

Dr. Siobhan Francois Rockcastle

Assistant Professor of Architecture

Frederik C. Baker Chair of Design, Institute for Health in the Built Environment

University of Oregon (srockcas@uoregon.edu)

Education

- 2012-17 Ecole Polytechnique Fédérale de Lausanne, **PhD**
School of Architecture, ENAC, Lausanne, Switzerland [**Special Distinction for Thesis**]
Thesis: Perceptual Dynamics of Daylight in Architecture
Adviser: Dr. Marilyne Andersen
- 2009-11 Massachusetts Institute of Technology, **SMArchS, Building Technology**
SA+P, Cambridge, MA [**SMArchS Thesis Award**]
Thesis: Daylight Variability and Contrast-Driven Architectural Effect
Advisers: Dr. Marilyne Andersen and Dr. Terry Knight
- 2003-08 Cornell University, **BArch**
AAP, Ithaca, NY [**Alpha Rho Chi Bronze Medal**]
Thesis: Pig's Eye Park, Reoccupying the Dump
Advisers: Kevin Pratt and Leire Asensio-Villoria

Academic Appointments

- 2018- **University of Oregon, Assistant Professor of Architecture (since 2018)**
Frederik C. Baker Chair in Design, Director of the Baker Lab, IHBE Partner Lab
- 2022- **TU Munich – IAS (Institute of Advanced Studies), Hans Fischer Fellow (since 2022)**
Hosted by Professor Thomas Auer and Funded by the Georg Nemetschek Institute
- 2017 **Ecole Polytechnique Fédérale de Lausanne, Post-Doctoral Assistant (June - December 2017)**
School of Architecture, Civil and Environmental Engineering
- 2013-17 **Ecole Polytechnique Fédérale de Lausanne, Doctoral Assistant (2013-2017)**
School of Architecture, Civil and Environmental Engineering
- 2011-12 **Northeastern University, Teaching Fellow & Visiting Assistant Professor (2011-2012)**
School of Architecture, College of Arts, Media and Design
- 2010-11 **Massachusetts Institute of Technology, Teaching & Research Assistant (2010-2011)**
Department of Architecture, School of Architecture & Planning
- 2008-09 **Cornell University, Teaching Associate (2008-2009)**
Department of Architecture, College of Architecture, Art & Planning

Honors and Awards

- 2022- **Hans Fischer Fellowship, TUM-IAS**, Funded by the Georg Nemetschek Institute (3-year award)
Recognizes Outstanding early-career (doctorate completed within the past 12 years) international scientists, 80,000 Euro award, 1 funded PhD student at TUM-IAS, and 9-months in residence at TUM-IAS
- 2022- **Francis Bronet Innovation Award**, College of Design, University of Oregon
\$4,500 fund Awarded by Dean Adrian Parr in support of 'The Impact of lighting design on occupant perception and behavior in a healthcare environment: an experiment in virtual reality' with Kyuho Ahn

- 2021 **ARCC New Researcher Award**, selected by the ARCC Board of Directors
Awarded to emerging figures in architectural and environmental design research that demonstrate innovation in thinking, dedication in scholarship, contributions to the academy, and leadership within architectural and environmental design research.
- 2020 **Best Paper Award, SimAUD 2020 conference**, Vienna Virtual due to COVID-19
For the paper titled, 'Evaluating Temporal and Spatial Light Exposure Profiles for Typical Building Occupants,' co-authored by Megan Danell (UO MArch student), Maria Amundadottir, and Siobhan Rockcastle
- 2020-21 **Francis Bronet Innovation Award**, College of Design, University of Oregon
\$4,500 fund Awarded by Interim Dean Laura Vandenburg in support of 'Motivation/Function, Comfort, Arousal and Behavioral Response in Built Environment via VR Setting' with Kyuho Ahn (Associate Professor of Interior Architecture)
- 2019 **Latrobe Prize Finalist**, Recognized by the Jury, FAIA, Denver
Selected as a finalist to present a collaborative project proposal to the FAIA Latrobe Prize Jury in Denver, CO, together with Andrea Love (Payette Architects) and Sue Ishaq (University of Oregon)
- 2018 **2nd Prize for OCULIGHT dynamics, 'LePrix StartUp Durable'**, Les Temps, CH
OCULIGHT dynamics acknowledged as one of the most innovative Swiss Start-ups in sustainability in 2018, together w/ Marilyne Andersen and Maria Amundadottir (co-founders)
- 2018 **Special Distinction for PhD Thesis**, Recognized by the Doctoral School, EPFL
Nominated by my thesis dissertation committee and selected as one of 9 graduating doctoral students short-listed for the Top Dissertation Award across all doctoral schools at EPFL in 2017 (awarded in 2018)
- 2014 **Velux Research Fellowship** (4 years), 100% PhD & Post Doc funding, Velux Stiftung, Zurich
Awarded for our proposal, 'Perceptual Dynamics of Architecture,' written by Marilyne Andersen and Siobhan Rockcastle to support 4-years of funding
- 2015 **Honorable Mention**, Fribourg urban design competition, Fribourg
Awarded to the competition design team, together with Pierre Escobar of Studio Nomadic Architecture for the proposal to re-design a public streetscape in historic Fribourg
- 2013 **Architizer A+ Finalist**, Architecture & Learning, Soft Rocker, KVA matX
Worked on the design team from schematic design, through design development, prototyping, fabrication, and installation in the MIT courtyard
- 2013 **Architizer A+ Special Mention**, Architecture & Fab, Beaver Wood Vault, KVA
Worked on the design team from schematic design, through design development, prototyping, fabrication, and installation on site in the Beaver Country Day School
- 2012 **Best Paper Award, SimAUD 2012** conference, Orlando
Lead author on the paper that summarized findings from my MIT SMArchS thesis, together with Marilyne Andersen
- 2011-12 **Teaching Fellowship**, School of Architecture, Northeastern (2011-2012)
Awarded a one-year fellowship to teach a suite of classes and develop an exhibition on my research. Courses included comprehensive design studio, daylighting design, and environmental control systems
- 2011 **SMArchS Thesis Prize**, for 'Daylight Variability and Contrast-Driven Arch. Effect,' MIT
Nominated by my thesis committee and awarded by faculty in the Department of Architecture for my SMArchS thesis on Daylight Variability and Contrast-Driven Architectural Effect

