

# Brent Robert Shambaugh

2516 O.J. Talley Cir. - Norman, OK 73072 – (405) 708-3343

[brent.shambaugh@gmail.com](mailto:brent.shambaugh@gmail.com), [www.linkedin.com/pub/brent-shambaugh/9/125/9b9/](http://www.linkedin.com/pub/brent-shambaugh/9/125/9b9/)

## EMPLOYMENT

### **Adjunct Professor (January 2013 – October 2013)**

Oklahoma City Community College

Subject: Chemistry 1115

### **Club Z! In-Home Tutoring Services (October 2013 – )**

Tampa/St. Petersburg, Florida

Subject: Physics

## EDUCATION

University of Oklahoma, Norman, OK

**MS in Chemical Engineering, August 2011 (GPA: 3.00)**

**BS in Chemical Engineering, May 2006 (GPA: 3.28)**

## PROJECTS

### **P2P World-OS: A P2P Enterprise Platform**

• This project evolved to envision a P2P Enterprise Platform that enables a P2P or Network Economy when installed in many instances on the web.

<http://bit.ly/1aKTo1f> (November 2007), <http://bit.ly/1a4GRVH> (February 2011), <http://bit.ly/1feMY7m> (January 2014)

## RELEVANT SKILLS

### **Computer Experience**

Microsoft Office Tools, FORTRAN, SPSS, PGPLOT, GNU/Linux, SigmaPlot, LaTeX, MathCad, process simulation tool (Pro-II), FTP, XML, Inkscape, GIMP, C language family, CAD, ...

### **Experimental Skills**

- Operation of continuous, 20 lb/hr polymer processing equipment at high pressures and temperatures (e.g., 2000 psi and 350 C). The equipment includes a Brabender extruder, Zenith spin pumps, and Dynisco pressure transducers.
- Off-line analysis of polymers with polarizing microscope; stress/strain testing of specimens
- On-line analysis of fiber spinning with FLIR infrared camera and 150,000 frames/second Redlake camera.

## RESEARCH EXPERIENCE

### **OU Center for Polymer and Fiber Research (May 2005 – Aug. 2006, May 2007 – Dec. 2012)**

*Graduate Student / Laboratory Associate / Undergraduate Researcher*

- *Team Leader*: directed students in the operation of polymer processing equipment, infrared camera, and high-speed motion camera
- Modified and worked with polymer processing models written in FORTRAN
- Specified and ordered equipment for repair and upgrade of equipment worth \$500,000
- Operated complex melt blowing, spunbonding, and melt spinning equipment.
- Gave Oral Presentations at (a) International 2009 INDA Nonwovens Conference (Denver, CO), (b) 2012 International Gas Processing Conference, (c) two industrial consortium meetings at University of Oklahoma.
- Wrote polymer processing manual using Flash MX and Microsoft Word.
- Co-authored three papers in *Industrial & Engineering Chemistry Research*:
  - Shambaugh, B. et al., Modifying Air Fields to Improve Melt Blowing, *I & EC Research* (2012)
  - Shambaugh, B. et al., Next-Generation Modeling of Melt Blowing, *I & EC Research* (2011)
  - Beard, J. et al., On-line Measurement of Fiber Motion during Melt-Blowing, *I & EC Research* (2007)

## HONORS & ACTIVITIES

- Webmaster for the Student Chapter of AIChE (2005)
- National Society of Collegiate Scholars (2003)
- Alpha Lambda Delta Honor Society (2003)
- Dean's Honor Roll
- Chevron-Phillips Scholar and Mentor (Fall 2004, Spring 2005)
- Special Olympics (Summer 2006)
- Norman Music Festival / MVP (2011, 2012, 2013)
- Treasurer of Cinematic Artists of Norman (January 2011 – Present)
- Silver Maple, Actor (May 2011)
- Toastmasters (November 2010 – October 2013)
- Church choir (Fall 2006 - Spring 2007, Fall 2009 – Fall 2013)
- Participant in the Web Payments Community Group on the World Wide Web Consortium Website (January 2013 – Present)