

**THE  
PARTNERSHIP  
FOR ACHIEVING  
CONSTRUCTION  
EXCELLENCE**

# PACE



[WWW.ENGR.PSU.EDU/PACE](http://WWW.ENGR.PSU.EDU/PACE)

APRIL 2016

Inside this issue:

**AE Welcomes Dr.  
Donghyun Rim** 1

**Race to Zero  
Student Design  
Competition** 2

**S:PACE Update** 3

**Upcoming Events** 4

This PACE Newsletter highlights activities and noteworthy events in the PACE program.

For more information or to submit prospective articles, contact the PACE Team at:

[PennState.PACE@gmail.com](mailto:PennState.PACE@gmail.com)

## **AE Welcomes James L. Henderson Jr. Memorial Assistant Professor**

Dr. Donghyun Rim is the recently appointed James L. Henderson Jr. Memorial Assistant Professor in Architectural Engineering, teaching in the mechanical option. Since joining the AE Department, he has taught undergraduate courses in Advanced HVAC Design and graduate courses in Computational Fluid Dynamics (CFD) in Buildings.

Before joining Penn State, Dr. Rim earned his undergraduate degree in Environmental Engineering from Hanyang University in Seoul, Korea. He moved on and earned both his Masters and his Doctoral degrees in Architectural and Environmental Engineering from the University of Texas at Austin.

After completing his education, Dr. Rim worked as a research engineer at UC Berkeley studying indoor air quality in energy efficient buildings in tropical climates. His research focuses on airflow and pollutant dynamics in occupied spaces, HVAC systems for high performance buildings, as well as the transport of chemical and biological agents in buildings.

"Americans spend 90% of their time indoors daily, and that is why buildings consume a lot of energy for space conditioning. More importantly, indoor environments can affect our health, comfort and work performance. Unfortunately there are only a few ways during the building design phase that to warn of possible sickness or discomfort," which is why Rim believes his research is so important.

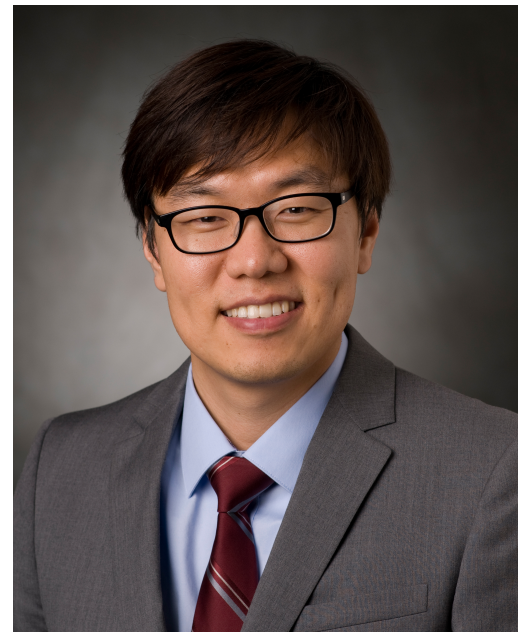
His favorite project was working on air quality sensor applications for smart buildings.

Rim focuses his research interests on the environmental aspects of building systems because humans spend 90% of their time in indoor environments. He focuses on how buildings interact with humans, and how to advance the industry understanding of sustainable and energy efficient buildings.

Outside of work, Dr. Rim enjoys hiking, playing and watching soccer and spending time with his daughter. He also noted that he is, "glad to be in this historic AE department," where he hopes to help students and the industry."

---

For more information on this, or simply to welcome Dr. Rim to the department, please contact him at [drim@engr.psu.edu](mailto:drim@engr.psu.edu)



## PSU Students Compete in Race to Zero Student Design Competition

The U.S. Department of Energy Race to Zero Student Design Competition is an annual competition that challenges students to create zero energy ready homes. Teams are posed with a design problem and are asked to either create a new house design that satisfies the project requirements or redesign the existing floor plan. Penn State is among 34 teams invited to compete.

Penn State Architecture, Architectural Engineering and Civil Engineering departments are collaborating with the Pennsylvania Union County Housing Authority to develop designs for owner occupied, high-performance townhomes that fit specifications for the Housing Authority's Penn Commons development in Lewisburg, PA. The collaboration will be mutually beneficial, giving the UCHA cutting edge design and systems options, and providing the student team with an ideal platform for design, and firsthand knowledge on affordable housing development.