- 2011 **Award of Excellence**, Ryerson SLC, Snøhetta, Canadian Architect
Worked on the team throughout schematic design, including building massing, environmental control, and interior daylight concepts.
- 2010-11 **Samuel A. Marx Fellowship**, full tuition award for outstanding scholastic merit, MIT
Awarded to cover tuition costs in the second year of my SMarChS degree
- 2010 **Holcim Forum Student Poster Selection**, for 'channels for learning', MIT
Awarded for our design of a school in Cambodia with Tiffany Chu, Lisa Pauli, Lisa Hedstrom, Joseph Nunoz & Juliana Sassaman (faculty advisors: Marilyne Andersen, Meejin Yoon, and John Ochsendorf
- 2008 **Alpha Rho Chi Bronze Medal**, for leadership and professional merit, Cornell
Selected by faculty in the department of architecture to a graduating BArch student
- 2008 **Robert James Eidlitz Traveling Fellowship**, energy infrastructure Iceland, Cornell
Supported a proposal to study the energy infrastructure in Iceland during the 2008 summer
- 2007 **Lifecycle Building Challenge, Honorable Mention**
Awarded for our proposal, 'The Foam Dome,' with Cayley Lambur, Kevin Pratt, and Dana Cupkova, Cornell
- 2007 **AIA NYS Student Design Award**, for 'growing Gibraltar,' Cornell
Nominated by faculty in the Department of Architecture for design work in an advanced studio with Cristina Diaz Moreno and Efren Garcia Grinda
- 2004 **First Place Baird Prize**, for 'pop-up cinema' in 1st year design competition, Cornell
Selected by faculty in the department of architecture during the first-year design competition

Funded Grants/Projects/Contracts

(\$333,939 as PI and \$78,950 as Co-PI since joining UO):

- 2022- **(PI) Francis Bronet Innovation Award, \$4,500** to support 'The Impact of lighting design on occupant perception and behavior in a healthcare environment: an experiment in virtual reality,' w/ Kyu-Ho Ahn, College of Design, University of Oregon. Awarded in 2022, ongoing.
- 2021-23 **(PI and Co-PI*) NEEA Research Grant on the Circadian Health Potential of an LLLC Lighting System, \$90,000** to support a field and simulation-based study that evaluates the circadian health potential of an overhead LLLC system, funded by the Northwest Energy Efficiency Alliance, w/ Kevin Van Den Wymelenberg and Alen Mahic. Awarded in 2021, completed in January 2023. * 48,050 in 2022 (PI) and 41,950 in 2021 (Co-PI)
- 2021-22 **(PI) PNNL Research Grant on Circadian Lighting & Visual Comfort, \$66,000** to support a simulation-based study on the impacts of visual comfort on circadian light exposure using the WELL standard, subaward from DOE SSL through PNNL, w/ Alen Mahic, awarded in 2021, completed in 2022.
- 2021-22 **(PI) PNNL Research Grant on Perception in Virtual Reality, \$94,993** to support an experimental study on the impact of VR display type on the perception of LED lighting, subaward from DOE SSL, w/ Kevin Van Den Wymelenberg, awarded in 2021, completed in 2022.
- 2021 **(PI) ZGF Visual Comfort Study, \$26,000** to analyze shading systems for a confidential project in Portland w/ Kevin Van Den Wymelenberg, University of Oregon, awarded in 2021, completed in 2021.
- 2021 **(Co-PI) Francis Bronet Innovation Award, \$4,500** to support the Motivation/Function, Comfort, Arousal and Behavioral Response in the Built Environment Using Virtual Reality and Biofeedback Sensing, w/ Kyu-Ho Ahn, College of Design, University of Oregon, awarded in 2021, ongoing.

- 2019-21 **(PI) PNNL Research Grant on Perception in 2D & 3D Displays, \$74,396** to support a pilot study comparing perceptions of electric light in real and virtual environments, subaward from DOE SSL, University of Oregon, awarded in 2019, completed in 2021.
- 2018-19 **(PI) Nuckolls Fund Grant, \$20,000** to develop a new course on 'Virtual Lighting Design' w/ Kevin Van Den Wymelenberg, Zach Suchara, Nathaniel Jones, and Naomi Miller, University of Oregon, awarded in 2018, completed in 2019.
- 2018-19 **(Co-PI) Lutron White Paper, \$10,000** to develop a white paper on daylight and views in the workplace w/ Kevin Van Den Wymelenberg, University of Oregon, awarded in 2018, completed in 2019.
- 2018 **(Co-PI) Knight Campus Visual Comfort Analysis, \$22,500** of internal funds from CPM to analyze exterior glazing and shading screens for glare risk w/ Kevin Van Den Wymelenberg, University of Oregon, awarded in 2018, completed in 2018.
- 2017-18 **(PI) InnoSeed Venture Grant, 26,000 CHF** for OCULIGHT interface, EPFL, Lausanne, awarded in 2017, completed in 2018.
- 2017-18 **(PI) InnoSeed Explorer Grant, 20,000 CHF** for OCULIGHT interface, EPFL, Lausanne, awarded in 2017, completed in 2018.
- 2013-18 **(Key Personnel) Velux Stiftung Research Fellowship, 350,000 CHF** to support Doctoral and Post-Doc, EPFL, Lausanne, w/ Marilynne Andersen, awarded in 2013, completed in 2018.

Peer-Reviewed Publications

A note on author order: It is common for the first author to lead manuscript preparation and the last author to be Principal Investigator on the project or play a major support role. Directing a lab with external funding results in many papers being co-authored by master and PhD students.

