

## Education

- Ph.D. – Mechanical Engineering And Mechanics, Expected Completion September, 2010  
Drexel University, Philadelphia, PA  
Thesis Topic: Natural Cements as Appropriate And Sustainable Technology (Advisor: Dr. Michel Barsoum)
- M.S./B.S. - Joint 5-Year M.S./B.S. Program Completed September 2007  
Drexel University, Philadelphia, PA  
M.S. - Materials Engineering (Advisor: Dr. Michel Barsoum)  
Thesis: “Spherical Nanoindentation: Insights And Improvements, Including Stress-Strain Curves and Effective Zero Point Determination”  
B.S. - Mechanical Engineering (Magna Cum Laude, 3.72/4.00, Concentration: Design & Manufacturing)

## Academic Research Experience (Drexel University, Philadelphia PA)

- Alkali-Activated Cements – Materials Science and Engineering & Mechanical Engineering and Mechanics  
*Research Associate and Ph.D. Research, September 2007 to Current*  
Research Natural Cements as appropriate, sustainable, and intermediate technology.
- Nanoindentation, Mechanical Properties - Materials Science and Engineering  
*Hess Undergraduate Honors Research Fellow and Master’s Thesis Research, September 2005 to Current*  
Invented a method to objectively and easily determine the zero point of contact for spherical nanoindentation.
- Mechanical Design - Mechanical Engineering and Mechanics  
*Hess Undergraduate Honors Research Fellow, January to March 2005*
- Polymer Nanotechnology - Materials Science and Engineering  
*STAR Scholar, June to August 2003*

## Industry Experience

- STV Inc. (National Consulting Firm), Philadelphia, PA  
*Vehicle Specialist, April 2006 to September 2006*  
Supported passenger rail vehicle fleet procurement, improvement, and maintenance for several railroads. United several organizations per project such as railroad, carbuilder, and consultant.
- Boehringer Laboratories, Inc., Norristown, PA  
*Project Engineer, March 2005 to September 2005*  
Designed and developed novel medical devices and associated manufacturing processes. Utilized experiments, literature, and industry experts to creatively overcome technical challenges.
- McNeil Consumer and Specialty Pharmaceuticals, a Johnson & Johnson Company, Fort Washington, PA  
*Solid Dose Processing / Manufacturing Co-op, August 2003 to March 2004*  
Developed solutions for complex projects independently, on teams, and as Manager. Facilitated critical ongoing operations. Collaborated with staff in a wide range of departments and functional levels.

## Select Awards

- NSF Graduate Research Fellowship (GRF) (2008)
- Graduate Assistance In Areas Of National Need (GAANN) Fellowship (2007)
- ASM International - Arthur E. Focke LeaderShape Award (2007)
- Drexel: Outstanding Cooperative Education Student Award, Outstanding Senior, Ryder Award (2007)

## Publications And Patents

- A. Moseson, S. Basu, and M.W. Barsoum, "Determination of The Effective Zero Point Of Contact For Spherical Nanoindentation," *J. Materials Research*, 23, No. 1 (2008)
- S. Basu, A. Moseson, and M.W. Barsoum, "On The Determination Of Spherical Nanoindentation Stress/Strain Curves," *J. Materials Research*, **21**, 2628-37 (2006)
- Pending Patent: A. Moseson, S. Basu, and M.W. Barsoum "A Novel Method for Zero Point Detection." USPTO Provisional Application No. 60/953,361.

## Select Conference Presentations

- Moseson, E, Jud, P. Narang, A. Sakulich, M.W. Barsoum, "Alkali-Activated Cements As A Sustainable Building Material; Case Study of Slag Cement using Design Of Experiment," MS&T 2008, Pittsburgh, PA, USA, October 5-9, 2008. Oral Presentation.
- Moseson, S. Basu, and M.W. Barsoum, "A novel method to determine the effective zero point of contact for spherical nanoindentation," MS&T 2008, Pittsburgh, PA, USA, October 5-9, 2008. Oral Presentation.
- Moseson, A. Sakulich, A. Curtin, E. Jud Sierra, M.W. Barsoum, "Slag-based geopolymer cements as a sustainable building material; case study using design of experiment," 2<sup>nd</sup> International Conference On Ceramics (ICC2), Verona, Italy. June 29 – July 4, 2008. Poster Presentation.

## Other Relevant Experience

- Co-Founder, Co-Owner, and Executive Scientist, Greenstone Technologies, Inc. (2008 – Current)
- Teaching Assistant for five engineering classes (2006-2007)
- Lathes For Africa Co-Founder and Co-Advisor (2008 – current), Advisor Drexel Summer Mentorship (2008)
- Engineers Without Borders, Drexel University; Co-Founder, Member (2006-2008), and President (2007)
- Hurricane Katrina Relief in New Orleans, Alternative Spring Break (2006)
- MEM Department Head Search Committee Member (2007 - 2008)
- Invited Panelist, Drexel Student Conference On Global Challenges (February 2008)
- LeaderShape Institute Certificate (June 2007)
- Drexel University Recruitment And Outreach Associate (2004 to 2007)
- American Society of Mechanical Engineers (ASME) Member (Inducted 2004)