



Workforce Development

Institute for **ADVANCED**
Composites Manufacturing
INNOVATION



Tom Rogers

Director, Workforce Development
IACMI



Workforce Development

Tom Rogers

Workforce Development Director

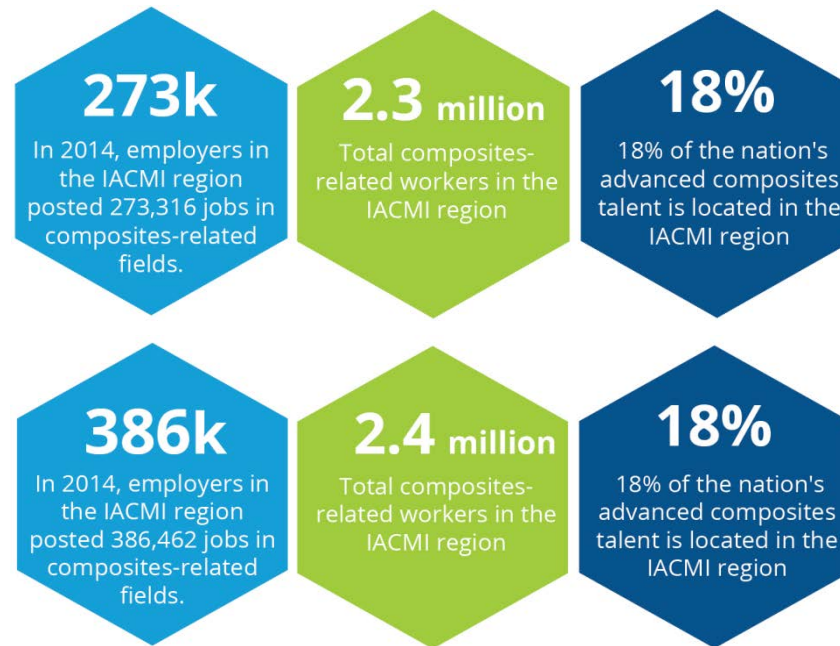
January 14, 2016

Institute for **ADVANCED**
Composites Manufacturing
INNOVATION

IACMI's workforce development goals:

- To establish key partnerships that will deliver composites training that meets specific industry needs
- To use IACMI resources to leverage existing State and Federal investments in workforce development
- To help ensure that there is an adequate supply of trained talent to support the anticipated growth in the advanced composites industry

