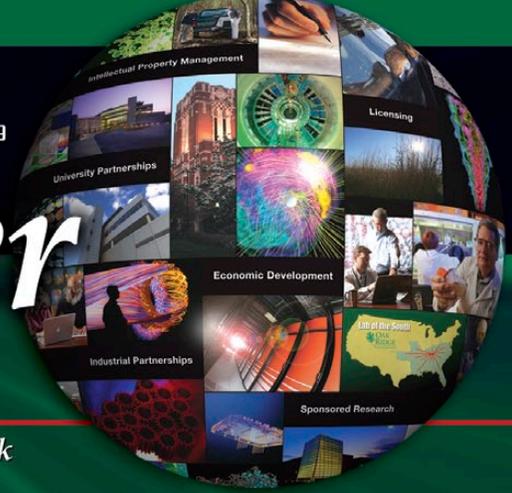


# Newsletter



*Putting Science to Work*

## REGIONAL PARTNERSHIP NEWS

### VW Philanthropic Pledge to Benefit ORNL, Other Education Partners

ORNL will be one of the beneficiaries of a \$5.28 million philanthropic commitment announced recently by Volkswagen Group of America, Chattanooga Operations, LLC.

The five-year “Partners in Education” program is designed to serve as a catalyst for educational enrichment in the state of Tennessee. At ORNL, the funding will create a “Volkswagen Scholars Program” that will be administered through Oak Ridge Associated Universities.

“The Volkswagen Scholars Program at ORNL will give students access to some of the finest scientific facilities, equipment, and staff mentors in the world,” said ORNL Director Thom Mason. “It will boost these students’ career potential and strengthen the automotive industry workforce. We are very pleased to be one of the leaders in this exciting initiative.”

The company’s program also includes funding for Fisk University, Hamilton County Public Schools, Tennessee State University, the University of Memphis, and the University of Tennessee’s Chattanooga



*Volkswagen executive Stefan Jacoby speaks at the dedication ceremony for the alliance.*

and Knoxville campuses. It will also leverage and support the Volkswagen Group’s relationship with Chattanooga State Community College, the lead institution for workforce training at the company’s new plant in Chattanooga.

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**Electronic Delivery Option**  
 Want to stay in the Partnerships loop while reducing the stack of mail on your desk?  
 Go to our updated website at [www.ornl.gov/partnerships](http://www.ornl.gov/partnerships) to view the newsletter online and sign up to receive it via e-mail.  
 While you're there, check out the information on current happenings, upcoming events, and key initiatives, as well as sections for industry professionals, entrepreneurs, researchers, and educators and students who have an interest in working with ORNL.

## DOING BUSINESS WITH ORNL

### DOE INCITE Projects Allocated at ORNL



In 2009, ORNL will make nearly 470 million processor hours available on Jaguar, its Cray XT supercomputer, under the Department of Energy’s Innovative and Novel Computational Impact on Theory and Experiment, or INCITE, program. Thirty-eight projects will advance breakthrough research in critical areas such as climate studies, energy assurance, materials, and other areas of fundamental science.

Since a processor hour is equivalent to one hour on one processing core, a single hour using all of Jaguar’s 181,000 processing cores is equivalent to 181,000 processor hours. Located within ORNL’s Leadership Computing Facility (LCF) in the National Center for Computational Sciences, Jaguar is the

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## MESSAGE FROM THE DIRECTOR



Tom Ballard

**T**+ T + T + C + C or T<sup>3</sup>C<sup>2</sup>. No, it's not a complex chemical formula. Instead, it's a defining recipe for how the Partnerships group at ORNL goes about doing its work. If we execute T<sup>3</sup>C<sup>2</sup> successfully, everyone is a winner.

The three Ts stand for *Talent, Tools and Technologies*. Clearly, in the past decade, ORNL has excelled at building world-leading tools and, as a

result, expanding our already strong base of great scientific talent. ORNL Director Thom Mason has repeatedly said that we must leverage these tremendous assets – our outstanding scientific talent and great tools like the Spallation Neutron Source and petascale-level high performance computers – to produce excellent science.

