



# I-RIM Conference 2018 Session Descriptions

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*Note: Additional descriptions will be added as they are received. Please check back for more.*

## **Wednesday, May 9**

### **Demonstration of Near Zero Energy Homes**

By William A. (Bill) Miller, PhD, Oak Ridge National Laboratory

This presentation describes the performance of four homes built to maximize energy efficiency and cost-effective residential construction. An alliance (ZEBRA<sup>1</sup>) composed of Schaad Companies LLC, the Tennessee Valley Authority (TVA), the Oak Ridge National Laboratory (ORNL), Barber McMurry Architects (BMA) and the Department of Energy (DOE) showcased and demonstrated several active and passive energy saving technologies. The presentation compares field measured data with EnergyPlus simulation results. All homes are serving as breadboards to help develop a portfolio of the best available materials and construction methods that are resistance to water damage, reduce carbon emissions, cost less to operate, and showcase several energy-efficient building benefits. Key objectives for the presentation offered to RIMA are:

- Analytical and experimental studies used to benchmark computer tools
- Guidelines for improving the energy efficiency of roofs and attics
- Cost of energy savings for various passive home energy strategies
- Prioritized passive strategies for roof retrofits

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### **Does the Presence of A Radiant Barrier Increase the Chance of a Lightning Strike?**

By Brian St. Germain, LP Building Products

RIMA-I recently posed this question to Engenamic Innopro, a South African engineering consulting company that offers expertise in the areas of lighting safety and protection. Engenamic compiled their research in the form of a white paper. This presentation will provide a brief overview of their work and conclusions made.

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### **Regional Updates**

Panel to Include: Sergio Luconi, Prodex; Guy Delcroix, KDB Insulation; Kah Wei Yam; Sam Miguel Yamamura Woven Products; Mike Boulding, Mitex International; Others TBA

Presentations from five regions including Australia, SE Asia, North America, Europe and Latin America will be presented sharing information such as an overview of the reflective products market, the most common applications (such as residential/commercial/agricultural/other), any applications that are unique to the region, building code requirements/issues, the involvement of manufacturers in the code process and any new or upcoming advances or uses being seen in each region. The full panel will also take questions following the presentations.

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### **Latin America Buildings with Reflective Insulation Performance and Improvements after RIS**

By Pablo Sobrano, Prodex

TBA

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### **Building Performance Software – Impact of Attic Radiant Barriers**

Panel to Include: Bill Lippy, Fi-Foil Company; others TBA

TBA

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### **About RIMA International & the Advanced Building Code Coalition (ABCC)**

By Bobby Byrd, RoyOMartin

Past President Bobby Byrd will talk about the work that RIMA International is doing which includes a strong emphasis on code work. He will introduce the ABCC and what it offers to industry professionals and how this work is vital to the continuation and growth of the reflective products industries.

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## **Interior Radiation Control Coatings (IRCCs)**

By Lynn Walters, Kemper System America, Inc.

TBA

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## **ASHRAE 90.1 Update**

By Monty Millsbaugh, Reflectix, Inc.

TBA

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## **Thursday, May 10**

### **Numerical and Experimental Analysis of Thermal Performance of Residential Attics Containing Aerogel-Based Radiant Barrier Insulation System**

By Jan Kosny PhD, Fraunhofer Institute

Residential and light commercial attics have the potential to be one of the most energy efficient building components by combining thermal characteristics of the attic floor insulation, attic air space, attic ventilation strategy, and solar energy collected by roof finish materials. In cooling-dominated and mixed climates, a large amount of solar energy is collected year around by roof structures. This solar energy often generates excess cooling loads, which need to be removed from the building by the space conditioning systems. In sloped roofs, the attic air provides an effective thermal break between the roof surface and the attic floor insulation, reducing thermal loads directed down to the condition space. In addition, during the winter time, attics, if properly designed, can act as passive solar collectors bringing extra heat energy to the building. These new technologies have demonstrated that the heat transfer penetrating the roof deck can be reduced by up to 90%. At the same time, the overall attic-generated thermal load can be lowered by 30% to 50% compared to performance of conventional insulation technologies. One of most effective thermal-control and energy-saving technologies is radiant barrier.

This presentation is focused on a new, easy to install, extremely light weight, and high R-value radiant barrier that shows promise for attics and wall cavities in residential and light-commercial buildings in cooling-dominated and mixed climates. The development, testing, and predicting the thermal performance a novel radiant barrier will be discussed. The newly developed aerogel-based radiant barrier was characterized at the system-scale laboratory settings and deployed in a side-by-side field test with conventional insulation technology. The experimental data was also used to validate numerical performance predictions with use of the Fraunhofer Attic Thermal Model (FATM). The validated attic model was later used for thermal performance analysis of similar attic configurations located in 11 different climatic conditions worldwide.

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### **Innovations in the Manufacture of Reflective Films**

By Veronica Ataya, Celplast Metallized Products

We will look at the evolution of technology to produce reflective films and some new applications where these materials can be used.

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### **RIMA-I Product Verification Evolution**

By Doug Kinninger, Fi-Foil Company

This briefing will inform the industry on recent I-RIMA Product Verification Program enhancements that support the mission to become a recognized authority within the code and testing communities. Mr. Luconi will contribute providing details on the success in promoting I-RIMA Verification in Central America.

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### **New Digital Experiences**

By Mario Vargas, Qanta

This session will reveal unique ways to reach customers and establish brand positioning in the digital age.

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### **Regulations in Latin America for Reflective Insulation**

By Pablo Sobrano, Prodex

This session will cover the current regulations, how these regulations can be improved and what work is being done to get that accomplished.

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## **SAP Business One**

By Juan Bautista, Novitec

This session offers an overview of the SAP Business One business management software (ERP) which is designed to help small and medium-sized businesses manage, organize and grow their businesses.

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## **Fundamentals and Techniques of Measuring Water Vapor Transmission**

By Michael Joyce, R&D Services, Inc.

This session will cover the physics behind water vapor transmission, why water vapor transmission is important in building applications, and how we measure water vapor permeance of building materials.

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## **The Power of the Marketplace**

By Steve Baden and Laurel Elam, RESNET

Consumer and builder response to the RESNET HERS index and how it has improved the energy efficiency of new homes in the U.S.

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## **Marketing in the 21<sup>st</sup> Century for Industrial Companies**

By Matt Miles, Innovative Insulation

This will be a crash course covering the different mediums utilized for marketing in today's Internet age. What once took days, weeks or more to research a business and their products, now takes seconds thanks to the world wide web; and if your company doesn't have a presence or doesn't know the tricks to the ever-changing way of the web, you will be lost at sea! With the ever-changing rules of the Internet, SEO and putting your company out there, it is vital for businesses today to know how to navigate these waters so you can be competitive and get your message out. This session will touch on search engines (such as Google), e-commerce, Customer Relationship Management, e-mail, branding and other tools capitalized by today's marketing experts – and how they all should work together.

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## **Reflectives and the International Code Council (ICC)**

By Wes Hall, Reflectix, Inc.

The presentation will include a discussion on the various steps required in obtaining approval of new or updated language, into the International Code Council (ICC) construction codes. The ICC Codes pertinent to the reflective industry will be outlined. Additionally, information will be presented that includes the current status, ongoing actions and future strategies for reflective products in the ICC.

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## **Next Generation Reflective Insulation Facing Films**

By Ralph Dale, Dunmore Corporation

This presentation will discuss the technologies available to film converters, like Dunmore, for upgrading the functionality of reflective facing films. Potential improvements include secure product identification, anti-fungal and anti-microbial properties and improved recyclability.

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