**Indicates Bachelor, Master, or PhD Students at UO, where authorship emerged from supervision of a thesis or instruction in a course/independent study*

***Indicates Bachelor, Master, or PhD Students at UO who was employed through grant activity or internal funding*

****Indicates a Bachelor, Master, or Doctoral Students outside UO, where authorship emerged from supervision of a thesis or instruction in a course*

Journal Articles (published):

- 2022 W. H. Ko, S. Schiavon, S. Altomonte, M. Andersen, A. Batool, W. Browning, G. Burrell, K. Chamilothoni, Y-C. Chan, G. Chinazzo, J. Christoffersen, N. Clanton, C. Connock, T. Dogan, B. Faircloth, L. Fernandes, L. Heschong, K. W. Houser, M. Inanici, A. Jakubiec, A. Joseph, C. Karmann, M. Kent, K. Konis, I. Konstantzos, K. Lagios, L. Lam, F. Lam, E. Lee, B. Levitt, W. Li, P. MacNaughton, A. M. Ardakan, J. Mardaljevic, B. Matusiak, W. Osterhaus, S. Petersen, M. Piccone, C. Pierson, B. Protzman, T. Rakha, C. Reinhart, **S. F. Rockcastle**, H. Samuelson, L. Santos, A. Sawyer, S. Selkowitz, E. Sok, J. Strømman-Andersen, W. C. Sullivan, I. Turan, G. Unnikrishnan, W. Vicent, D. Weissman, J. Wienold. Window view quality: why it matters and what we should do, *LEUKOS*, Vol. 18 (3), 2022. [https://www.tandfonline.com/doi/full/10.1080/15502724.2022.2055428]
- 2021 *M.C. Coronado, **S.F. Rockcastle**, A. Kwok, Environmental Health Perceptions in University Classrooms: Results from an Online Survey During the COVID-19 Pandemic, *Frontiers in Built Environment*, published online December 24, 2021. [https://www.frontiersin.org/articles/10.3389/fbuil.2021.784634/full]
- 2021 **S.F. Rockcastle**, **M. Danell, **E. Calabrese, A. Mahic, K. Van Den Wymelenberg, R. Davis, Comparing Perceptions of LED Lighting Between a Physical Space and a Virtual Reality Display, *Lighting Research and Technology*, published online February 24, 2021. [https://journals.sagepub.com/doi/abs/10.1177/1477153521990039]

- 2017 Ámundadóttir M.L., **Rockcastle S.**, Sarey Khanie M., Andersen M., A Human-Centric Approach to Assess Daylight for Non-Visual Health Potential, Visual Interest and Gaze Behavior, *Building & Environment*, vol 113, February 2017. [<https://www.sciencedirect.com/science/article/abs/pii/S0360132316303869>]
- 2016 **Rockcastle S.**, Ámundadóttir M.L., Andersen M., A Comparison of Contrast-Based Measures for Predicting Perceptual Effects of Daylight in Architectural Renderings, *Lighting Research and Technology* (published online first, April 15, 2016). [<https://journals.sagepub.com/doi/abs/10.1177/1477153516644292>]
- 2014 **Rockcastle S.**, Andersen M., Measuring the Dynamics of Contrast and Light Variability in Architecture: A Proof-of-Concept Methodology, *Building and Environment*, vol 81, November 2014, 320-333. [<https://www.sciencedirect.com/science/article/abs/pii/S036013231400198X>]

Journal Articles in Progress:

- 2023 **S.F. Rockcastle**, **G. Whalen, **A. Milgrim, R. Davis, The accuracy of virtual reality for use in perceptual studies on lighting: a comparison between real, cardboard, and tethered VR HMDs, *LEUKOS* [Submitted for review on April 1, 2023]
- 2023 **S.F. Rockcastle** and A. Mahic. Simulating the annual energy demand to meet recommended eye-level light exposure from an electric lighting system with automated window blinds [submission for a special edition on Occupant Centric Controls in the *Energy and Buildings* Journal, planned for April 30, 2023]

Articles in a Conference Proceeding (published):

- 2023 *A. Satumane, **S.F. Rockcastle**. The Impact of Space function and Window View on Perceived Indoor Environmental Quality and Privacy, *Proceedings to ARCC 2023*, Dallas, April 12-15, 2023 [accepted 2/20/2023].
- 2022 **S. F. Rockcastle**, **G. Whalen, and Robert Davis. Comparing perceptions of web-based 2D perspective and 360-degree navigable images with measurements from a physical space and a virtual reality headset, *Proceedings to the IES Annual Conference 2022*, New Orleans, August 18-20, 2022.
- 2022 *H. Parhizkar, M. Fretz, **S. F. Rockcastle**, K. Van Den Wymelenberg. A simulation-based approach to mitigate disease transmission risk from aerosol particles in buildings, *Proceedings to SimAUD 2022*, San Diego, July 18-19, 2022.
- 2021 *J. McLaughlin, M. Young and **S. F. Rockcastle**. Fine-grained measurement of the indoor built environment with robotic vacuum cleaners, *Proceedings to Building Simulation 2021*, Bruges, Sept. 1-3, 2021.
- 2021 *M. Danell, S. L. Hartmeyer, L. Petterson, M. Andersen, R. Davis, **S. F. Rockcastle**. The Impact of Light and Furniture Distribution on Healthy Light Exposure in an Office, *Proceedings to Building Simulation 2021*, Bruges, Sept. 1-3, 2021.
- 2021 *A. Satumane and **S. F. Rockcastle**. A Pilot Study on the Contextual and Environmental Factors Influencing Window Shading Preference, *Proceedings to ARCC 2021: Performative Environments*, Virtual, April 7-10, 2021.
- 2021 *S. Ghasemi, J. H. Lee, **S. F. Rockcastle**, R. Taylor, and K. Van Den Wymelenberg. The Scene Dynamism as an Aspect of Rating Indoor View Quality, *Proceedings to IES Annual Conference*, Virtual, August 9-13, 2021.
- 2020 **S.F. Rockcastle**, *M. Danell, L. Petterson, M.L. Ámundadóttir, The Impact of Behavior on Healthy Circadian Light Exposure Under Daylight and Electric Lighting Scenarios, *Proceedings to ACEEE Summer Study on Energy Efficiency in Buildings 2020*, Pacific Grove, Aug 16 – 21, 2020.
- 2020 *M. Danell, M.L. Ámundadóttir, **S.F. Rockcastle**., Evaluating Temporal and Spatial Light Exposure Profiles for Typical Building Occupants, *Proceedings to SimAUD 2020*, May 22-24, 2020. **[Best Paper Award]**
- 2019 P. Ward, **S. F. Rockcastle**, J. Kline, and K. Van Den Wymelenberg, The Impact of Lighting and Views on Human Functionality in The Workplace, *Proceedings to the 2019 IES Annual Conference*, Louisville, August 8-10, 2019.