The two Cs stand for *Collaboration and Commercialization*. During its nine-year tenure as manager of ORNL, UT-Battelle LLC has advocated strong alliances with a variety of entities – our immediate local communities, statewide and multi-state organizations, and entrepreneurs and established companies, regardless of location. An important goal of working more closely with others has been and will continue to be to accel-

erate the commercialization pipeline for our inventions. This philosophy of collaborating with others will become even more pronounced as we work to meet the expectations of the new American Recovery and Reinvestment Act of 2009.

Elsewhere in this issue of our newsletter, you will read about new team members that we are bringing into the Partnerships group to help us respond more effectively to the unprecedented level of interest we are receiving. Those individuals and organizations that are seeking alliances with ORNL clearly recognize and genuinely appreciate the outstanding scientific talent and world-leading tools that we have. They believe that great discoveries will be made, and they want to be early-stage, active collaborators so that they can bring those new technologies to market.

The challenge for the Partnerships group is straightforward. First, we must draw on our own talented staff and the diverse set of tools at our disposal to help facilitate “win-win” collaborations involving ORNL researchers and external parties. Then, as scientific discoveries are made, we must ensure that these inventions are commercialized as expeditiously as possible. All of the ingredients are present, and the recipe seems simple – T<sup>3</sup>C<sup>2</sup>.

We'll be reporting on our progress in future issues.

## IMPACTS ON ECONOMIC DEVELOPMENT

# New Maturation Projects Funded from Royalties on Licensed Technologies

The Office of Technology Transfer has announced that six new royalty-based maturation projects were funded from the proposals received under the fiscal year 2009 Maturation Funding Call for Proposals. Nineteen proposals were evaluated for funding merit.

Maturation funds are used to support projects that will significantly increase the likelihood of licensing of pre-existing ORNL intellectual property. Funding for the projects is generated from royalty collections from licensed technologies; 25 percent of net royalty income is set aside each year to support this program. The average award amount for maturation proposals was \$51,500. Here are the awardees:

- Repackaging of Vertically Aligned Carbon Nanofiber-Based Neuro-Physiological Microelectrode Arrays, Tim McKnight and Nance Ericson, Measurement Science & Systems Engineering; Dale Hensley, Center for Nanophase Materials Sciences
- Rapid Determination of Volatile, Semi-Volatile and Particulate-Phase Hydrocarbon Fractions in Diesel Exhaust, Scott Sluder, John Storey and Sam Lewis, Energy & Transportation Science
- Preventing Direct Electrolysis and Electrochemically Initiated Homogeneous Reactions of Analytes in Thin-Layer Cell
- Electro spray Devices, Vilmos Kertesz and Gary Van Berkel, Chemical Sciences
- Application of Separation Layers to Outside of Support Tubes Using ORNL Membrane Technology, Brian Bischoff, Materials Science & Technology
- Produced Water Treatment Using Microbial Fuel Cell Technology, Abhijeet P. Borole, Biosciences
- Applicability of ORNL Couette Reactor/ Separator to Specific Industrial Chemical Processes, Coustas Tsouris, Joanna McFarlane and Joe Birdwell, Nuclear Science & Technology

(IMPACT ON ECONOMIC DEVELOPMENT continued on page 4)



REGIONAL PARTNERSHIPS NEWS (continued from page 1)

## VW Philanthropic Pledge *continued*



The “Partners in Education” program was unveiled during a ceremony at Chattanooga’s Calvin Donaldson Elementary School. Attendees included Dr. Horst Neumann, member of the Board of Management Volkswagen AG for Human Resources and Organization; Frank Fischer, CEO and chairman of Volkswagen Group of America, Chattanooga Operations;

Stefan Jacoby, president and CEO of Volkswagen Group of America; and Tennessee Governor Phil Bredesen.

“We are employers, but we are also neighbors. That means pitching in and doing our part to make life better for the entire community,” Neumann said. “Our corporate philosophy demands that it is not enough to merely have an interest in education. We have an obligation to turn interest into action. If we’re going to create first-rate minds, we have to create first-rate schools.”

## TVC NATIONAL SUMMIT RETURNS TO OAK RIDGE

The Tennessee Valley Corridor’s National Summit returned to Oak Ridge for the first time since its inaugural event in 1995. The event was held May 27–28 at the New Hope Center, Y-12 National Security Complex. Sessions included “Looking Back. Moving Forward – New Missions and New Opportunities in the Tennessee Valley Corridor,” “Energy Innovation and the New Economy” and “Creating an Entrepreneurial Culture – Bridging the Gap from Science to Commerce.”

