April 2014

RCBI celebrates innovation and technology May 8 in Bridgeport

The Robert C. Byrd Institute for Advanced Flexible Manufacturing invites you to join us Thursday, May 8, as we showcase innovation at the RCBI Advanced Manufacturing Technology Center.

Activities begin at 1 p.m. and continue throughout the day. A highlight will be the grand opening of the North Central West Virginia Design Center at 4:30 p.m. and a special networking reception at 5:30 p.m. Activities conclude with a graduation ceremony at 6 p.m. to recognize the RCBI Machinist Technology/CNC Program Class of 2014.

"We're excited to partner with the U.S. Small Business Administration, West Virginia Small Business Development Center, Mountwest Community & Technical College, the Harrison County Chamber of Commerce as well as local business and economic development groups for this special day," said Charlotte Weber, Director & CEO of RCBI. "Great things are happening at RCBI Bridgeport and across the state, and this event will help showcase those advancements to the region."

During the day, RCBI will demonstrate a number of technologies and services available at RCBI.

Greetings!

As this month's newsletter shows, manufacturing is attracting people of all ages, and the Robert C. Byrd Institute for Advanced Flexible Manufacturing works with groups across the state.

We're helping teachers take STEM lessons to students and preparing individuals to enter the workforce. As our latest Success Story update shows, we're also helping growing companies become even more competitive. Thank you for supporting our activities!

www.rcbi.org
Bridgeport as well as RCBI facilities in Huntington and Charleston. Among them are Additive Manufacturing with 3D Printers, Robotics Technology, Waterjet Cutting, Lathe operation, SolidWorks software, and a number of specialized training topics that focus on small businesses and start-ups.

For a full list of activities visit www.rcbi.org.

RCBI Bridgeport is located at 2400 E. Benedum Drive in Bridgeport. Please RSVP by May 2 to 800-469-RCBI (7224).

RCBI participates in ChemCeption dedication

A new West Virginia business incubator launched in early April to assist start-ups in the chemical industry by serving as an innovation hub for any technology involving chemistry - from traditional to green. ChemCeption, located in the W.Va. Regional Technology Park in South Charleston, is the only incubator in the nation focused solely on commercializing chemistry-based technology. The Robert C. Byrd Institute for Advanced Flexible Manufacturing is one of the center’s strategic partners. Charlotte Weber, Director & CEO of RCBI, far left, is shown with business and government officials at the official opening of ChemCeption in South Charleston.

RCBI taking applications for System Specialist

W.Va. teachers share in exciting lessons that showcase STEM skills and 3D Printing

SOUTH CHARLESTON, W.Va. - Training at the Robert C. Byrd Institute for Advanced Flexible Manufacturing (RCBI) provided dozens of teachers in 12 counties across West Virginia the tools and skills they need to deliver interactive lessons to their students.

In collaboration with NASA Independent Verification and Validation’s Educator Resource Center, RCBI and Marshall University’s June Harless Center delivered a one-day workshop on April 5 that provided training on the NASA Museum-in-a-Box program as well as information about the role of 3D Printing in K-12 classrooms. The exercises encourage students to consider career opportunities with innovative, leading-edge technology.

The teachers, counselors and librarians who attended the daylong session at RCBI learned to use NASA’s “Museum in a Box.” Successful completion of the course permits teachers to borrow a $1,000 classroom kit of activities from NASA that covers Science, Technology, Engineering and Mathematics (STEM) lessons. Additionally, each classroom educator...
The Robert C. Byrd Institute for Advanced Flexible Manufacturing (RCBI), West Virginia’s Advanced Manufacturing Technology Center, is accepting resumes for a System Specialist.

Responsibilities of the System Specialist, who reports directly to the Director of Information Technology, include constructing and maintaining computer and network systems; operating and maintaining Voice over IP telephony systems; database system development; supporting network administration and applications across statewide RCBI facilities; RCBI Web sites; working with other staff to develop/foster relationships with external RCBI customers and partners; and performing other duties as assigned. Based at the RCBI Huntington Advanced Manufacturing Technology Center, this position requires extensive travel.

For more information please visit: http://www.rcbi.org/wmspage.cfm?parm1=164

Quick Links
- RCBI celebrates National Robotics Week http://tinyurl.com/l58gqojr
- 3D Printing market set to rocket http://tinyurl.com/jwgrh3g
- Airbus describes 3D printed future http://tinyurl.com/m9x8ad4
- 3D Printing Predictions http://3dprint.com/1858/3d-printing-predictions/

Stay ‘social’ with RCBI
This monthly newsletter is just one way to keep up with the latest activities from RCBI. You also can be a friend on Facebook or follow us on Twitter (@RCBI4Mfg) to get breaking news and links to interesting stories about additive manufacturing.