- 2019 **S.F. Rockcastle**, M.L. Ámundadóttir, M. Andersen, The case for occupant-centric daylight analytics: a comparison of horizontal illuminance and immersive view, *Proceedings to Building Simulation 2019*, Rome, Sept. 2-4, 2019.
- 2018 **S.F. Rockcastle**, M.L. Ámundadóttir, M. Andersen, OCUVIS: A web-based visualizer for simulated daylight performance in buildings. *Proceedings to SimAUD 2018*, Delft, June 4-7, 2018.
- 2017 **S. F. Rockcastle**, M. L. Ámundadóttir and M. Andersen. A Simulation-based workflow to assess human-centric daylight performance, *Proceedings to SimAUD 2017 – Symposium on Simulation for Architecture & Design*, Toronto, May 22-24, 2017.
- 2017 **S. F. Rockcastle**, K. Chamilothoni, and M. Andersen. An experiment in virtual reality to measure daylight-driven interest in rendered architectural scenes, *Proceedings to BS2017 – 15th International Conference of the International Building Performance Simulation Association*, San Francisco, August 7-9, 2017.
- 2016 L. Pastore, P. Rastogi, **S. F. Rockcastle**, H. Y. C. Monari and G. Rueff. Assessing the impact of contemporary urbanization on bioclimatic features of historic architecture through a two-step simulation process, *Proceedings to Passive and Low-Energy Architecture*, Los Angeles, July 11-13, 2016.
- 2016 **S. F. Rockcastle**, M. L. Ámundadóttir and M. Andersen. Towards a novel prediction model for visual interest in daylight renderings, *Proceedings to SimAUD 2016*, London, May 16-18, 2016.
- 2015 **S. F. Rockcastle** and M. Andersen. Human perceptions of daylight composition in architecture: a preliminary study to compare quantitative contrast measures with subjective user assessments in HDR renderings, *Proceedings to Building Simulation 2015*, Hyderabad, December 7-9, 2015.
- 2013 M. Andersen, A. Guillemain, M. L. Ámundadóttir and **S. F. Rockcastle**. Beyond illumination: An interactive simulation framework for non-visual and perceptual aspects of daylighting performance, *Proceedings to Building Simulation 2013*, Chambéry, France, 2013.
- 2013 **S. F. Rockcastle** and M. Andersen. Celebrating Contrast and Daylight Variability in Contemporary Architectural Design: A Typological Approach, *Proceedings to LUX EUROPA*, Krakow, Poland, 2013.
- 2012 **S. F. Rockcastle** and M. Andersen. Dynamic Annual Metrics for Contrast in Daylit Architecture, *Proceedings to SimAUD 2012*, Orlando, Florida, 2012. **[Best Paper Award]**

Full-length Conference Papers in Progress:

- 2023 **S.F. Rockcastle**, **H. Carlberg, *M. Esmailian, M. Amundadottir, Simulating the impact of building form, interior wall composition, and occupant behavior on disparities in circadian health potential in an office environment, *Building Simulation 2023*, Shanghai, Sept. 4-6, 2023. [abstract accepted, paper submitted for review on March 15, 2023]
- 2023 **S.F. Rockcastle**, A. Mahic, S. Safranek, and R. Davis. The Impact of Automated Window Shading on Visual Comfort, Non-Visual Health, and Energy Demand from Electric Lighting. *Building Simulation 2023*, Shanghai, Sept. 4-6, 2023. [abstract accepted, paper submitted for review on March 15, 2023]

Conference Abstracts with Presentation in Progress:

- 2023 ***N. Nikookar, **S.F. Rockcastle**, A.O. Sawyer. Assessing the Complex and Dynamic Nature of Indoor Lighting: A Study Using Image Processing and Subjective Ratings in Virtual Reality. *CIE Annual Conference*, Slovenia, Sept. 15-23, 2023. [abstract submitted for review on March 5, 2023]

Conference Abstracts with Presentation:

- 2022 K-H. Ahn, **M. Vanko, **B. Woods, **A. Gottlin, **S.F. Rockcastle**. Immersive technology in lighting research experiment in café and office design. *2022 Interior Design Educators Council (IDEC) Annual Conference*, August 2-5, Virtual, 2022.

Book Chapters (Invited)

- 2019 "Lamps, Luminaires, and Controls" Chapter 15 in *Mechanical and Electrical Equipment for Buildings 13th Edition*, pp. 699 – 731 by Walter Grondzik and Alison Kwok, Hoboken: Wiley, 2019. [edited chapter through page 731, extended content, and provided multiple new illustrations].

Edited Conference Proceedings

As General Chair:

- 2019 **S.F. Rockcastle**, T. Rakha, C. Cerezo Davila, S. Papanikolaou, T. Zakula (Eds.). SimAUD 2019 Proceedings, Society for Modelling & Simulation, April 7-9, Georgia Tech, Atlanta, USA. 400 pages.

As Scientific Chair:

- 2018 T. Rakha, M. Turrin, D. Macumber, F. Meggers, **S.F. Rockcastle** (Eds.). SimAUD 2018 Proceedings, Society for Modelling & Simulation, June 4-7, TU Delft, Netherlands. 352 pages.