The Tennessee Valley Corridor is a multi-state regional economic development organization dedicated to promoting the TVC as one of the nation’s premier science and technology centers. Another goal is to leverage the valley’s abundant research and technology assets and institutions for maximum regional economic development and new job creation.

Since 1995, when it was formed by Congressman Zach Wamp, the Tennessee Valley Corridor has built a strong alliance of community, business, education and

government leaders through a series of regular regional economic summits led by the corridor’s bipartisan and multi-state Congressional delegation and a blue-ribbon board of regional leaders. These events have strategically linked the technology-rich corridor – from North Alabama through Tennessee into Southwest Virginia, Western North Carolina and Southeastern Kentucky. The May summit will be the 21st in a series of regular economic development events the corridor has organized throughout the Tennessee Valley and in Washington, D.C.

The corridor’s current Congressional delegation includes Tennessee Congressmen Wamp, Bart Gordon, Lincoln Davis, Phil Roe and Jimmy Duncan; Alabama Congressmen Parker Griffith and Robert Aderholt; Kentucky Congressman Hal Rogers; North Carolina Congressman Heath Shuler; and Virginia Congressman Rick Boucher. Tennessee Senators Lamar Alexander and Bob Corker, as well as Alabama Senators Jeff Sessions and Richard



Shelby, also have been particularly active supporters of the effort.

Building relationships and strong collaborations among our federal institutions, world-class research universities and dozens of corporate leaders in science and technology, the Tennessee Valley Corridor has helped showcase the valley’s superior quality of life and the people, business, natural and scientific resources available for high-tech research, development, business and investment in the 21st century.

These strong federal and regional assets include NASA’s Marshall Space Flight Center; the U.S. Army’s Redstone Arsenal; the U.S. Air Force Arnold Engineering Development Center; ORNL and the Y-12 National Security Complex; Tennessee Valley Authority; Oak Ridge Institute for Science and Education; Great Smoky Mountains National Park; National Transportation Research Center; Center for Rural Development; National Safe Skies Alliance; several world-class research universities; and dozens of corporate leaders in science and technology.

The Partnerships Directorate’s Tom Ballard and Tom Rogers are former chairs of the TVC Board and remain active on the board and executive committee. For more information, see [www.tennvalleycorridor.org](http://www.tennvalleycorridor.org).



New Hope Center at the Y-12 National Security Complex.

## Seven Companies Selected for ORNL Mentor Protégé Program

Seven companies have been selected to participate in the mentor protégé program sponsored by ORNL. The program is a DOE initiative designed to assist energy-related companies in an effort to enhance their capability to perform contracts and subcontracts for the laboratory.

“Through our mentor protégé program, small businesses are able to broaden their capabilities while competing for new contracts,” said ORNL Director Thom Mason. “It’s a guide for federal contracting and working with a national lab. We gain valued business partners with the skills needed to support our work for DOE and also other customers.”

Companies eligible for mentor protégé selection are small disadvantaged businesses, 8(a) minority businesses, women-owned businesses, Historically Black Colleges and Universities, other minority institutions of higher learning, and small business concerns owned and operated by service disabled veterans.

Companies selected as ORNL mentor protégés are:

- **C. Gibb Consultants, Knoxville.** A Woman-Owned Small Business, C. Gibb Consultants performs tasks including process improvement facilitation, quality assurance program development, operational assessments and configuration, and records management.
- **Echota Technologies LLC, Alcoa.** This Small Disadvantaged Business serves as a security technology test facility while working in business operations and planning along with operations, training and security.
- **XCEL Engineering Inc., Oak Ridge.** A Service Disabled Veteran-Owned Small Business, XCEL Engineering provides technical services, construction management and environmental compliance with a specialty in air quality.

- **LRS Federal Inc., Annapolis, Md.** A Service Disabled Veteran-Owned Small Business, it performs program and project management, construction management and environmental services.
- **Martin Federal of Dadeville, Ala.** A Service Disabled Veteran-Owned Small Business, Martin Federal is involved with information technology and information security solutions, governance control assistance and intelligence.
- **Ingenium Professional Services Inc., Knoxville.** A Service Disabled Veteran-Owned Small Business, this company performs facility operations, regulatory compliance, and technical and design engineering.
- **Envision Engineering Inc., Oliver Springs.** This Woman-Owned Small Business provides mechanical engineering and analysis, project management and professional engineering software training.