Our first six months: Baseline composites workforce data

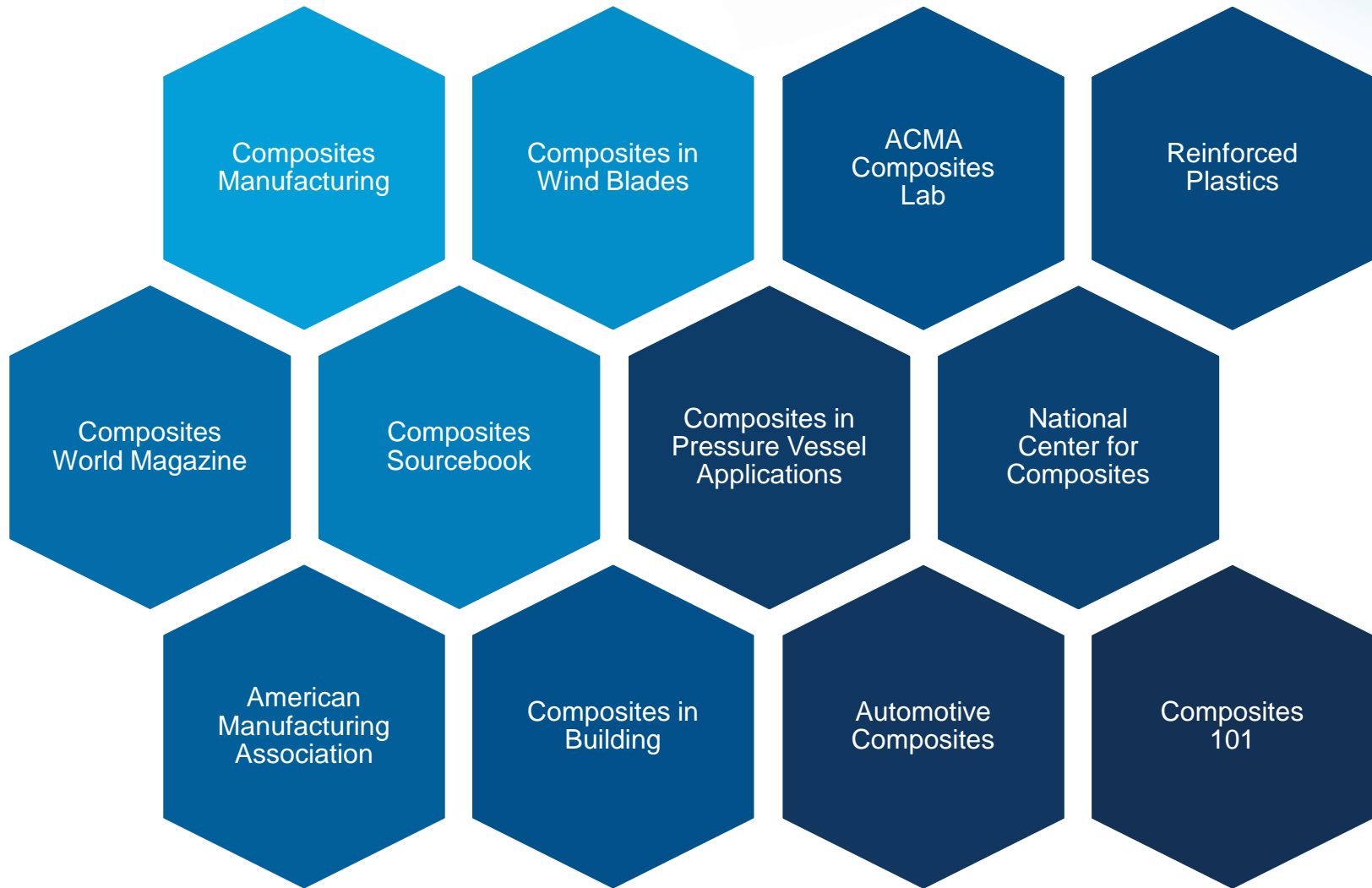


- New composites jobs grew over 30% from 2014 to 2015
- Job postings outpacing new workers 2:1

Our first six months: Meet the players



Our first six months: Establish a composites information clearinghouse



What's new: IACMI Workforce Needs Assessment Survey



THE COMPOSITES INSTITUTE

Take the Workforce Survey



<https://www.surveymonkey.com/r/IACMIWorkforceSurvey>

- Where is your company in the supply chain?
- Which occupations have you struggled to fill?
- What are the most common skills gaps?
- Where have you found workers in the past?
- What training have you provided?
- What occupations will you need to add in the future?
- Is your company willing to participate in further research on composites workforce needs?

What's new: IACMI Workforce Advisory Board

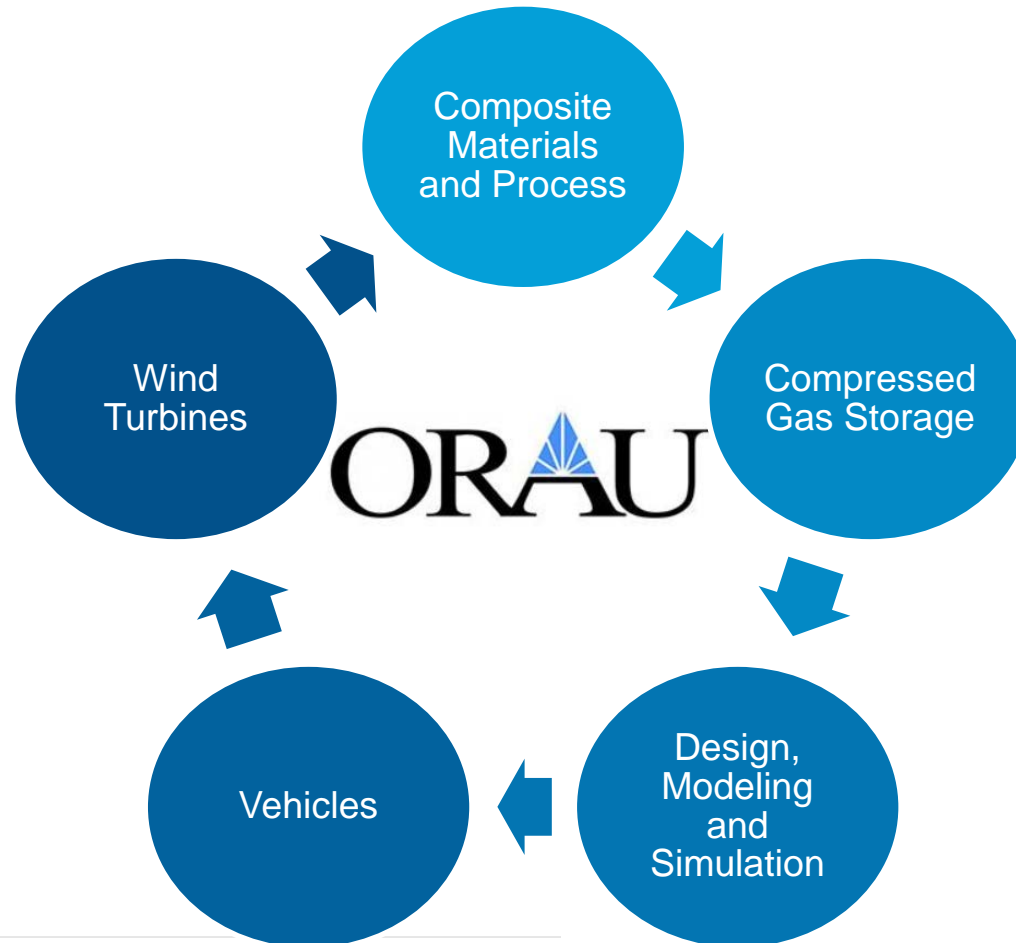
- Proposed Advisory Board composition:
 - One person from each IACMI state (6)
 - Dan Coughlin, ACMA
 - Dan Beattie, Dow Chemical
 - Emily DeRocco, LIFT
 - Add'l industry representatives
 - Community Colleges
 - Federal representatives



