

6TH BIENNIAL RESIDENTIAL BUILDING DESIGN & CONSTRUCTION CONFERENCE



PennState



SAVE THE DATE | MARCH 2-3, 2022

IN-PERSON AT THE PENN STATER CONFERENCE CENTER & HOTEL IN
STATE COLLEGE, PENNSYLVANIA, USA

You won't want to miss networking with the leading researchers in residential construction, hearing from two innovative keynote speakers, and sharing your own research with colleagues over two days at the 2022 RBDCC!

5 WAYS TO PARTICIPATE! SUBMIT YOUR ABSTRACT BY MAY 31 *(EXTENDED)*

FULL PAPER
PUBLISHED IN
PROCEEDINGS
&
PRESENTATION

FULL PAPER
PUBLISHED IN
PROCEEDINGS
&
POSTER

PRESENTATION
ONLY

POSTER
ONLY
(NEW!)

FULL PAPER
PUBLISHED IN
PROCEEDINGS
ONLY
*(NO TRAVEL
NECESSARY)*

SUBMISSION DETAILS

Experts from academia, A/E design firms, builders, developers, manufacturers, and government and code officials are cordially invited to submit abstracts by May 31, 2021 (*extended deadline*) on all aspects of residential buildings, including the following topics with some examples in parentheses.

CONFERENCE TOPICS

- High-Performance Building Analysis & Design (*BIM, Energy Efficient Components & Systems, BIPV, Passive House, IAQ, Smart Homes*)
- Disaster-Resilient Residential Design (*Fire Protection, Temporary Housing Post-Disaster, New Designs & Retrofits*)
- Community-Scale Design & Construction (*Aging-in-Place, Affordable Housing, Rural Housing*)
- Design, Construction, & Evaluation of Building Enclosures (*Building Science, Testing & Simulations, Green Roofs, Innovative Systems*)
- Construction & Material Innovation (*Modular, 3D-Printing, Sustainable Materials & Methods, Bio-Based Materials*)
- Education (*Tools & Methods, Design Competitions*)

SUBMISSION OPTIONS

Full Paper Submissions

Authors of accepted abstracts for full paper submissions will submit their full papers for review and comments by the International Scientific Committee for inclusion in the Conference Proceedings. The Conference Proceedings will be an edited document with an ISBN number and will require the authors of the papers to transfer copyright to the PHRC for its publication.

Presentation Only & Poster Only Submissions

Rather than full papers, authors of accepted abstracts for PowerPoint presentations only or Poster only submissions must submit their PowerPoint presentation or Poster by the deadline listed below for distribution at the conference. However, these submissions will not be considered as part of the Conference Proceedings but will later be made available on the PHRC website, www.phrc.psu.edu/Publications/Past-Conference-Proceedings.aspx.

DELIVERY OPTIONS

- **Presentations:** Those accepted to deliver their submissions via Presentation will have 20-30 minutes for a PowerPoint presentation on their paper and must bring their presentation to the conference on a USB flash drive.
- **Posters:** Those accepted to deliver their submissions via a Poster must bring their printed poster with them to the conference. Mounting will be provided at the conference.
- **Proceedings Only:** Authors may choose the Proceedings Only option to include their paper in the Conference Proceedings. This option does not include a Presentation or Poster and does not include admission to the conference.

At the time of abstract submission, submitters will indicate which submission and delivery options (listed above) that they would prefer. All conference submission materials will be received through EasyChair conference management software.

DEADLINES

Authors are invited to submit 200-300 word abstracts and indicate the topic area from technical paper session topics appropriate for their paper.

- | | |
|--|---|
| • Abstract Submission Deadline: | May 31, 2021 (<i>Extended</i>) |
| • Abstract Acceptance Notification: | June 15, 2021 |
| • Full Paper Submission Deadline: | September 1, 2021 |
| • Full Paper Acceptance & Review Comments Notification: | October 30, 2021 |
| • Final Paper Deadline for Inclusion in the Proceedings: | November 30, 2021 |
| • Presentation Only Submission Deadline: | January 10, 2022 |
| • Poster Only Submission Deadline: | January 10, 2022 |

**SUBMIT YOUR ABSTRACT AT
[HTTPS://BIT.LY/2022RBDCC](https://bit.ly/2022RBDCC)**

CONFERENCE GOALS

The Pennsylvania Housing Research Center (PHRC), housed in the Department of Civil & Environmental Engineering at The Pennsylvania State University, is pleased to announce the 6th Biennial Residential Building Design & Construction Conference (RBDCC), which provides a forum for researchers, architects, engineers, design professionals, product manufacturers, builders, developers, and code officials to discuss challenges to sustainable, energy efficient, healthy, environmentally friendly, natural hazard resistant, affordable, and innovative residential construction. The event also focuses on the dissemination of recent research findings, state-of-the-art technologies, advanced projects, and new approaches in the field. This conference will focus on various types of residential buildings including single-family dwellings, multi-family multi-story apartment buildings, mid-rise and high-rise residential building towers, factory-built and modular housing, dormitories, and hotels/motels.