### SAFETY REMINDER – HOTEL SECURITY

Whether traveling for business or personal reasons, following a few precautions can enhance your safety and security when staying in a hotel.

- Rooms accessed by interior hallways are more secure than those opening to parking areas or courtyards.
- When checking in, ask for your room number to be written, not spoken aloud.
- Note the fire evacuation plan, locate emergency exits, and count the door-

ways from your room, so you could find exits in dark or smoky conditions.

- Ensure that adjoining room doors, exit doors and windows are kept locked. Always use the deadbolt and swinging security lock, and don’t open the door to anyone you don’t expect. Report any loiterers to the front desk.
- Leave TV and a light on if you leave your room at night.
- Keep car keys, room key and a flashlight beside the bed at night.

**BUILDING ECONOMIC DEVELOPMENT**

## CEG Program to Receive 'Facelift'



The Center for Entrepreneurial Growth program, the partnership between ORNL and Technology 2020, is getting a facelift, called simply CEG 2.0

The CEG program was formed when UT-Battelle was awarded the contract to manage ORNL in April 2000. Since that time, more than 84 companies have been launched with assistance from the program staff at Technology 2020.

The CEG 2.0 program will be managed by John Morris, a serial entrepreneur from the region who most recently served as CEO of Sunlight Direct, an ORNL spin-out. CEG 2.0 will provide Tech 2020 the ability to work even more closely with its clients by limiting the number of new companies introduced to the program. Other new features include more front-end market research by Tech 2020 into ORNL technologies with commercial potential, and the option for client companies to engage members of Tech 2020's Business Mentor Group as advisory board members.



*John Morris*

For more information about CEG 2.0, contact John Morris at [morrisj@tech2020.org](mailto:morrisj@tech2020.org).

## SPOTLIGHT ON PARTNERSHIPS

# Smith Upbeat about Innovation Valley



Jesse Smith's goal is clear: to leverage the Knoxville-Oak Ridge Innovation Valley's considerable technological assets for the economic good of the region. Since filling the newly created job of director of Technology for Innovation Valley Inc., he's worked closely with a consulting team from Battelle Technology Partnership Practice.

"You might ask, 'don't we already know what we've got,' but often, it takes an economic development professional with a scientific background to appreciate the value our collective resources can have for industrial clients and use those to recruit companies," he said.

Smith, whose training includes a BS in polymer science and an MBA, served in a similar role at Mississippi Power Company and, earlier, at Mississippi Polymer Institute.

"My niche is at the interface of the scientific and economic development communities," he said.

His position is funded by a grant to Tech 2020 from the U.S. Department of Commerce's Economic Development Administration (EDA) and matching funds from Innovation Valley Inc., the regional partnership created to implement a new five-year economic development blueprint for the Knoxville-Oak Ridge Innovation Valley.

The EDA project includes the development of a technology-driven economic development strategy, along with the hiring of the director of Technology, and is expected to yield very concrete results.

"It will identify specific companies for me to contact," he said. "It will help me target those industries that we feel have

the most to gain from establishing a presence here. Private sector investment and job creation – ultimately, those are the measures of our success."

He's upbeat about the Innovation Valley.

"We know high tech is our future," he said. "We're in an extremely strong position because of ORNL, the University of Tennessee,

so many innovative young companies here, and a talent pool that's absolutely world class.

And we have an economic development community that really works together. I think we're uniquely prepared for the future."

IVI serves as the support organization for the partners participating in this next-generation regional economic development campaign. They are the Blount County Chamber of Commerce, Knoxville Area Chamber Partnership, Loudon County Economic Development Agency, Oak Ridge Economic Partnership, Roane Alliance, and Tellico Reservoir Development Agency. Members of the IVI board of directors include Thom Mason, president and CEO of UT-Battelle; Jimmy Haslam, president of Pilot Travel Centers; and Kevin Clayton, CEO of Clayton Homes.



*Jesse Smith*

DOING BUSINESS WITH ORNL (continued from page 1)

## DOE INCITE Projects continued

world's most powerful supercomputer for open scientific research, with a peak performance of 1.64 quadrillion calculations a second, or 1.64 petaflops.