The team, advised by Dr. Ali Memari, Andy Lau, Dr. Somayeh Asadi, Ehsan Kamel, Lisa Iulo, Scott Wing, Dr. Jiro Yoshida and Sarah Klinetob Lowe, presented at the finals on Saturday.

---

For more information on this or related project delivery research, please contact Dr. Robert Leicht at [rmleicht@enr.psu.edu](mailto:rmleicht@enr.psu.edu).

*The secret of change  
is to focus all of your  
energy, not on  
fighting the old, but  
on building the new.*

- **Socrates**



Interactive workspace at Odeh Engineers, Providence RI

# S:PACE Update

S:PACE had another successful year, beginning with the annual trip to Washington, DC in November. The students had the opportunity to visit sites in Pennsylvania, Maryland, DC and Virginia in a variety of different market sectors including Healthcare, Education, Commercial and Residential. Many companies who have been gracious PACE sponsors over the years, including DAVIS, Clark, Barton Mallow, Southland, Balfour Beatty, DPR and Benchmark, generously opened their sites to show the students some of their existing projects and teach them about many of the current trends in the construction industry. Thank you to each of these companies for their continued support of the program! Additionally, S:PACE maintained its partnership with the Association of Builders and Contractors in Pennsylvania, working to pair younger students who are excited about getting their start in construction with local contractors in their area. S:PACE is looking forward to another successful year beginning in the fall with a new group of motivated leaders!



*Penn State student members of S:PACE pictured with executives from Benchmark Construction at the WellSpan Ephrata Community Hospital during the annual Washington, DC trip in November 2015.*

If you would like to learn more about the projects or have any questions please contact Kevin Clement at [kic5220@psu.edu](mailto:kic5220@psu.edu).

# AE CONSTRUCTION FACULTY



**Chimay Anumba, PhD - [anumba@engr.psu.edu](mailto:anumba@engr.psu.edu)**  
Professor and Head of Architectural Engineering

**Somayeh Asadi, PhD—[asadi@engr.psu.edu](mailto:asadi@engr.psu.edu)**  
[www.engr.psu.edu/ae/faculty/asadi/](http://www.engr.psu.edu/ae/faculty/asadi/)

**Robert Leicht, PhD - [rmleicht@engr.psu.edu](mailto:rmleicht@engr.psu.edu)**  
Director of PACE | [www.engr.psu.edu/PACE](http://www.engr.psu.edu/PACE)

**John Messner, PhD - [jmessner@engr.psu.edu](mailto:jmessner@engr.psu.edu)**  
Director of CIC Research Initiative |  
[www.engr.psu.edu/ae/cic/](http://www.engr.psu.edu/ae/cic/)

**David Riley, PhD - [driley@engr.psu.edu](mailto:driley@engr.psu.edu)**  
Director of Sustainable Energy and  
Construction Initiative; [www.cfs.psu.edu](http://www.cfs.psu.edu)

## Upcoming Activities

**AEI Student Design Competition**  
**March 31-April 1, 2016**  
Worcester Polytechnic Institute  
Worcester, MA

**Senior Thesis Presentations**  
**April 11-13, 2016**  
Engineering Units  
University Park, PA

**Senior Thesis Competition**  
**April 20, 2016**  
Nittany Lion Inn  
University Park, PA

## Upcoming PACE Events

**PACE Roundtable Meeting**  
**October 20-21**  
An open forum discussion in which key topics selected  
by the advisory board are discussed by students and  
industry practitioners.

**PACE Advisory Board Meeting**  
**June 9, 2016**  
Representatives from PACE Member  
companies meet to discuss key issues facing the  
building industry, and establish a research agenda  
for the next year. This year's meeting will be hosted  
by Barton Malow Construction at their  
headquarters in Baltimore, MD.

## WE WOULD LIKE TO THANK THE FOLLOWING COMPANIES FOR THEIR SUPPORT OF PACE

Thank you for your support of PACE's 2015-2016 activities!

### Leaders

James G. Davis Const. Corp.  
Penn State Office of Physical Plant

### Associates

DPR Construction  
Gilbane Building Company

### Partners

Balfour Beatty Construction      Clark Construction Group  
Barton Malow Company      Skanska  
Benchmark Construction

### Donors

Alexander Building Construction      LS Fiore, Inc.  
Burns Mechanical      Massaro Construction  
C3M Power Systems, LLC      McClure Company  
Forrester Construction      Reynolds  
Holder Construction      Trammell Crow