JENNIFER G. SCHEIB

WORK EXPERIENCE

Fall 2017 – Present **University of Colorado** Boulder, CO

Civil, Architectural, and Environmental Engineering, Instructor

- Teaches architectural lighting fundamentals courses (Illumination I, Radiative Transfer), and develops and teaches lighting applications courses that address changing professional practice and zero energy building design goals (Daylighting, Lighting Controls)
- Collaborates with the National Renewable Energy Laboratory to develop project concepts for energy efficient lighting solutions via a joint appointment
- Co-directs and teaches for the Rocky Mountain Lighting Academy, an annual, intensive workshop for industry professionals

2009 – Fall 2017 **National Renewable Energy Laboratory** Golden, CO

Commercial Buildings Research Group, Multidisciplinary Engineer III

- Served as the technical project manager for the Wells Fargo Innovation Incubator program, in which NREL provides technical support to startups developing energy efficiency technologies for buildings
- Performed daylighting performance, occupant behavior, and building acquisition research projects that help owners/operators realize zero energy in building operation
- Supported field demonstrations of lighting and building control technologies

2006 – 2009 **Architectural Energy Corporation** Boulder, CO

Daylighting Analysis Group, Staff Engineer

- Provided development support for Sensor Placement + Optimization Tool (SPOT)
- Performed daylighting design assistance and in-depth Radiance analysis on a variety of school, office, and airport projects

2003 **National Institute of Standards and Technology** Gaithersburg, MD

Optical Radiation Group, Research Assistant

- Conducted research project to characterize the power and intensity distribution of LED sources

2002 **Horton Lees Brogden Lighting Design** Los Angeles, CA

Lighting Design Intern

- Prepared fixture layouts, schedules, presentation boards, and electric lighting calculations

EDUCATION

1999 – 2004 **University of Colorado** Boulder, CO

Bachelor/ Master's Degree in Architectural Engineering, Building Systems Program

- Merit scholarships paid for tuition: Fall 1999 – Spring 2003

Master's Thesis, "Metrics of perception: Sharpness of beam edges"

- Funded by LiteControl to research relationship between sharpness judgments and spatial frequency content of beam edges through subjective experimentation and digital image analysis

ACTIVITIES AND ACHEIVEMENTS

- Illuminating Engineering Society of North America member: Spring 2002 to present
- NREL's Outstanding New Partnership Award: Spring 2015
- NREL's President's Award for Excellence in Campus Development: Spring 2014
- Outstanding Graduate for Research, College of Engineering and Applied Science: Fall 2004
- Community service including Habitat for Humanity and ReNew our Schools student mentoring

PUBLICATIONS

Kung, T., Frank, S., **Scheib, J**., Heredia, W.B., Pless, S. (2016). *Supervisory Control of Loads and Energy Storage in Next-Generation Zero Energy Buildings*. NREL/TP-5500-67007, National Renewable Energy Laboratory, Golden, Colorado. http://www.nrel.gov/docs/fy16osti/67007.pdf

Walker, A., **Scheib, J**., Turchi, C., Robi, R., Tomberlin, G., Burman, K., Hillesheim, M., Kroposki, B., Qu., M. (2016). *Integration of Renewable Energy Systems*. American Society of Mechanical Engineers Technologies for Sustainable Life (TSL) – Concise Monograph Series. ISBN: 9780791861240. 150 pages. https://www.asme.org/products/books/ingegration-of-renewable-energy-systems

Fregosi, D., Ravula, S., Brhlik, D., Saussele, J., Frank, S.; Bonnema, E., **Scheib, J**., Wilson, E. (2015). "A Comparative Study of DC and AC Microgrids in Commercial Buildings Across Different Climates and Operating Profiles." Presented at the *IEEE First International Conference on DC Microgrids,* Atlanta, Georgia. http://www.nrel.gov/docs/fy15osti/63959.pdf