The 2009 INCITE program reflects several recent upgrades to the system. The LCF's allocation in the coming year is more than three times the 145 million processor hours allocated in 2008 and more than six times the 75 million processor hours allocated in 2007.

For more on the DOE INCITE program, *see [www.sc.doe.gov/ascr/incitel](http://www.sc.doe.gov/ascr/incitel)*.



*The Jaguar XT5 Supercomputer.*



Success Story

## ORNL Technology Leads to WolfTech's 'Greener' Bullet



As hunters trek to their blinds for new seasons, an Ohio-based company is

*An ORNL technology helps lead to a high performance, greener bullet.*

introducing a high performance bullet based on technology developed at ORNL. The new bullet promises more precision and superior terminal ballistics but is also lead free and environmentally safe, and can be used everywhere that old toxic lead bullets are banned.

The lead-free bullet technology, recently licensed to WolfTech of Wakeman, Ohio, has resulted in the first of these bullets being made available to muzzle-loading hunters as part of a high performance system sold by MDM in Vermont.

Because of the bullet's composition – mixtures of tungsten and other metals or alloys – the density of the bullets can be adjusted to produce different bullet weights without changing the external dimensions. This makes the bullets ideal for high performance hunting and target applications. The products will also help answer demand for greener ammunition as states are already beginning to outlaw lead bullets in certain hunting areas.

## ORNL, PBMR Reach Work for Others Agreement



ORNL has signed a Work for Others agreement for the design of a testing program and the preparation, irradiation and subsequent testing of appropriate test specimens for ceramic materials to be used in the core structure of a Pebble Bed Modular Reactor (PBMR) demonstration plant.

The four-year \$9.6M agreement with PBMR Ltd., South Africa, is for the design of a material irradiation and testing program, as well as associated services such as project management, quality control and configuration management. Project objective is the characterization of the response of the Core Structure Ceramics (CSC) materials to fast neutron irradiation at elevated temperatures. This is relevant for the operating conditions of the graphite reflector and other components of PBMR core structures.

The current design of the PBMR CSC primarily uses graphite reflector blocks, as well as components fabricated from carbon-fiber-reinforced composites, nongraphitized carbon and fused silica insulation. Material qualification plans for the CSC require specific characterization of property changes expected because of exposure to a fast neutron flux at elevated temperatures.



*Technicians measuring irradiated graphite.*

NEW FACES IN PARTNERSHIPS DIRECTORATE

## 2009 Tech Transfer Analyst Team

Graduate students from the University of Tennessee's Master of Business Administration Program make up the 2009 Technology Transfer analyst team. The analysts write market research reports and engage in projects that support ORNL's technology commercialization effort. Members of this year's team are, from left to right, John Batey III, Matt Trent, Sarah Davis and Robert (Bob) Adams.



UNIVERSITY PARTNERSHIP ACTIVITIES

## UT Day at ORNL



With an eye toward developing the next generation of great scientists and engineers, the University Partnerships Office sponsored its first "UT Day at ORNL" in January. Forty-five University of Tennessee honor students participated in the event, which offered an on-site orientation to the numerous opportunities for research, internships and professional development readily available at the laboratory. In an effort to strengthen the ties between ORNL and partner universities, more "Day at ORNL" events are being planned.

## Sims Joins Partnerships Directorate

David Sims has joined the ORNL Partnerships Directorate as a licensing associate. He is responsible for portfolio management and licensing of UT-Battelle's intellectual property associated with the laboratory's work in energy, transportation and energy efficiency. He also serves as supervisor for the directorate's commercialization analyst team – a group of students from the University of Tennessee's full-time MBA program.



David Sims

Sims joined ORNL with many years of experience in the private sector specific to small business operations. His prior roles include job foreman, retail assistant manager, marketing research project manager, treasurer and owner. He also has several years of leadership experience in community service organizations. Sims had served as an intern on the directorate's analyst team while attending graduate school at UT; thereafter, he served as analyst and team project manager under an ORNL subcontract. He holds an MS in information science from UT.

## Cuddy Named Tech 2020 President and CEO

The Technology 2020 Board of Directors named Mike Cuddy as its new president and chief executive officer. Technology 2020, a regional economic development organization headquartered in Oak Ridge, is dedicated to helping create new businesses and high quality jobs by capitalizing on the unique technology resources in the Tennessee Valley Corridor.