White Papers

- 2019 P. Ward, **S. F. Rockcastle**, J. Klein, K. Van Den Wymelenberg. The Impact of Lighting and Views on The Workplace of The Future. Published online August 12, 2019.

Presentations of a Peer-Reviewed Publication

- 2022 K.H. Ahn and S.F. Rockcastle. Immersive technology in lighting research experiment in café and office design. 2022 Interior Design Educators Council (IDEC) Annual Conference, August 2-5, Virtual (2022)
- 2020 The Impact of Behavior on Healthy Circadian Light Exposure Under Daylight and Electric Lighting Scenarios, ACEEE Summer Study on Energy Efficiency in Buildings 2020, Virtual (2020)
- 2020 Evaluating Temporal and Spatial Light Exposure Profiles for Typical Building Occupants. SimAUD - Symposium on Simulation for Architecture and Urban Design, Virtual (2020)
[Best Paper Award]
- 2019 The case for occupant-centric daylight analytics: a comparison of horizontal illuminance and immersive view. Proceedings of IBPSA 2019 conference, Rome (2019)
- 2018 A web-based visualizer for simulated daylight performance in buildings. SimAUD - Symposium on Simulation for Architecture and Urban Design, Delft (2018)
- 2017 A Simulation-based workflow to assess human-centric daylight performance. SimAUD 2017 – Symposium on Simulation for Architecture & Design, Toronto (2017)
- 2017 An experiment in virtual reality to measure daylight-driven interest in rendered architectural scenes. BS2017 – 15th International Conference of the International Building Performance Simulation Association, San Francisco (2017)
- 2016 Towards a novel prediction model for visual interest in daylight renderings. 7th Symposium on Simulation for Architecture and Urban Design (SimAUD), London (2016)
- 2015 Human perceptions of daylight composition in architecture: a preliminary study to compare quantitative contrast measures with subjective user assessments in HDR renderings. International Conference of the International Building Performance Simulation Association, Hyderabad (2015)

- 2013 Celebrating Contrast and Daylight Variability in Contemporary Architectural Design: A Typological Approach. LUX EUROPA, Krakow, Poland (2013)
- 2012 **S. F. Rockcastle** and M. Andersen. Dynamic Annual Metrics for Contrast in Daylit Architecture. SimAUD 2012 – Symposium on Simulation for Architecture and Urban Design, Orland (2012) **[Best Paper Award]**

Invited Lectures/Workshops

- 2023 Lighting Design in Virtual Reality, invited virtual lecture by Dr. Azadeh Sawyer, Carnegie Mellon (2023)
- 2023 The Impact of Daylight on the Design of Healthy Buildings, Invited lecture and workshop (in-person) at Florida Atlantic University (2023).
- 2023 Achieving Non-Visual Health in the Workplace using LLLCs, invited presentation (webinar) to NEEA's Product Council (2023)
- 2022 The Evolving Value of Daylighting, Invited Webinar w/ Kevin Van Den Wymelenberg for Pacific Energy Center, Virtual (offered by Pacific Gas & Electric & IES education) (2022)
- 2022 Lighting Perception in Virtual Reality: Opportunities and Limitations, Invited presentation in the 2022 IES Research Symposium, Orlando (2022)
- 2022 Energy efficient lighting and window shading controls to support occupant health, Invited virtual presentation at the DOE-IES Lighting R&D Workshop
- 2022 Daylight Design and Analysis, invited virtual lecture by Dr. Hoa Vo, Lighting Design Course, University of Georgia
- 2022 Daylight Analysis and Design, invited virtual lecture by Dr. Tarek Rakha, Environmental Sys. Course, Georgia Tech
- 2022 Lighting & Well-Being, invited virtual lecture by Michiru Tanaka, Lighting Course, Pratt
- 2021 Virtual Lighting Design, invited virtual lecture by Dr. Azadeh Sawyer, Lighting Design Course, Carnegie Mellon
- 2021 Evaluating the Environment with Domestic Robots: a Passive Approach to Fine-Grained Analysis, w/ Joseph McLaughlin, invited presentation at Build Health 2021, Virtual.
- 2021 Lighting Design & Research in Virtual Reality, invited virtual presentation at the Lighting R&D Workshop, co-sponsored by the IES and U.S. Department of Energy
- 2020 Factors in Daylight Analysis, w/ Kevin Van Den Wymelenberg, Invited webinar at Pacific Gas & Electric, Virtual
- 2020 Electric Lighting Simulation for Circadian Health & Energy invited virtual presentation w/ Lisa Petterson at Build Health 2020
- 2020 Virtual Lighting Design invited virtual presentation at Build Health 2020
- 2019 Current Trends in Daylighting invited lecture and workshop w/ Kevin Van Den Wymelenberg at Pacific Gas & Electric (PG&E), San Francisco
- 2019 Image-Based Human-Centric Daylight Assessment Workshop, invited round-panel presentation w/ Richard Mistrick (Penn State) & Kevin Van Den Wymelenberg, LIGHTFAIR International, PA
- 2019 Lighting Perception in VR, invited Speaker at the DOE SSL R&D Annual Meeting, Washington D.C
- 2019 Human-Centric Lighting, invited lunchtime lecture at SRG Architects, Portland

- 2019 Human-Centric Daylight Performance, invited lecture in MIT Spring Lecture Series in the BT Path, Boston
- 2018 Designing Health in the Built Environment, invited lecture w/ Kevin Van Den Wymelenberg at Oregon Institute of Occupational Health at OHSU, Portland
- 2018 Public Lecture Series, invited lecture in Cal Poly Pomona Spring Lecture Series, Pomona
- 2018 Simulating Circadian Light Workshop, invited w/ Aicha Diakite, Frederic Rudawski, and Jon Sargent at SimAUD 2018, Delft
- 2017 Human-Centric Lighting Workshop, w/ Maria Amundadottir, SimAUD 2017, Toronto
- 2017 Dynamic Daylight in Ryerson SLC, Invited lecture, w/ Maria Amundadottir at Snohetta, NYC
- 2017 Virtual Reality in Daylighting, w/ Kynthia Chamilothoni at the Velux Daylight Symposium, Berlin
- 2016 Current Research on Visual Interest, Invited speaker at Transsolar Research Days, Stuttgart
- 2016 Daylight Perception in Architecture, Invited speaker at NBBJ, San Francisco
- 2016 Daylight Perception in Architecture, Invited speaker at KADK, Royal Danish Academy of Fine Arts, Copenhagen