KEYNOTE SPEAKERS

Wil V. Srubar III, PhD

Associate Professor, University of Colorado Boulder
Founder and Managing Director, Aureus Earth, Inc.
Transforming Buildings into Carbon Sinks

Rusty Smith

Associate Director, Rural Studio
Auburn University School of Architecture, Planning, & Landscape Architecture
Rural Studio: What Does Affordable, High-Performance Housing Truly Afford?

REGISTRATION

All people who submit an abstract to the RBDCC should register for the conference by January 10, 2022.

- Presenter (includes Presentation or Poster): **\$620**
- Full Paper in Proceedings Only: **\$200**

Unable to submit an abstract but still want to attend? Stay up to date on the presentation schedule and costs on our website, including early bird and student rates. Full conference details, as well as information on our concurrent industry-focused conference, will be available by December 2021. Learn more at <https://bit.ly/2022RBDCC>

ACCOMMODATIONS

Located just minutes from the heart of the Penn State University Park campus in State College, Pennsylvania, The Penn Stater Hotel and Conference Center is the venue for the 2022 RBDCC. It features complimentary Wi-Fi, two restaurants, and complimentary parking. Rooms are available for conference attendees at a discounted rate through Saturday, January 29, 2022.

- Group code: RBDCC22A
- Group rate: \$114 plus tax per night
- Penn Stater Reservations by phone, 1-800-233-7505, or online thepennstaterhotel.psu.edu



2022 RBDCC ORGANIZATION

CONFERENCE CHAIR

Dr. Ali Memari

Bernard and Henrietta Hankin Chair in Residential Building Construction

Department of Architectural Engineering,
Department of Civil & Environmental Engineering,
PHRC, Penn State
amm7@psu.edu

CONFERENCE ORGANIZER



206B Sackett Building
Penn State University
University Park, PA 16802
T: 814-865-2341
phrc@psu.edu

CONFERENCE SECRETARIAT

Sarah Klinetob Lowe

High-Performance Housing Specialist, PHRC
SKLowe@psu.edu

CONFERENCE COORDINATOR

Rachel Fawcett

Financial & Communications Coordinator, PHRC
rfawcett@psu.edu

INTERNATIONAL SCIENTIFIC COMMITTEE

Clinton Aigbavboa

University of Johannesburg, South Africa

Somayeh Asadi

Penn State University, USA

Naomi Beal

passivhausMAINE, USA

Ben Bigelow

Texas A&M, USA

Melissa Bilec

University of Pittsburgh, USA

Ryan Bradley

University of the Witwatersrand, South Africa

Silvia Brunoro

University of Ferrara, Italy

Carlo Carbone

Université du Québec à Montréal, Canada

Kristen Cetin

Michigan State University, USA

Andre Desjarlais

Oak Ridge National Laboratory, USA

José Pinto Duarte

Penn State University, USA

Jim Freihaut

Penn State University, USA

Alessandro Gaiani

University of Ferrara, Italy

Antonio García-Martínez

University of Seville, Spain

Corey Griffin

Penn State University, USA

Walter Grondzik

Ball State University, USA

Karim Hadjri

University of Sheffield, UK

Dan Hindman

Virginia Tech, USA

Eric Holt

University of Denver, USA

Patrick Huelman

University of Minnesota, USA

Lisa Iulo

Penn State University, USA

Bohumil Kasal

Fraunhofer Wilhelm-Klauditz-Institute WKI, Germany

Mei Yung Leung

City University of Hong Kong, Hong Kong, China

Carlos Martín

Urban Institute, USA

Andrew McCoy

Virginia Tech, USA

Tim McDonald

Onion Flats, USA

Mahua Mukherjee

IIT Roorkee, India

Isabelina Nahmens

Louisiana State University, USA

Esther Obonyo

Penn State University, USA

Cilísia Duarte Ornelas

University of Porto, Portugal

Freddy Paige

Virginia Tech, USA

Shiling Pei

Colorado School of Mines, USA

David O. Prevatt

University of Florida, USA

Georg Reichard

Virginia Tech, USA

Awni Shaaban

Sultan Qaboos University, Oman

Matt Syal

Michigan State University, USA

Fitsum Tariku

British Columbia Institute of Technology, Canada

Sam Taylor

Joint Committee on Building Science Education, USA

Ioannis Zisis

Florida International University, USA