Cuddy has dedicated his career to making East Tennessee a better place to live and work. He has worked for the past decade as the vice president for Information Technology Services at SAIC, one of the region's largest employers. Prior to joining SAIC, Cuddy supported DOE missions in Oak Ridge, working for 30 years in increasingly responsible positions for Union Carbide, Martin Marietta and Lockheed Martin. From 1994 to 1998, Cuddy was responsible for a \$120 million technology services business unit with clients in both the federal and private sectors.

"A 10-person search committee, with the assistance of an executive search firm, conducted a national search for Tech 2020's new president and CEO," said search committee chair Homer Fisher. "The position attracted interest from outstanding professionals across the country, and Mike Cuddy was our unanimous first choice. Mike has a rare combination of strategic leadership skills, highly suc-



Mike Cuddy

cessful business development experience and a great passion, combined with an impressive vision for Technology 2020. He impressed the search committee and the staff with his ideas for and commitment to moving the organization forward in partnership with other organizations in our region."

Cuddy holds two degrees from the University of Tennessee – a BS in mechanical engineering and an MBA in finance and operations research. He has been very active in community affairs, serving on the boards of the Knox County E911 district and the American Museum of Science and Energy Foundation, and on the UT President's Committee on the Future of the University of Tennessee. He also served as a founding board member of Technology 2020 and has been a member of the organization's Financial Oversight and Executive Committee.

"Technology 2020 has proven to be a valuable part of our region's support system for our entrepreneurs and technology based business community," said Cuddy. "I am extremely pleased and excited to have been chosen to lead such an impressive organization that was created to support and enable the success of our sponsoring organizations and client companies. This is noble work and I intend to build upon the success of our former CEO, Tom Rogers, and his predecessor, Alex Fischer. I look forward to working with the outstanding Tech 2020 Board of Directors as we focus on our partners and clients in delivering services that will make a difference for our regional economic success."

## ACTIVITY CONTINUING AT S&T PARK

Development of the Oak Ridge Science and Technology Park at ORNL is proceeding on several fronts this year.

Phase I, which includes some 12 acres, has been completed by Halcyon Corporation, the subsidiary of CROET (Community Reuse Organization of East Tennessee) serving as park developer. The Phase I property has been leased to IVH, LLC, which is developing the Pro2Serve National Security Engineering Center, a 115,000-square-foot multi-tenant facility. The building is expected to be ready for occupancy in early 2010.

DOE has also leased Building 2033 within the S&T Park boundaries to the Halcyon Corporation, which is teaming with Technology 2020 to establish the Halcyon Commercialization Center (HCC). It will be a



## SIEEC Works to Help Improve Regional Energy Efficiency

The Southeast Industrial Energy Efficiency Summit, held last year at ORNL, was a call to action for industries, utilities, state energy offices, and other organizations to work together to reduce the region's industrial energy intensity and carbon emissions. Using the Atlanta-based Southeast Energy Efficiency Alliance as a champion and organizational umbrella, a leadership group of key stakeholders have met quarterly to formulate the underpinnings for a collaboration that will focus on objectives outlined at the summit.

The Southeast – the nation's largest and fastest-growing region – can be a model for industrial energy efficiency improvements. The industrial sector plays a vital role in the region's economy, accounting for 13 percent of GDP and employing 3.3 million workers. The annual growth rate for industrial GDP was 10 percent higher in the Southeast than the national average from 2002 to 2007. However, energy consumption per dollar of GDP is 17 percent higher in the Southeast than the national average. For sustained growth, regional industries must operate with a higher degree of energy efficiency.

The Southeast Industrial Energy Efficiency Coalition (SIEEC) brings together industry, utilities, and governments to focus on a common vision of improving industrial energy efficiency. SIEEC will work in partnership with the Department of Energy and its national labs toward reducing regional industrial energy intensity by 25 percent by 2020. DOE's Industrial Technologies Program, with participation and leadership from ORNL, has provided seed funding.

The coalition's initial goals are to:

- Develop membership from Southeastern industries, utilities, and states to enable and accelerate significant improvements in plant energy efficiency.
- Promote best practices and training in energy efficiency.
- Identify R&D requirements for breakthrough technologies.
- Accelerate deployment and demonstration of leading-edge technologies.



