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Ph.D. Position at the *irradiantlab*

Present and future indoor visual environments in urban areas

The *irradiantlab* (Laboratory of Integrated Research on Daylighting) led by Dr. Clotilde Pierson has an open position for a Ph.D. candidate starting on-site in Corvallis (OR) in Fall 2022.

The mission of the laboratory is to advance knowledge of daylighting in buildings to enhance people's health, well-being, and performance, while minimizing energy consumption. We rely on insights from different disciplines to further understand how our natural and built habitat affects our indoor visual environment, and how, in turn, our indoor visual environment affects us, the building occupants. Our long-term goal is to translate fundamental knowledge about human responses to light and the need to reduce energy consumption into strategies for the development of a more sustainable built environment and innovative daylighting solutions.

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 visual environments. The goal of this research is to characterize the present indoor visual environments in urban areas and predict their evolution in the future. The main approach for this project is expected to be through numerical modeling. User surveys and in situ measurements could be used to support and validate the simulation work.

The Candidate

Required:

- Bachelors or Masters (preferred) degree in Architectural Engineering, Architecture (with a technical focus), or other STEM majors
- Knowledge or background in one or more of the following fields: (day)lighting and photometry; 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 **irradiantlab**, 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

Please submit your application via the [online form](#). Review of applications will begin immediately; interested applicants are encouraged to apply as early as possible, and by May 15, 2022, at the latest. Email follow-up after the submission of the application is not needed and shortlisted applicants will be contacted via the email they provided in the application form. Additional supporting information may be requested upon review.

Application material, to be combined in the following order into ONE PDF file and submitted through the online form:

1. (required) Cover letter (or personal statement) detailing relevant experience, your interests, and how they fit with the **irradiantlab** and the research project
2. (required) CV
3. (required) A one-page (two-page max.) research proposal/vision document for the research project
4. (required) Transcripts of Records
5. (required for *international* applicants only) English language test score
6. (optional) GRE test score
7. (required) Names and contact information of three references
8. (optional) Publication sample (such as a conference or journal paper) with a cover page clearly detailing your contributions to the paper

Additional Information

The appointment is expected to start on September 1, 2022. Earlier/later start dates can also 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.](#)