Success Story:
Preston County manufacturer tests green technology at RCBI

RCBI is assisting a Preston County energy company with a prototype model of a power monitoring and control system enclosure it produced for the company and is serving as a test facility for the new system - dubbed the “Brain Box.”

The remote-controlled Brain Box contains advanced circuitry and specialized software that enables HCS Technologies Inc. to deliver a low-cost solution to monitor, analyze, assess and control energy flow down to the individual circuit level. HCS specializes in advanced
power management solutions and systems, either fixed or portable, with digital connectivity to develop intelligent power control systems that help clients save time and energy.

Now installed on select pieces of computer-controlled equipment at the RCBI Bridgeport Advanced Manufacturing Technology Center, the box is monitoring energy levels of the RCBI equipment in an effort to prove the device’s potential prior to full production.

“Because energy efficiency begins with measurement, this prove-out stage is essential,” said Charlotte Weber, RCBI Director and CEO. “Cost and energy savings are critical factors in manufacturing operations.”

Dan Headley, who owns HCS, said he took his new project to RCBI because of his previous positive experience working with RCBI’s staff. “We approached RCBI because we needed a fast turnaround on the prototype enclosure for this power control system, and we knew what we could expect from its technical staff.”

Headley said the initial prototype-development stage of the project involved his staff working directly with RCBI engineers to configure and complete a CAD (computer-aided-design) technical drawing so they could fabricate the professional housing of the Brain Box. After the initial digital design was complete, Headley said, RCBI used leading-edge Additive Manufacturing technology to 3D Print a functional prototype model of the Brain Box that he could test prior to taking it to market.

Weber said she is excited to undertake the new phase in the energy project. “RCBI already provides access to sophisticated prototyping and production equipment that delivers unequalled precision and efficiency,” she said. “We think this energy-test phase is the next step in continuing to bring a ‘green’ touch to manufacturing and the shop floor.”

Headley said his company will continue to rely on RCBI’s engineers and specialists, particularly as he launches the production phase of his Brain Box system. “RCBI’s 21ST Century Manufacturing Network as well as its statewide and region-wide knowledge of the manufacturing supply base will help us meet our full production needs.”

To contact HCS, call 304.282.0294 or e-mail hcstech@atlanticbb.net.
Jackson County students experiment with 3D Printing at RCBI's interactive display during the annual Marcellus to Manufacturing (M2M) conference in Charleston.

**M2M Academy brings manufacturing program to middle school students**

As a component of the Marcellus to Manufacturing conference, the West Virginia Manufacturers Association (WVMA) hosted the first M2M Academy, a half-day educational program for middle school students. Attended by more than 100 Jackson County students, the academy provides a broad overview of the diversity of manufacturing in West Virginia and the growth associated with the development of shale gas and the prospect of downstream manufacturing.

“Our academy attracted hands-on activities by Toyota and DuPont as well as a 3D Printing demonstration from RCBI,” said Rebecca Randolph, president of the WVMA. “The West Virginia Manufacturers Association is continuing our focus on activities that introduce today’s students to tomorrow’s opportunities for careers in manufacturing - careers that offer great wages, strong benefits and continued growth for our state and industry.”

**RCBI assists with Skills USA competition held in West Virginia**
RCBI provided judges and mentoring for the March 29 Skills USA Competition at the Ben Franklin Career Center in Dunbar. Participation was proof that there are future "makers" interested in Innovation and Design - and in keeping America strong.

Thank you for your time and your support of RCBI. As always, please let us know if there's anything we can do to assist you or your business!

Sincerely,

Charlotte Weber
Director and CEO

Find us on Facebook, Twitter, and the Web!

www.rcbi.org
What RCBI Does

The Robert C. Byrd Institute for Advanced Flexible Manufacturing (RCBI) encourages job creation, economic development, innovation and entrepreneurship by supporting manufacturing companies of all sizes. We offer cutting-edge equipment use and specialized training for everyone from sole proprietors to Fortune 500 companies.

Simply put, our goal is to use our Advanced Manufacturing Technology Centers across West Virginia to provide the resources that individuals and companies need to create, sustain and expand their businesses. In addition to providing leased use of cutting-edge equipment, workforce development programs, Quality Management Implementation, and customized training, RCBI assists companies in networking and procurement - particularly with federal contracts.

The technologies available at RCBI Advanced Manufacturing Technology Centers in Huntington, Charleston and Bridgeport are among the best in the world, providing companies in the Mid-Atlantic region services that would not otherwise be readily available to them. In particular, RCBI offers Additive Manufacturing (AM) with 3D Printer technology through its Design Works labs, and is a national Center of Excellence for composite materials providing support to NASA engineers as well as first-tier DoD suppliers in West Virginia. These activities help ensure that RCBI fulfills its mission of developing a quality, just-in-time supplier base for the Department of Defense (DoD) as well as other agencies and the commercial sector.