo, Catia
- Code | Proficiency in Python, Ruby, Java, PHP
- Build | Experience with Lathe, Mill, standard machine tools

FURTHER READING

Find my full resume and public domain projects at <http://www.brentanalexander.com/>

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