Upcoming Invited Lectures/Workshops

- 2023 The Perceptual Effects of Daylight on Human Experience, invited lecture by Dr. Ute Besenecker in a doctoral course on lighting research at KTH Royal Institute of Technology, virtual (upcoming, May 2023)
- 2023 Simulating Light Health in Buildings, invited lecture to students in a EuroTeq course by Dr. Manual Spitschan, Chair of Chronobiology at TU Munich, virtual (upcoming, June 2023).

Professional Experience

- 2018- **OCULIGHT dynamics, Lausanne, Switzerland (2018-current)**
Co-Founder & Director of Design
 This company consults on novel human-centric metrics for daylight performance in buildings
- 2022- **EPFL Ecotope for 3XN and Itten+Brechtbühl, Lausanne, Switzerland (ongoing)**
300,000 sf mass-timber innovation center
Consulting with the design team to maximize daylight and work synergistically to improve indoor environmental comfort, commissioned by the architects
- 2022- **1-2-3 Housing Retrofits for Velux, Rotterdam, Netherlands (ongoing)**
1,000 sf loft space, demonstration project
Evaluated the impact of a 1 for 1, 2 for 1, and 3 for 1 retrofit of existing skylights in a demonstration house, commissioned by Velux
- 2022-23 **Innovation House Office Space (w/ Praxis Architects) for Velux, Denmark**
135,000 sf office space in two-story renovated warehouse
Consulted for the design architect and client on layout of skylights and human-centric performance over the year, commissioned by Velux
- 2022 **Tour Tilia Tower for Realstone Group (w/3XN, Itten+Brechtbühl), Lausanne**
21,000 sf over bottom 3 stories of a 400,000 sf mass-timber tower
Evaluated the health-potential and visual comfort for a mixed-use portion of the program, commissioned by the developer

- 2021-22 **Study of Health and Emotion in Meier & Partners Projects**, New York, New York
Mixed sf across 4 different projects
Evaluated health potential for the Smith House (Connecticut), Reforma Office Tower (Mexico City), Jubilee Church (Rome), and Four-Seasons (Miami), commissioned by the architect
- 2021 **Home of the Future for Velux**, Copenhagen, Denmark
2,000 sf model home
Consulted on daylight performance and created animations to illustrate the health potential for hypothetical building occupants in a model home, commissioned by Velux
- 2021 **Research Center for the Smart Living Lab**, Fribourg, Switzerland
50,500 sf educational building
Evaluated the impact of PV-integrated glass on visual interest and glare risk as well as non-visual health-potential in zones with atrium access, commissioned by Smart Living Lab
- 2020 **Nautiland Pool for Bougyues**, Haguenau, France
30,000 sf indoor pool
Evaluated the risk for glare across all pool surfaces and adjacent circulation zones to ensure safety for lifeguards who need to maintain visual acuity in the renovated pool, commissioned by Bougyues
- 2020 **Daylight Matrix for WeWork**, New York, New York
Mixed sf of indoor workspace
Evaluated two floors of WeWork space in New York City to understand the impacts of interior partitions and workspace layout on access to light health, commissioned by WeWork
- 2019 **Co-Working for the Smart Living Lab**, Building 2050 Group, Fribourg
80,000 sf of co-working space
Evaluated the impact of interior material finishes and program layout on the health potential of lab and lounge spaces, commissioned by Smart Living Lab
- 2018-19 **Campus I for Audemars Piguet**, Les Saignoles, Switzerland
50,000 sf of precision manufacturing and workspace
Evaluated light health, emotion, and visual comfort across a series of design options and provided recommendations to the architect, commissioned by Audemars Piguet
- 2018-19 **Campus II for Audemars Piguet**, Le Brassus, Switzerland
150,000 sf of workspace
Evaluated light health, emotion, and visual comfort across a series of design options and provided recommendations to the architect, commissioned by Audemars Piguet
- 2014- **Independent Daylight Design Consultant (2014-current, intermittent)**
Independent Contractor
 Healthy Lighting for GOOD INC/UPWORTHY, New York, NY (2022)
 Campus Expansion, Ecole Hôtelière de Lausanne, Lausanne, Switzerland
 Automata Pavilion Competition, TEN x TEN, Chicago, Illinois
 Fribourg Master Plan Competition, DEVspace, Fribourg
- 2011-13 **Kennedy & Violich Architecture**, Boston, MA
Designer & Project Manager
 Bending Wood Vault for the Beaver Country Day School, Boston, MA
 Minneapolis Riverfront Development Initiative, Minneapolis, MN
 Sunlight Delivery Fixtures for 3M Architectural Markets, Minneapolis, MN
 Tozzer Library Renovation, Cambridge, MA
 Solar-Powered Soft Rockers for MIT's 150th Anniversary, Cambridge, MA

- 2010 **Snøhetta**, New York, NY (May – August)
Intern Architect
 Ryerson Univ. SLC, Toronto [Award of Excellence by Canadian Architect]
- 2009 **Epiphyte Lab**, Ithaca, NY (January – May)
Intern Architect
 HSU Residence Ithaca, NY
- 2004-08 **MSR Architecture**, Minneapolis, MN & Hyattsville, MD (intermittent)
Intern Architect (Intermittent)
 Urban Outfitters Corporate HQ Philadelphia, PA
 Farragut Street Row Homes, Hyattsville, MD
- 2005-07 **Cornell Solar Decathlon Team**, Ithaca, NY & Washington D.C.
Architecture Team Co-Leader
 Cornell's 2007 entry in the U.S. Department of Energy sponsored Solar Decathlon
- 2003 **Gensler**, New York, NY (May - August)
Intern Architect
 Thornton Tomasetti Offices, New York, NY

