REBECCA CIEZ

Carnegie Mellon University, Baker Hall 129, 5000 Forbes Avenue, Pittsburgh, PA 15213
rciez@andrew.cmu.edu ◆ (724) 972 – 2977

EDUCATION

Carnegie Mellon University, College of Engineering, Pittsburgh, PA
Ph.D. in Engineering and Public Policy, *Expected 2017*

Columbia University, School of Engineering and Applied Science, New York, NY
Bachelor of Sciences, Mechanical Engineering, May 2013
Economics & Sustainable Engineering Minors

RESEARCH EXPERIENCE

Carnegie Mellon University, Engineering and Public Policy, Pittsburgh, PA
Graduate Research Assistant 2013 – Present
Advisors: Dr. Jay Whitacre, Dr. Inês M. L. Azevedo
Created time-step battery degradation model to study economic impacts of energy storage in hybrid energy systems. Working to expand model to account for externalities associated with battery manufacturing and fossil fuel consumption.

ASME, Washington DC
Public Policy Research Intern Summer 2014
Advisors: Dr. Kenneth Lutz, Melissa Carl
Conducted research related to US international energy policies, specifically related to the Power Africa Initiative. Research findings and recommendations were presented in writing and in presentations to representatives from engineering professional societies and Congressional fellows working on energy and technology issues.

Columbia University Water Center, New York, NY
Undergraduate Research Intern Fall 2012
Organized economic data to be interfaced with electricity and agricultural water use patterns of Punjab, India, in coordination with other researchers and interns to develop water and energy optimization models.

PROFESSIONAL EXPERIENCE

ASME, New York, NY
Engineering for Change (E4C) Intern Summer 2013

- Coordinated with research team, manufacturers, and subject matter experts to gather technical data for development technologies and to build an online decision aid tool
- Participated in the development process of *Demand* an international development case study journal

Disney/ABC Television, New York, NY
Facility Management Intern Summer – Fall 2012

- Compile energy and water resource usage data as part of a company-wide conservation program

- Participate in the commissioning process for LEED Silver targeted building
- Assist in management of mechanical, electrical, and plumbing systems in broadcast facilities

Uncharted Play, New York, NY
Social Development Associate Spring 2012

- Analyze and recommend clean energy technologies and sustainable manufacturing processes
- Research and recommend mobile data collection technology to assist in conducting community surveys to measure program effectiveness and impact
- Assist in development of curriculum framework focused on energy, fitness, and teamwork

Aerotech, Pittsburgh, PA
Mechanical Production Intern Summer 2011

- Designed fixtures used with CNC mills to produce housings for high-performance rotary motors
- Updated manufacturing programming to be compatible with CNC Mazatrol equipment
- Completed production tracking documentation and analysis

TEACHING EXPERIENCE

Carnegie Mellon University
Energy Policy and Economics, *Teaching Assistant* Spring 2016

- Update course materials to reflect recent energy and climate change policies
- Grade reflection papers for masters-level course

HONORS AND AWARDS

NSF Graduate Research Fellowship, 2015
Neil and Jo Bushnell Fellowship, 2014
Friedman Fellowship, 2014
Columbia University King's Crown Civic Responsibility Award, 2013
Columbia University King's Crown Gold Crown Leadership Award, 2012

LEADERSHIP/SERVICE

Engineers Without Borders
Graduate Student Member & Advisor Fall 2013 – Present

- Assist in assessing project success metrics for energy access projects in Rampur, India
- Advise students during the closeout process of successfully completed projects, and in the search for new community partners

Columbia University Uganda Program Manager 2013

- Coordinated between student members, university administrators, and NGO partners to manage water resource and energy access projects
- Administered project grants from the United States Environmental Protection Agency P3 program ($75,000) and National Geographic ($105,000)

- Presented project accomplishments at recruiting events, as a guest lecturer, and to the public

Columbia University Uganda Program Travel Team Leader June 2010 & January 2012

- Executed the installation of three rainwater harvesting systems and two agricultural processing exhaust systems
- Constructed lesson plans for secondary school students about engineering design and proper water treatment processes

Columbia University Chapter Treasurer 2011

- Oversaw an annual budget of approximately $20,000
- Kept accurate records of all purchases made through seven different program accounts
- Assisted in planning a regional workshop for 400+ EWB members from the Northeast Region

Columbia University Student Member Fall 2009 – Spring 2013

- Designed electrical systems to be implemented with biodiesel processing sites
- Researched battery charging technologies to support local mobile phone charging businesses
- Completed design drawings using AutoCAD

Society of Women Engineers

Carnegie Mellon University Graduate Student Member Fall 2013 – Present

- Lead activities and serve on panel of engineering students during outreach programs for Middle and High-School students from local public schools
- Assisted in the preparation of the bid to host the first WE Local regional conference as a collaboration between the University of Pittsburgh, Carnegie Mellon, and Pittsburgh professional sections

Columbia University Student Member Fall 2009 – Spring 2013

- Served as student mentor, providing advice relating to internships and course selection to underclassmen
- Participated in networking events with alumni, students, and professors

Columbia University ASME

Vice President of Communications Fall 2012 – Spring 2013

- Assisted in organizing on-campus events with students, faculty, and potential employers
- Implemented a mentorship program and built institutional memory

Columbia University ADVANCE Leadership Program

Participant Spring 2012

- Discussed leadership strategies with other student leaders and campus advocates
- Performed project-based fieldwork to augment professional leadership capabilities

PUBLICATIONS

Rebecca Ciez, J.F. Whitacre, *Comparative techno-economic analysis of hybrid micro-grid systems utilizing different battery types*, Energy Conversion and Management (Accepted)

CONFERENCE PRESENTATIONS

Energy Storage Optimization: A Techno-economic Analysis of Battery Chemistries in Hybrid Microgrids. USAEE/IAEE North American Conference, Pittsburgh, PA, October 27, 2015.

POSTER PRESENTATIONS

Optimizing Energy Storage: A Techno-Economic Analysis for Hybrid Microgrid Systems. Center for Climate and Energy Decision Making Annual Meeting, Pittsburgh, PA, May 20-21, 2015.

Optimizing Energy Storage: A Techno-Economic Analysis for Hybrid Microgrid Systems. Engineering Sustainability: Innovation and the Triple Bottom Line, Pittsburgh, PA, April 20, 2015.

The (Not So) Little Engine That Could: Implementing Multifunction Energy Platforms in Uganda. National Sustainable Design Expo, Washington, DC, April 18-19, 2013.

OTHER PRESENTATIONS

Policies Shaping Power Africa: Perspectives on Energy Policy for the Developed and Developing World. ASME Board on Government Relations. November 16, 2014.

Early Career Engineer Mini-Talks, Panel Moderator. ASME Board on Career Development, November 16, 2014.

The Techno-Economics of Distributed Hybrid Micro-grid Systems: Optimizing the Energy Storage Element. Carnegie Mellon Electricity Industry Center Advisory Committee Meeting. October 21, 2014.

Engineers Without Borders-USA Columbia University: Water Safety & Security. Guest Lecture: The Art of Engineering. November 16, 2012

Engineers Without Borders-USA Columbia University Uganda Program: Multifunction Energy Platforms. Guest Lecture: The Art of Engineering. March 30, 2012

Engineers Without Borders, Columbia Engineering Women's Forum. October 29, 2011.

Engineers Without Borders, Columbia Engineering Women's Forum. October 17, 2010.

PROFESSIONAL ORGANIZATIONS

ASME
SWE
AAAS

SKILLS

MATLAB
R

Sawtooth
AutoCAD
PTC Creo 2.0
Java
Microsoft Office
LaTex