What's new: IACMI Internship Program

- 3 graduate or undergrad interns at each IACMI technology area this summer

<http://iacmi.org/iacmi-internships/>



FIRST Robotics EERE Internship Program

<http://www.orise.orau.gov/roboticsinternship/>

U.S. DEPARTMENT OF ENERGY
ADVANCED MANUFACTURING OFFICE

Energy Efficiency & Renewable Energy

FIRST

Become a Corporate Sponsor of the EERE Robotics Internship Program

The EERE Robotics Internship Program is seeking corporate host sites for 10-week fully-funded summer internships. The U.S. Department of Energy's (DOE) Office of Energy Efficiency and Renewable Energy's (EERE) Advanced Manufacturing Office (AMO) will fund approximately 45 students to intern at corporations across the nation.

The Robotics Internship Program is a unique collaboration between public and private sectors to continue development of the future technical, advanced manufacturing and engineering workforce. EERE-AMO has partnered with FIRST™, sponsor of the FIRST™ Robotics Competition, the Institute for Advanced Composites Manufacturing Innovation (IACMI), and the Oak Ridge Institute for Science and Education (ORISE) to centralize resources and opportunities for potential students and corporations.

EERE-AMO will seed the first year of internships to provide public and private entities an opportunity to experience the benefits of a centralized internship program designed to engage innovative thinkers and problem solvers with teamwork expertise. As such, the partnership with FIRST™ is a key factor in recruiting the best and brightest from its FIRST™ Robotics Competitions. Each year, approximately 50,000 high school students graduate with a FIRST™ Robotics Competition experience. What we know is that experience creates innovators and problem-solvers with known teamwork experience. However, as these students enroll at college and in various engineering programs, there is not a centralized program to provide students with relevant experiences in the emerging industries or a way to provide industries with a quality, nation-wide pool of potential interns.

ORISE, managed by Oak Ridge Associated Universities on behalf of DOE, will administer the umbrella structure program.

The basic components of the EERE Robotics Internship Program include:

1. Centralized recruiting—including the partnership with FIRST™—to attract students from across the nation with the skills obtained through robotics team competitions
2. Centralized application process, including resumes, transcripts, citizenship verification and internship preferences
3. A centralized portal for public and private industries to register requests to host interns
4. A centralized portal for registered companies to review all applicants and make selections based on the most beneficial candidate for each company
5. Standardized appointment processes, documentation, stipend payments, final project documentation and travel

This approach provides a centralized, standardized, and tracking capability for each student's experience. Most importantly, it provides students with knowledge and experience for jobs within these emerging industries. For companies, it is an opportunity to select the best-of-the-best innovative, problem solving, team members.

To register to host a fully-funded intern, please visit <http://orise.orau.gov/roboticsinternship/hosts>.