- Enable sharing of ideas and successes among industries throughout the region.
- Foster cooperation between industrial users, utilities, and agencies.
- Reducing industrial energy intensity in the Southeast will increase the competitiveness of the region's industrial base by reducing energy costs per unit of output, increasing productivity, maximizing the use of utility power providers, and creating jobs for providers of energy-efficient technologies.



facility where businesses large and small can locate to explore and secure research collaborations with ORNL. HCC is expected to be available for occupancy this spring, and several companies have expressed interest in being founding tenants in the 20,000-square-foot facility.

A master plan has been completed for the total 28 acres in the park, and specific parcels have been identified for future development. DOE funding may be available this fiscal year to clear away legacy structures on one of the more prominent potential sites in the park, which could provide a springboard for future development.

The Oak Ridge Science and Technology Park – the nation's first technology park on the campus of a national laboratory – offers opportunities to work closely with ORNL researchers to address critical scientific challenges and to grow new companies that will strengthen America's competitiveness for decades to come.

*AWARDS AND REWARDS*

## ORNL's Greg Hanson Is Distinguished Inventor

Greg Hanson, an R&D staff member in ORNL's Measurement Science and Systems Engineering Division, has been named a Distinguished Inventor by Battelle.

Researchers from throughout Battelle and the national laboratories that it manages or co-manages for DOE become eligible for the honor by having 14 or more U.S. patents to their credit as a direct result of their work at Battelle. The Distinguished Inventor program was developed to recognize Battelle's history of innovation and the scientists behind it.

Hanson also was honored at ORNL's 2006 Awards Night, where he was named Inventor of the Year for the development of intellectual property portfolios related to energy/environmental control and national security.



Greg Hanson

## Singh, Simpson, Weigh-in-Motion Team Honored

David Singh, John Simpson and members of a multidivisional team were among ORNL employees honored at UT-Battelle's 2008 Awards Night ceremony in Knoxville.

Singh, who is a member of the Materials Science and Technology Division, received the Director's Award for Outstanding Individual Accomplishment in Science and Technology. He was honored for his sustained pioneering work on the development of methods of electronic structure. This work paves the way for critical applications in the research of condensed matter physics and materials science and related areas. Singh has been with ORNL since 2004 and has authored more than 280 papers.

ORNL Director Thom Mason said Singh's career at the laboratory has been filled with reaching new heights in research. "His work has helped pave the way for a new and better understanding of the study of many facets of condensed matter physics and their applications to many related areas of science that may lead to many future scientific breakthroughs," Mason said.

Simpson, an R&D staff member in the Measurement Science and Systems Engineering Division, was named Inventor of the Year. He was honored for "significant inventive contributions to the field of sub-wavelength optical devices and nanostructured materials."

The Excellence in Technology Transfer Award was presented to team members Robert Abercrombie, Lee Hively, Gregory David Richardson and Frederick Sheldon, Computational Sciences and Engineering; William Besancenez, Contracts; David Beshears, Measurement Science and Systems Engineering; Julius Coats Jr., National Security Directorate; Mark Reeves, Partnerships Directorate; Matthew Scudiere and Clifford White, Energy and Transportation Science.

The team was recognized for "commercialization of Weigh in Motion (WIM) and the Automated In-Motion Vehicle Evaluation Environment (AIMVEE) for both military and civilian use."

*Award winners: left bottom, David Singh; left top, John Simpson. The team members are: standing: Gregory David Richardson, Lee M. Hively, Julius E. Coats Jr., Matthew S. Scudiere and Clifford P. White; seated: Frederick T. Sheldon, David L. Beshears, Robert K. Abercrombie, Mark Reeves and William R. Besancenez.*



## Five ORNL Submissions Receive FLC Regional Awards

ORNL received five 2008 awards for excellence in tech transfer from the Southeast Region of the Federal Laboratory Consortium (FLC) for Technology Transfer. FLC is a network of federal labs that provides a forum to develop strategies and opportunities for linking laboratory mission technologies and expertise with the marketplace. ORNL winners are:

**Automated In-Motion Vehicle Evaluation Environment (AIMVEE)**, a safe, accurate, portable and affordable system that automatically evaluates slow-moving vehicles and their cargo. SF Dynamics signed a licensing agreement with ORNL and plans to market a commercial AIMVEE version. Honorees: Robert Abercrombie, Kristopher Daley, Lee Hively, David Richardson and Frederick Sheldon, Computational Sciences and Engineering; Willy Besancenez, Contracts; David Beshears, Measurement Science and Systems Engineering; Julius Coats Jr., National Security Directorate; Matthew Scudiere and Clifford White, Energy and Transportation Science; Mark Reeves, Partnerships Directorate; and Glenn Arnold and Bob Schlicher, subcontractors.