Press/media

- 2018 'Working Together: Siobhan Rockcastle on Learning from Others and Sharing What You Know,' by Julia Gamolina for Madame Architect (Architexx blog, 2018) <https://www.architexx.org/subtetxt/working-together-siobhan-rockcastle-on-learning-from-others-and-sharing-what-you-know>
- 2016 10 Typologies of Daylighting: From Expressive Dynamic Patterns to Diffuse Light, by Thomas Schielke for ArchDaily (2016) <https://www.archdaily.com/787734/10-typologies-of-daylighting-from-expressive-dynamic-patterns-to-diffuse-light>
- 2015 Visualizing Perceptual Dynamics in Architecture, in Phoenix, Bauen im Bestand, vol. 1, p. 62-67 (2015) <https://infoscience.epfl.ch/record/205745?ln=en>

Courses Taught

- 2018- **University of Oregon, Assistant Professor of Architecture (2018 – current)**
 Frederik C. Baker Chair in Design

Courses Taught:

- 2023 **ARCH 491/591 Environmental Control Systems 1**, Required Course, 4 cr. (2023)
Required course for BArch and MArch students (co-taught with Professor Tom Hahn + 3 GEs) format includes lectures, section activities, and workshops on computer software
- 2019-22 **ARCH 484/584 Architectural Design Studio**, 6 cr. (2019, 2022)
Solo taught studios for advanced design students, both graduate and undergraduate
- Projects:
 Oregon Museum of Climate Science, sites in McKenzie watershed (2019)
 Early Childhood Learning Center, Eugene, Oregon (2022)
- 2018-23 **ARCH 384 Architectural Design Studio**, 6 cr. (2018-2021, 2023)
Required studio course for 2nd-year BArch students – co-taught with 4-5 other faculty (14-16 students per studio section)

Projects:

Boathouse in Lowell, Oregon (2018-2019)
Center for Brew Science, Eugene, Oregon (2020) - Studio Coordinator
Culinary Arts Center, Eugene, Oregon (2021) - Studio Coordinator

- 2021-22 **ARCH 410/510 Building Simulation & Visualization**, Elective Course, 4 cr. (2021-2022)
*Elective course for for BArch and MArch students and satisfies as a technical elective.
format includes lectures, workshops, and guest presentations*
- 2020-22 **ARCH 440/540 Human Context of Design**, Required Course, 4 cr. (2020, 2022)
*Required course for BArch and MArch students (co-taught with Professor Jenny Young in 2020 and
Professor Mark Gillem in 2022 + 3 GEs)
format includes lectures and section activities*
- 2018-22 **IARC 492/592 Electric Lighting**, Required Course, 3 cr. (2018-2019, 2021-2022)
*Required course for BIArc and MIArc students and and satisfies as a technical elective for architecture
students if they take 1-credit of 405/605
Format includes lectures and workshops*
- 2018-21 **ARCH 678 Advanced Research Methods**, Required course, 4 cr. (2018, 2020, 2021)
*Required course for doctoral students
Format includes lectures, one-on-one critique sessions, and guest presentations*
- 2019 **ARCH 410/510 Virtual Lighting Design**, Elective Course, 4 cr. (2019)
*Elective course for for BArch and MArch students and satisfies as a technical elective. Course was
supported by a \$20,000 Nuckolls Fund Grant in 2018 to promote lighting education using Virtual
Reality.
Format includes lectures, workshops, and guest presentations*
- 2018 **ARCH 410/510 Human Centric Environments**, Elective Course, 3-4 cr. (2018)
*Elective course for for BArch and MArch students and satisfies as a technical elective
Format includes lectures, workshops, and guest presentations*
- 2018 **ARCH 610 Celebration of Light with James Carpenter**, 1 cr. (2018)
*Elective course for for BArch and MArch students
Format was held over three days and included lectures and workshops with James Carpenter*

2013-17 **Ecole Polytechnique Fédérale de Lausanne, Doctoral Assistant**
School of Architecture, Civil and Environmental Engineering

Courses co-Taught:

Solar Decathlon Summer Workshop, Master Level (2016)
Space and Light: The Lighting Project, Master Level (2015)
Architecture and Sustainability: Critical Approaches, Doctoral Level (2014)

2011-12 **Northeastern University, Teaching Fellow & Visiting Assistant Professor**
School of Architecture, College of Arts, Media and Design

Courses Taught:

Architecture & Energy Systems, Bachelor Level (2011)
Comprehensive Design Studio, Bachelor Level (2012)
Daylight Design Seminar, Master Level (2012)

2011 **Massachusetts Institute of Technology, Teaching Assistant**
Department of Architecture, School of Architecture & Planning

Courses Taught:

2011 Comprehensive Design Studio, Master Level (2011)

2008-09 **Cornell University, Teaching Associate**

Department of Architecture, College of Architecture, Art & Planning

Courses Taught:

Summer College Introduction to Architectural Design Studio (2008)

Undergraduate Design Studio 101 (2008)

Undergraduate Design Studio 102 (2009)

