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Ph.D. Position at the radiantlab
Present and future indoor light and visual conditions in urban areas

The radiantlab has an open position for a Ph.D. candidate in architectural engineering starting on-site in Corvallis (OR) in Fall 2022.

The Laboratory
Our mission is to advance knowledge related to daylight in buildings and the practice of daylighting to enhance people's health, well-being, and performance, while minimizing energy consumption. We rely on insights from different disciplines to further understand and optimize relations between the natural and built environment, indoor light and visual conditions, building occupants, and energy consumption.

The Research Project
Today, we spend an average of 90% of our time indoors. Compared to the outdoor daylight under which we have evolved for thousands of years, we receive much less light during the day, and much more in the evening. In addition, 68% of the global population is expected to live in cities by 2050. This strong urbanization and the current climate change herald an even greater transformation of our indoor light and visual conditions. How will urbanization trends affect our indoor light and visual conditions? What is the impact of climate change and air pollution on the prediction of indoor light and visual conditions? How will our lighting energy consumption evolve in the future, given that our access to daylight is likely to change with urbanization and climate change? The goal of this research is to answer such kinds of questions through the development/use of innovative numerical modeling methods, supported by user surveys or in situ measurements.

The Candidate
Required:

- Bachelors or Masters (preferred) degree in Architectural Engineering, Architecture (with a technical focus), or other Engineering majors
- Knowledge or background in (day)lighting and photometry, and one or more of the following fields: computational engineering or data science; physics, mathematics, or statistics; urban planning; climatology
- Strong programming (R/MATLAB/Python) and lighting/building simulation skills
- Strong writing and communication skills

Preferred:

- Experience in big data management
- Experience in statistical data analysis, data science, and machine learning
- Experience in IEQ instrumentation and sensing
- Experience with setting up local and cloud-based data acquisition
- Familiarity with GPU-accelerated simulations
- Enthusiasm for multidisciplinary research

If you work with us, you can expect that we will provide mentorship and resources, and invest time and energy to help you achieve your goals. By the same token, you will be expected to bring your own passion, ideas, ambition, and skills to the table.

OSU—and especially the radiantlab, commits to inclusive excellence by advancing diversity, equity, and inclusion in all that we do. We particularly encourage applications from members of historically underrepresented racial/ethnic groups, women, individuals with disabilities, veterans, LGBTQI+ community members, and others who demonstrate the ability to help us achieve our vision of a diverse and inclusive community.

Apply for this Position
Potential applicants can contact Dr. Clotilde Pierson (clotilde.pierson@oregonstate.edu) directly. To be considered for this position in the School of Civil and Construction Engineering (CCE) at Oregon State University (OSU), those interested will have to apply and be accepted to OSU CCE Graduate School. Supporting information and application material may be requested upon review.

Additional Information
The appointment is expected to start at the earliest on September 1, 2022. Later start dates can be discussed. Information about the School of Civil and Construction Engineering can be found here, and for future graduate students here. Oregon State University, as one of the largest land-grant institutions in the U.S., is located in Corvallis, Oregon, which has been ranked as the 11th best place to live in the U.S.