Scheib, J., Pless, S., Coleman, E. (2015). *Realizing High-Performance Buildings: How To maintain Energy-Efficient Design Intent During Building Operation*. NREL/BR-5500-62530, National Renewable Energy Laboratory, Golden, Colorado. http://www.nrel.gov/docs/fy15osti/62530.pdf

Pless, S., **Scheib, J**., Torcellini, P., Hendron, B., Slovensky, M. (2014). *NASA Net Zero Energy Buildings Roadmap*. NREL/FS-5500-60838, National Renewable Energy Laboratory, Golden, Colorado. http://www.nrel.gov/docs/fy15osti/60838.pdf

Scheib, J., Pless, S., Torcellini, P. (2014). *An Energy-Performance-Based Design-Build Process: Strategies for Procuring High-Performance Buildings on Typical Construction Budgets*. NREL/FS 5500-61571, National Renewable Energy Laboratory, Golden, Colorado. http://www.nrel.gov/docs/fy15osti/62530.pdf

Scheib, J. (2013). *Integrated Design Team Guide to Realizing Over 75% Lighting Energy Savings in High-Performance Office Buildings*. NREL/FS-5500-51665, National Renewable Energy Laboratory, Golden, Colorado. http://www.nrel.gov/docs/fy14osti/51665.pdf

Schott, M., **Scheib, J**., Long, N., Fleming, K., Benne, K., Brackney, L. (2012). "Progress on Enabling an Interactive Conversation Between Commercial Building Occupants and Their Building To Improve Comfort and Energy Efficiency." In *Proceedings of the 2012 ACEEE Summer Study on Energy Efficiency in Buildings*. Monterey, California. http://www.nrel.gov/docs/fy12osti/55197.pdf

Guglielmetti, R., **Scheib, J**., Pless, S., Torcellini, P., Petro, R. (2011). "Energy Use Intensity and its Influence on the Integrated Daylighting Design of a Large Net Zero Energy Building." In *Proceedings of ASHRAE Winter Conference,* Las Vegas, Nevada. https://www.seventhwave.org/sites/default/files/49103.pdf

SPEAKING ENGAGEMENT HIGHLIGHTS

Panelist, "Will LED Lighting Systems Change Daylighting Design for Energy Efficient Buildings?" Presentation and panel discussion on daylighting design in the era of solid state lighting, given at the *DOE Solid-State Lighting Technology Trends Workshop,* November, 2017, Portland, Oregon.

Co-Presenter, "Real Performance for Real Buildings," Conference lecture on zero energy building operation, given at *Rocky Mountain Green,* April, 2015, Denver, Colorado.

Presenter, "What's Next for Lighting Systems," Conference lecture on retail lighting system advancements, given at *RetailGreen,* December, 2014, Tucson, Arizona.

Presenter, "Energy-Performance-Based Design-Build: Strategies for Procuring High-Performance Buildings on Typical Construction Budgets," Paper presentation on zero energy building procurement strategies, given at the *ACEEE Summer Study on Energy Efficiency in Buildings,* August, 2014, Monterey, California.

Co-Presenter, "The Evolution of Daylighting Design at the National Renewable Energy Laboratory," Conference lecture surveying thirty-years of daylighting design approaches, given at *LightFair International,* June, 2014, Las Vegas, Nevada.

Co-Presenter, "The Largest Net Zero Energy Building: What's Under the Hood," Conference lecture on the lighting systems at the National Renewable Energy Laboratory's Research Support Facility, given at the *ASHRAE Annual Conference,* June, 2013, Denver, Colorado.

Co-Presenter, "High Dynamic Range Imaging: A Tool for Lighting Designers," Conference workshop, given at *LightFair International's Daylighting Institute,* May, 2012, Las Vegas, Nevada.

Co-Presenter, "High Dynamic Range Imaging for Glare Analysis," Conference workshop, given at *LightFair International's Daylighting Institute,* May, 2011, Philadelphia, Pennsylvania.