

#### INSTITUTE FOR ADVANCED COMPOSITES MANUFACTURING INNOVATION

## 2017 Year in Review: Colorado

**UPDATED 12/6/17** 



COLORADO
Office of Economic Development
& International Trade

**CONREL**NATIONAL RENEWABLE ENERGY LABORATORY

# SIEMENS Gamesa RENEWABLE ENERGY COLORADO SCHOOL OF

#### **COLORADO MEMBERS**



The Composites Manufacturing Education and Technology Facility (CoMET) at NREL's National Wind Technology Center (NWTC) paves the way for innovative wind turbine components and accelerated manufacturing



# WORKFORCE DEVELOPMENT IN COLORADO

# **Hundreds Trained in Colorado Workforce Initiatives**

2 fully funded IACMI interns

**145** attendees at the training workshop with Composites One **183** students participated in the Collegiate Wind Competition 2017 Technical Challenge



"After attending an outstanding event at last year's IACMI training workshop at the National Wind Technology
Center, our team at Siemens Wind Power sent sixteen new employees to the 2017 workshop to gain experience and insight as
part of their on-boarding program." - Jacques Nader | Head of Boulder R&D Center, Siemens Gamesa Renewable Energy

#### NATIONAL MEDIA COVERAGE



materialstoday

WINDPOWER

Three Technologies You Need to Start Paying Attention to Right Now July 8, 2017 | www.inc.com

**#3:** Materials Science: including new composite materials responsible for reducing the weight of Boeing's Dreamliner by 40,000 pounds and fuel use by 20 percent."

The 9-meter wind blade prototype - unveiled at the 2017 IACMI Winter Members Meeting and showcased at AWEA Windpower with thousands of participants - was picked up by national media and trade media including North American Wind Power, Materials Today, KnoxNews, Plastics.com, JEC Composites, Lucintel, Yahoo, ChooseColorado and more...





## 2017 Year in Review: Colorado

#### COLORADO IACMI PROJECTS

#### IACMI-THE COMPOSITES INSTITUTE FACILITATES THERMOPLASTIC COMPOSITE DEVELOPMENT FOR WIND TURBINE BLADES THROUGH INNOVATIVE PROJECT

IACMI will investigate new developments in thermoplastic materials with industry partners to lower production costs, improve recyclability of wind turbine blades and expand applicability to components demonstrated at large scale.

PROJECT PARTNERS: Ashland Performance Materials | Michelman | Zoltek | UDRI | MSU



### IACMI TEAMS WITH INDUSTRY TO UNVEIL UNIQUE COMBINATION OF TECHNOLOGIES IN NINE-METER WIND TURBINE BLADE

The nine- meter long blade was fabricated at IACMI's Wind Technology Area in the Denver, Colorado area. Commercialization of the wind blade prototype created could speed production times, reduce manufacture cost, and provide stronger, more energy-efficient blades for the United States.

PROJECT PARTNERS: Arkema | Johns Manville | TPI Composites | Huntsman Polyurethanes | Strongwell | DowAksa USA | Chomarat North America | Composites One | SikaAxson | Creative Foam | Chem-Trend | National Renewable Energy Laboratory (NREL) | Oak Ridge National Laboratory (ORNL)

#### **IACMI Members Meeting Brought Hundreds to Colorado**

Over 300 attendees representing more than 100 companies participated in the two-day meeting held in Denver. Colorado Covernor John Hickenlooper welcomed attendees and presentions were provided by Siemens Gamesa Renewable Energy, Colorado Office of Economic Development and International Trade, and many others. Attendees had the opportunity to tour the NWTC in Boulder and preview the latest technologies demonstrated in the 9-meter wind blade prototype.

#### **WORKFORCE DEVELOPMENT INITIATIVES**



#### **IACMI INTERNSHIP PROGRAM**

21 interns were accepted from hundreds of applicants, nationally. 2017 placements included NREL's National Wind Technology Center and Colorado School of Mines. Colorado interns worked on a project to recycle wind turbine blades.

PLUS MANY COLORADANS UTILIZING THE LATEST TOOLING-U CONTENT

#### **IACMI HOSTS HANDS-ON WORKSHOP AT COMET FACILITY**

Nearly 150 participated in the Composites in Wind 2 workshop. Siemens Gemesa Renewable Energy brought 16 employees as part of its onboard training. Large companies, General Electric and Vestas Blades America, educational institutions, EcoTech Institute and Colorado School of Mines, and small and medium sized companies including Colorado Water Jet were also among the organizations sending employees to the training event. In addition to the Colorado-based employees, attendees from over 20 other states, including SMEs like Texas-based Airways Services Inc. traveled to learn more about the innovative manufacturing techniques. The workshop featured live demonstrations of new technology, equipment repair and rehabilitation training, drone and up-tower inspection, and tours of the NWTC.







