

Brandon S. Byers, EIT, WELL AP

CONTACT INFORMATION

736 Serra St, Apt 1034
Stanford, CA 94305

Phone: (706) 910-5433

E-mail: bbyers3@stanford.edu

LinkedIn: www.linkedin.com/in/brandon-s-byers/

Website: bsbyers.github.io/website/

RESEARCH INTERESTS

The trade-offs and intersection of designing for equity, economy, and ecology. Past research has focused on designing for wellbeing, but evolving research interests are in economic and ecological solutions such as design for disassembly and end-of-life solutions.

EDUCATION

Stanford University, Palo Alto, CA

M.S. Sustainable Design and Construction, *Structures Concentration*, June 2021
Advisor: Prof. Sarah Billington

Georgia Institute of Technology, Atlanta, GA

B.S. Civil Engineering, *High Honors*, May 2017
Academic Exchange at Nanyang Technical University

HONORS AND AWARDS

Dean E. Stephan and Charles Pankow Builders Fellowship in Civil Engineering,
Stanford University, 2019 - 2020
Chi Epsilon, Civil Engineering Honor Society, inducted 2016
George International Scholarship, Georgia Tech, 2014
Energy Solutions Scholarship, Georgia Tech, 2012

RESEARCH EXPERIENCE

Hybrid Physical + Digital Spaces, Stanford University, Palo Alto, CA

Graduate Research Assistant

March 2020 - June 2021

Dr. Sarah Billington

- Lead a team of three in developing a methodology for recreating a lab study in Virtual Reality and comparing the room impacts on the occupant in the physical room to the virtual room representation
- Conducted literature review on the efficacy of Virtual Reality to test the impacts the built environment has on the occupant
- Conducted literature review on the influence of building environmental factors on occupant wellbeing and cognitive performance
- Analyzed test data in R for descriptive statistics and data visualization of lab studies to demonstrate influence of room environment on occupant wellbeing
- Performed reliability and variance statistical analysis on survey studies on building feature impact on occupants

Structural Engineering, Mechanics and Materials Group, Georgia Institute of Technology, Atlanta, GA

Undergraduate Research Assistant

January 2017 - May 2017

Dr. Abdul-Hamid Zureick

- Performed destructive testing and analysis on pultruded Fiberglass Reinforced Plastic members in bolted connections

- Developed research report to further develop industry code for minimum bolt edge distance performance equations

PROFESSIONAL EXPERIENCE

Clark Construction, BART Union City, CA

Summer Associate

June 2020 - July 2020

- Developed data visualization dashboard using Power BI to track subcontractor performance
- Utilized SketchUp to develop construction site plans
- Assisted tracking materials and resources for LEED credit
- Developed Site Specific Work Plan and provided construction support

AECOM, Washington DC +

Structural Engineer

July 2017 - August 2019

- Analyzed and modeled steel surge tanks attached to hydropower facility using Finite Element Analysis
- Provided engineering support for dam rehabilitation alternatives for Crane Lake Dam, MO by performing preliminary design calculations, initial design drawings, construction cost estimates, and a written design alternatives report
- Quality engineer in assignment for FEMA to produce 17,546,644 meals shipped through 775 truckloads to both Puerto Rico and U.S. Virgin Islands for hurricane relief
- Developed recommendations for hillside development code in cooperation with FEMA to aid in supporting building code development in the U.S. Virgin Islands

AECOM, Mosul Dam, Iraq

Office Engineer

July 2018 - February 2019

- Calculated grouting pressures to be used for a grout curtain underneath dam foundation
- Managed small team of local subcontractors in scanning and electronic indexing of historic design and as-built drawings
- Performed Quality Control of grout mix design and batch tests
- Developed and executed a training program to integrate Office Engineers from the Iraqi Ministry of Water Resources into supporting the field and technical staff of the dam

TEACHING EXPERIENCE

Materials for Sustainable Built Environments, Stanford University

Course Assistant: CEE-223, Dr. Sarah Billington

March 2021 - June 2021

- Approximately 25 graduate students
- Developed embodied carbon of buildings module and supporting assignments
- Built up final project to include carbon calculations and constructability estimates

Structural Design, Stanford University

Course Assistant: CEE-182, Dr. Sarah Billington

January 2021 - March 2021

- Approximately 20 undergraduate students
- Assisted in developing syllabus for the first year that offered a combined structural steel and reinforced concrete design course

Building Modeling for Design and Construction, Stanford University

Course Assistant: CEE-220A, Glenn Katz September 2020 - November 2020

- Approximately 40 undergraduate and graduate students

AFFILIATION AND
SERVICE

Academic Organizations

- Events Coordinator for Leaders of the Built Environment, 2019-2020, *Stanford University*
- Team Captain for Stanford's Integrated Project Delivery competition team in the Associated Schools of Construction Student Competition, 2020, *Stanford University*
- CEE Peer Mentoring Program, 2020, *Stanford University*
- Trip Leader, Outdoor Recreation Georgia Tech, 2015-2017, *Georgia Tech*
- Team Lead, Engineers Without Borders, 2016, *Georgia Tech*

Professional Organizations

- Associate Member, American Society of Civil Engineers, inducted 2017
- Garden Guild Volunteer Member, Franciscan Monastery of the Holy Land, 2017-2018

TECHNICAL SKILLS

Registered: WELL Accredited Professional, Engineer-In-Training (EIT)

Software: BIM, Revit, Dynamo, AutoCAD, EC3, SimaPro, OneClickLCA, SketchUp, R, Power BI