

Anosua Mukhopadhyay

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Education

M.S., Civil and Environmental Engineering, University of Wisconsin-Madison, August 2010

Focus in Structural Engineering and Geophysics

Thesis topic: “*Numerical modeling of crustal deformation associated with the earthquake sequence of June 2000 in the South Iceland Seismic Zone using Finite Element Analysis.*” I successfully developed a groundbreaking method to model earthquake dislocations using a finite element software called ABAQUS. My final results showed that earthquake triggering occurred because of increasing water pressure in the rock due to particular groundwater movement, aiding in earthquake prediction in South Iceland.

Course Highlights: Highway Bridge Design, Topics in Sustainability (LEED), Building Information Modeling (BIM), Advanced Mechanics of Materials, Geophysical Inverse Theory, Steel II, Concrete II, Structural Modeling II

Design Experience: Proposed a 300 ft span steel and concrete bridge and a 3-story steel hospital

B.S., Civil and Environmental Engineering, Cornell University, August 2008

Course Highlights: Structural Modeling, Steel, Concrete, Advanced Fluid Dynamics, Geotechnical Engineering, Transportation Engineering, Finite Element Analysis (FEA), Mathematical Physics I, II, Engineering Economics, Engineering Professionalism

Design Experience: 2-story steel manufacturing house, 3-story concrete academic building, FEA model of a laser hitting a concrete slab, AutoCAD model of a rj45-crimper, modeled a 4-story building’s response to the Northridge Earthquake, Devised a Nitrogen pump laser, Constructed a heart rate monitor

Professional Certifications

EIT, April 2008 in New York

Lean Six Sigma, White Belt, September 2010

Skills

Computing: AutoCAD3D/Revit, BIM, RAMSteel, Microstation, ArcGIS, Eaglepoint, TR-20, ABAQUS, Matlab, C, C++, awk, scripting in UNIX environments, Photoshop, Illustrator, Dreamweaver, PHP, SQL, XHTML, XML

Interpersonal and Leadership: Taught Differential Equations; Led a Sustainability group to analyze LEED via building modeling; Conveyed civil engineering topics to the geophysical community; helped other graduate students quickly pick up on software such as ABAQUS and Matlab; work with various freelance clients to design and maintain their websites

Professional Experience

BridgeTech, Inc., February 2011-Present, *Programming Engineer*

- Software applications for bridge design

Absolute College Success, December 2010-Present, *Founder and CEO*

- Help students get into top colleges
- SAT/AP/GRE Tutor
- College counseling

The Six Sigma Way, September 2010-Present, *Business Development Manager*

- Market, networking, and managing customer relations
- Website development and maintenance (keeping up with search engine optimization [SEO] techniques)
- Development of promotional materials

UW-Madison, Department of Geophysics and Department of Civil Engineering, August 2008-August 2010, *Graduate Student Researcher*

- Created a FEA model of poroelastic structures and earthquake faults in Iceland to attest a triggering effect.

Walter P. Moore, Inc., June 2008-August 2008, *Structural Engineering Intern*

- Designed the steel framing and concrete columns of a 230,000 square foot military hospital in San Antonio, TX
- Shop Drawings for Cowboys Stadium in Arlington, TX and for courthouse in Jackson, MS
- Site inspection for Cowboys Stadium
- Roof steel beam design for a courthouse in Collin County, TX

Cornell University, Department of Civil and Environmental Engineering, January 2006-May 2008, *Undergraduate Student Researcher*

- Developed a program that integrates IDL and ENVI to remove glint from satellite images of water

Town of Ithaca, June 2007-August 2007, *Civil Engineering Intern*

- Site Work – soil/sediment erosion control inspections; surveying
- Watershed modeling/delineation

Cornell Center for Nanoscale Systems (CNS), May 2006-July 2006, *Research Assistant*

- Explored the behavior of conducting liquids (primarily mercury) in electric fields for nano-devices

Cornell University, Department of Theoretical & Applied Mathematics, May 2005-August 2006, *Undergraduate Student Researcher*

- Modeled a silicon-nanotube resonator and found resonant frequencies by varying gate voltages to develop a scale with single atomic mass sensitivity

Ecology and Environment, Inc, June 2003-August 2003, *Environmental Engineering Intern*

- Fourier analysis and hydrodynamic modeling for the design of a gas terminal in Bahamas
- Statistical analysis of chemical data on petroleum contaminated sand and soil in Kuwait
- Determination of rate constants for alkalinity production for a copper mine in Chile

Honors and Awards

Cornell Presidential Research Scholar

John Dean McMullen's Scholarship

Dean's List Fall 2004, 2007

"Distinguished Employee" at Ecology and Environment, Inc.

Professional Affiliations

American Society of Civil Engineers, webmaster for UW Chapter

Society of Women Engineers

Sigma Delta Epsilon - Graduate Women in Science
Institute of Electrical and Electronic Engineers, Executive Director for Cornell Chapter
International Folk Dancing Club at Cornell, Publicity Director

Publications and Presentations

Mine Water and the Environment. "Limestone Drain Design Parameters for Acid Rock Drainage Mitigation". Volume 26, Number 1 / March, 2007. Biswajit Mukhopadhyay, Luciano Bastias, and Anosua Mukhopadhyay
Presented master's research to the Graduate Women in Science group

References

1. Dr. Kurt L. Feigl
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