Recognition of Student Work/Support of Student Research

- 2023 **Hart Howerton Fellowship Award**, Faculty Supervisor to Rigel Wakil (UO B.Arch and Clark Honor's College student, expected 2024) who will complete a summer internship at Hart Howerton in SF and then travel to Japan to study the impacts of daylight on interior space using immersive 360-degree photography [**\$20,000 to support salary, housing, and travel**].
- 2023 **Clark Honors College Mentored Research Program**, Faculty Supervisor to Rigel Wakil (UO B.Arch student, expected 2024) who was awarded **\$860 for hourly research in the Baker Lab** in the Spring of 2023. This award will support Rigel's time to work on an experiment and data analysis for his Honor's College Thesis
- 2022-23 **Nike PhD Fellowship**, Faculty Supervisor to Anupam Satumane (UO PhD Student, expected 2023) Summer 2022 - Summer 2023 for his proposal, 'Leveraging workplace design to promote workplace experience: Evaluating the impacts of social, environmental, and workplace settings on employee satisfaction [**\$60,000 to support research and living expenses**].
- 2021-22 **UROP Mini Grant**, Faculty Supervisor to Marin Nagle (UO B.Arch and Clark Honor's College Student, '2022) who was awarded a **\$1,000 grant to support research** through the Undergraduate Research Opportunity Program and the Office of the Vice President for Research and Innovation (2021-22).
- 2021-22 **Promising Scholar Award** Faculty Supervisor to Maryam Esmailian (incoming Doctoral students, expected '2025) who was awarded a **\$6,000 top off stipend** from the Division of Graduate Studies and secured 2 years of GE funding through the Department of Architecture (2021-2023).
- 2020 **Best Paper Award SimAUD 2020**, for the paper titled, 'Evaluating Temporal and Spatial Light Exposure Profiles for Typical Building Occupants,' and co-authored by Megan Danell (UO MArch student '2020), Maria Amundadottir, and Siobhan Rockcastle. This research emerged out of an independent study with Megan Danell in the Winter of 2020.

Thesis & Dissertation Committees

Clark Honor's College Thesis Committees:

- 2020-21 Hannah Gerton, Honors College Thesis Adviser, BArch, University of Oregon
- 2021-22 Marin Nagel, Honors College Thesis Advisor, BArch, University of Oregon
- 2022- Hadley Carlberg, Honors College Thesis Advisor, BArch, University of Oregon (2024 expected)
- 2022- Rigel Wakil, Honors College Thesis Advisor, BArch, University of Oregon (2024 expected)

Doctoral Thesis Committees:

- 2019-21 Sadiqa Al Awadh, Dissertation Committee, University of Oregon (2019-2021)
- 2020-22 Hooman Parhizkar, Dissertation Committee, University of Oregon (2020-2022)
- 2019- Anupam Satumane, Adviser & Dissertation Committee, Univ. of Oregon (2024 expected)
- 2022 Maria Coronado, Exam Committee Chair, University of Oregon (2022)
- 2021- Maryam Esmailian, Advisor & Exam Committee Member, Univ. of Oregon (2025 expected)
- 2022- Niloofar Nikookar, Doctoral Thesis Committee, PhD in Arch., Georgia Tech (expected 2025)

Master of Science Thesis Committees:

- 2019 Denise Blankenberger, Master Thesis Committee, MSc, University of Oregon (2018-2019)
- 2022 Sohrab Ghasemi, Master Thesis Committee, MSc, University of Oregon (2021-2022)
- 2022 Selorm Fiati, Master Thesis Committee, MSc, University of Oregon (2021-2022)
- 2022 Dan Qin, Master Thesis Committee, MSc, University of Oregon (2021-2022)
- 2022 Tanmay Naik, Master Thesis Committee, MS in Architecture, Georgia Tech (2022)

Service

Architecture Department Committees (UO):

- 2022- Curriculum Committee (**co-chair**), Dept. of Architecture, University of Oregon (2022-current)
- 2022- Lectures Committee, Dept. of Architecture, University of Oregon (2022-current)
- 2021- Visioning Ad-hoc Committee, Dept. of Architecture, University of Oregon (2021-current)
- 2018- PhD Committee, Department of Architecture, University of Oregon (2018-current)
- 2022- Undergraduate Studies Committee, Dept. of Architecture, University of Oregon (2022-current)
- 2020-22 Graduate Studies Committee, Dept. of Architecture, University of Oregon (2020-2022)
- 2020-21 TTF Search Committee, Mass Timber, Dept. of Architecture, University of Oregon (2020-2021)
- 2019-20 TTF Search Committee, Mass Timber, Dept. of Architecture, University of Oregon (2019-2020)
- 2018-19 John Reynolds Symposium: Education by Design, Organizing Comm., Eugene (2018-2019)
- 2018-19 Communications & Recruitment Committee, College of Design, Univ. of Oregon (2018-2019)

College Committees (UO):

- 2018-20 Equity & Inclusion Committee, College of Design, University of Oregon (2018-2020)
- 2019 Places Oregon Prize Selection Committee, College of Design, U of Oregon (2019)

Leadership Positions (External):

- 2023- Associate Editor, LEUKOS – the journal of the Illuminating Engineering Society, (2023-current)
- 2019 General Chair of Organizing Committee, SimAUD 2019 Conference, Atlanta (2019)
- 2018 Scientific Chair of Organizing Committee, SimAUD 2018 Conference, Delft (2018)

Search and Scientific Committees (External):

- 2020-21 TTF Search Committee, Sch. of Civil & Construction Eng., Oregon State Univ (2020-2021)
- 2018-21 Committee Member, SimAUD Steering Committee (2018-2021)
- 2021 Scientific Committee Member, CAAD Futures (2021)
- 2020-21 Scientific Committee Member, SimAUD (2015-2017, 2020-2021)
- 2018 Cavin Travelling Fellowship Selection Committee, Cal Poly, Ponomo (2018)
- 2018 Scientific Committee Member, ACADIA annual conference (2018)
- 2018 Scholarship Committee, Society of Building Science Educators (2018)
- 2018 Faculty Representative, Cavin Travelling Fellowship, UO & Cal (2018)

Peer-Review Contributions:


- 2022 LEUKOS Journal (2022)
- 2018-20 Journal of Environmental Psychology (2018, 2020)
- 2017-22 Lighting Research & Technology Journal (intermittent reviewer since 2017)
- 2015-22 Building and Environment (intermittent reviewer since 2015)

Presentations to a Non-Scientific Audience:

- 2019 Simulating the Experience of Daylight in Buildings, invited presentation at OMSI Science Pub Eugene (2019)

Memberships in professional organizations

- 2021- Member, Society of Building Science Educators, 2021-current
- 2023- Associate Member, Illuminating Engineering Society, 2023-current

 03/31/2023