**Adaptive Band Excitation Method in Scanning Probe Microscopy**, which enables a new family of techniques that allow rapid measurement of energy dissipation in electrical, mechanical, magnetic and thermal processes. This technology is licensed to Asylum Research. Honorees: Sergei Kalinin and Stephen Jesse, Center for Nanophase Materials Sciences; and Alexander DeTrana, Partnerships Directorate.

**Nell 1-Based Diagnosis and Treatment of Musculoskeletal and Cardiovascular Conditions**, the identification of the role of the Nell 1 gene and its signaling pathway. Bone Biologics and NellOne Therapeutics are negotiating technology licenses for cartilage and bone repair and for creating diagnostics/therapies to regenerate and repair skeletal and cardiac muscles, respectively. Honorees: Cymbeline Culiati, Biosciences; and Jennifer Caldwell and Russ Miller, Partnerships Directorate.

**SpaciMS: Spatially Resolved Capillary Inlet Mass Spectrometry**, used for minimally invasive chemical sampling inside operating confined-space systems. SpaciMS was developed through cooperative research and development agreements (CRADAs) with Cummins and with Northern Ireland's Queen's University, which developed a commercial time-of-flight SpaciMS device with Hiden Analytical. Honorees: William Partridge Jr., John Storey, Sam Lewis and Jae-Soon Choi, Energy and Transportation Science; and Frank Damiano, Partnerships Directorate.

**CF8C-Plus: New Cast Stainless Steel for High-Temperature Performance**, developed to provide better performance and reliability in high-temperature exhaust components for advanced diesel and industrial gas turbine applications. It was developed through CRADAs between ORNL and Caterpillar and is being tested for turbocharger housing applications in a CRADA between ORNL and Honeywell. Honorees: Philip Maziasz and D. Ray Johnson, Materials Science and Technology; and DeTrana.

## MARK REEVES HONORED BY ORNL, FLC SOUTHEAST REGION

Mark Reeves, associate director and acting interim director of Commercialization for the Partnerships Directorate, has been honored by ORNL and by the Federal Laboratory Consortium for Technology Transfer.

At the laboratory's 2008 Awards Night ceremony, Reeves was part of the team who received the Excellence in Technology Transfer Award for the commercialization of Weigh in Motion and the Automated In-Motion Vehicle Evaluation Environment.

The FLC's Southeast Region named him 2008 Laboratory Representative of the Year, citing his "many and substantial" contributions to the consortium and the region, as well as to ORNL's Partnerships Directorate. Reeves has served as FLC regional coordinator for the past four years and has served on the Executive Board.

In the awards citation, the consortium said Reeves has "continued supporting the annual regional conference, encouraged greater participation by laboratory representatives in the Southeast Region, built partnerships with other regional coordinators, and catalyzed the development of a new public relations and internal outreach publication to explain the value of federal laboratory technology transfer to agency representatives, laboratory management, laboratory scientists and engineers, and commercial partners."



Mark Reeves

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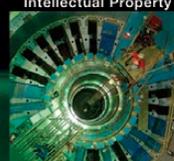
University Partnerships



Licensing



Intellectual Property



Sponsored Research



Industrial Partnerships



Economic Development

# PARTNERSHIPS

## UPCOMING EVENTS

### June 8-9

Southern Growth Policies Board's 37th Annual Conference, Biloxi, MS.  
For more information: [www.southern.org/conference/conf.shtml](http://www.southern.org/conference/conf.shtml)

### June 8-10

Automotive News Manufacturing Conference, Birmingham, AL.  
For more information: [www.autonews.com/assets/html/09\\_anmc/](http://www.autonews.com/assets/html/09_anmc/)

### November 22-23

Tennessee Valley Corridor 2009 Fall Partnership Event, Murfreesboro, TN.  
For more information: [www.tennvalleycorridor.org](http://www.tennvalleycorridor.org)



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