OAK RIDGE INSTITUTE FOR SCIENCE AND EDUCATION
Managed by ORAU for DOE

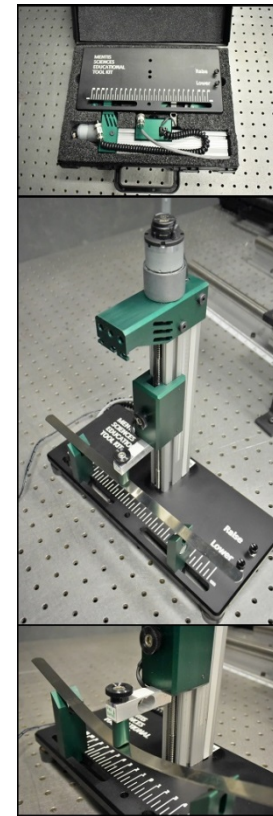
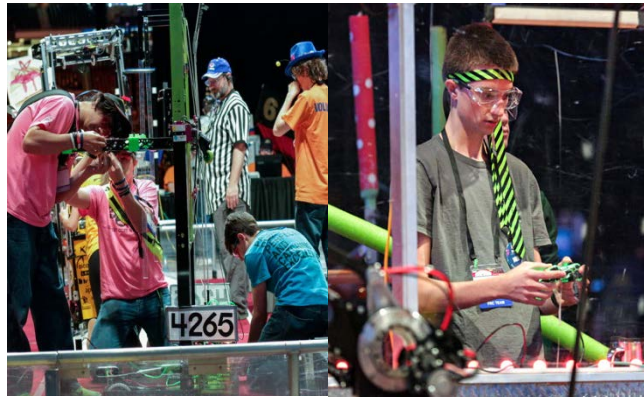
OAK RIDGE National Laboratory

THE COMPOSITES INSTITUTE
IACMI

The basic components of the EERE Robotics Internship Program include:

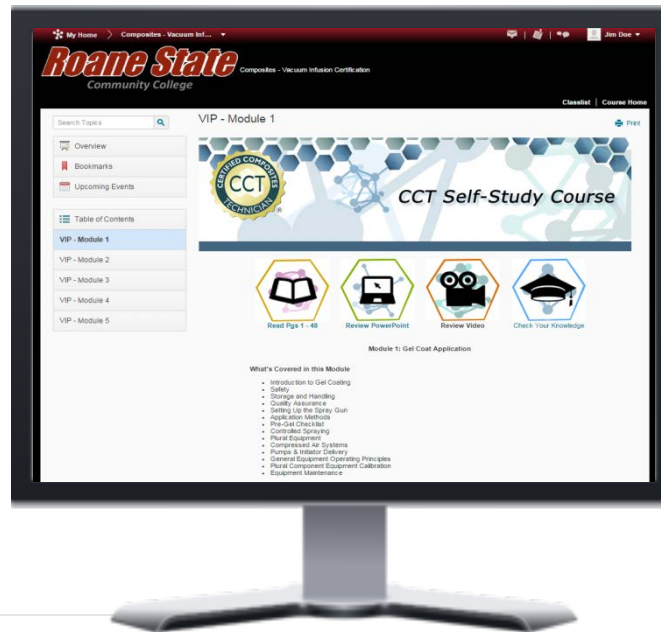
1. Centralized recruiting—including the partnership with FIRST™—to attract students from across the nation with the skills obtained through robotics team competitions
2. Centralized application process, including resumes, transcripts, citizenship verification and internship preferences
3. A centralized portal for public and private industries to register requests to host interns
4. A centralized portal for registered companies to review all applicants and make selections based on the most beneficial candidate for each company
5. Standardized appointment processes, documentation, stipend payments, final project documentation and travel

Coming soon: IACMI RFP on STEM Education for Younger Students



What's new: Pilot online composites course

- Initiated pilot project with ACMA and Roane State to develop on-line CCT course that will enable broader availability of training in key composites areas.
 - ACMA contributed Vacuum Infusion CCT curriculum
 - Roane State developed on-line course
 - IACMI providing composites manufacturing videos



Online Composites Videos

Module 1: Gel Coating



Module 2: Lamination Schedule



Coming soon: Hosting 4 IACMI Composites Demos & Training Events

- Each location will feature tailored composites manufacturing demos and training opportunities
- Proposed dates:
 - April 12-13 Knoxville – Advanced Materials & Additive Mfg.
 - June 14-15 Denver – Wind Energy
 - August 9-10 Indiana – Modeling and simulation
 - November 1-2 Detroit – Automotive focus



Coming soon: Developing a *new* on-line composites technician course

- Topic TBD
- In partnership with ACMA
- Will include community colleges as training partners



Special thanks to:

- Dan Beattie, Dow Chemical
- Dan Coughlin, ACMA
- Teresa Duncan, Roane State Community College
- Robin Pate, IACMI

IACMI's New Workforce Director

Beth Phillips

