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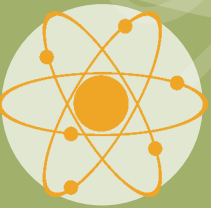
Community

The Magazine of Wright State University

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Rethinking the Region's Future



SUMMER 2009
VOLUME XV NO. 1

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In the pioneering spirit of the Wright Brothers, Wright State will be Ohio's most innovative university, known and admired for our diversity and for the transformative impact we have on the lives of our students and on the communities we serve.



INNOVATION

The Matthew O. Diggs III Laboratory for Life Science Research is rated LEED NC-Gold by the U.S. Green Building Council. This prestigious award places Wright State University at the forefront of green building design, since Diggs Laboratory is the first laboratory in Ohio to receive the LEED-NC Gold status.



DIVERSITY

Born in Puerto Rico, **Juan Munoz** moved to the United States during the seventh grade. A senior at Wright State, Munoz is the recipient of a \$1,000 scholarship from the League of United Latin American Citizens. This scholarship "helps to lighten the burden for me and my parents," says Munoz. Wright State hopes to increase its Latino population through scholarships.



TRANSFORMATION

A self-proclaimed "OK student," **Tyler Hahn** was transformed by a four-month-long work-study exchange program in Dalian, China. After falling in love with Chinese culture and learning he had a knack for the language, Hahn said, "I have found my focus. It was really a door opener for me, so fulfilling and worthwhile."



Our GOALS

GOAL 1 ACADEMIC DISTINCTIVENESS AND QUALITY

Enhance our distinctive learning experience to produce talented graduates with the knowledge and skills essential for critical thinking, meaningful civic engagement, international competency, an appreciation for the arts, lifelong learning, and the ability to lead and adapt in a rapidly changing world.

GOAL 2 EDUCATIONAL ATTAINMENT

Enhance student access to and successful participation in higher education through quality and innovative instruction and student life programs that increase graduation and career placement for a diverse student body.

GOAL 3 RESEARCH AND INNOVATION

Expand our scholarship in innovative and targeted ways to address regional, national, and global needs.

GOAL 4 COMMUNITY TRANSFORMATION

Provide leadership to promote and support social, cultural, and economic development within the region through collaborations with local, state, national, and global partners.

GOAL 5 VALUED RESOURCES

Develop and sustain the human, financial, and physical resources required to accomplish the university's strategic goals.

IN 2007 AND 2008, Wright State University hosted a Regional Summit where business and community leaders came together and discussed how we could form partnerships to improve our region.

At last year's summit, we also unveiled the university's strategic plan and our five goals of:

- Academic Distinctiveness and Quality
- Educational Attainment
- Research and Innovation
- Community Transformation
- Valued Resources

In lieu of hosting a Regional Summit this year, we have created this special edition of *Community* magazine to communicate with you—our alumni, community partners, and friends—about the various initiatives supporting our strategic plan and how they impact our region.

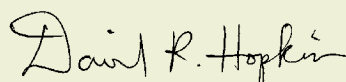
Learn about STEM education in the fields of science, technology, engineering, and math and how we are working with our educational partners in the region to create a pipeline for future jobs. As Governor Ted Strickland has said, "Our investment in STEM education is one of the most essential investments we can make, not only for our students, but for the future of the state of Ohio. This investment will ensure that our students will have the skills that will enable them to compete in an increasingly competitive global environment."

Meet our Choose Ohio First scholars in STEM and the recipients of our new Graduation Fund. See how the lives of these students have been transformed by scholarships and the quality education that Wright State provides.

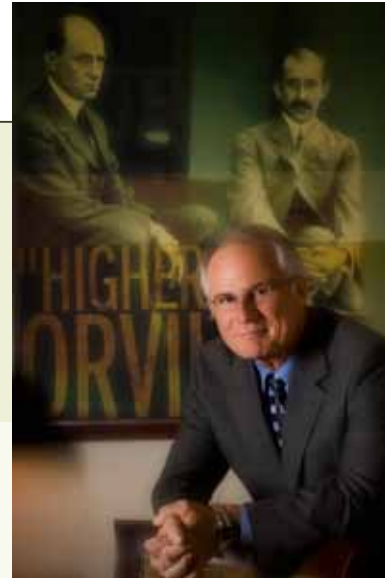
Find out how to partner with us through the Wright State Research Institute, discover cutting-edge technology and research, and learn how all of us are working together to help this region grow and prosper.

Beyond the pages of this magazine, we have also created a brand new website where all of us can engage in dialogue throughout the year. Read web-only exclusive stories about more community initiatives, watch videos and view photo galleries, and leave your own questions and comments online.

I hope you will join me in creating an online community where we can foster ideas and collaboration. And I look forward to seeing you in person at our next Regional Summit in 2010!



DAVID R. HOPKINS
PRESIDENT
WRIGHT STATE UNIVERSITY



"Our investment in STEM education is one of the most essential investments we can make, not only for our students, but for the future of the state of Ohio."

—GOVERNOR TED STRICKLAND





Science, technology, engineering, and math

STEM

and how they affect the future of the region



THIRTY YEARS AGO, Michele Wheatly left her native United Kingdom for what was then the mecca of STEM research—the United States. “If you wanted to be a successful scientist, the common advice was to go spend a few years in the U.S. and see how they do it there. That wouldn’t be true anymore,” said Wheatly, dean of Wright State’s College of Science and Mathematics.

But Wheatly and other educators at Wright State and throughout the region are at the forefront of a movement to return the United States, and particularly the Miami Valley, to its former glory days.

A philosophy of education

STEM is an acronym for science, technology, engineering, and mathematics. Medicine also falls under the STEM umbrella. But as Wheatly explained, STEM goes well beyond just the sciences. “It’s a philosophy of education—learning by doing—that can be applied in any discipline,” said Wheatly. “The old-fashioned way of educating people clearly isn’t working. We’re trying to create a learning environment where we engage students

in different ways. STEM boils down to really good instruction that could be applied to pretty much any area. STEM is for everybody.”

According to Greg Bernhardt, dean of Wright State’s College of Education and Human Services, the need for a new approach to teaching became clear years ago. “We started thinking fundamentally about how to train teachers differently over 10 years ago,” said Bernhardt. Creating joint appointment faculty is one example of how Wright State is shaping the next generation of teachers.

“We have about 15 jointly appointed faculty—they hold their faculty rank in both teacher education and in one of the sciences or math areas,” Bernhardt explained. “It wasn’t a matter of two cultures trying to get together and learn each other’s language. Instead, we began to blend the two cultures together.”

The end result is that teacher education majors are better prepared to teach science or math in the real world. “Why are kids afraid of math? Why do kids have anxieties? Why do they have misconceptions about how math works or how it’s important? Our math professors and our math educators all work together to overcome those things,” said Bernhardt.

Wright State also hosts a Science and Mathematics Education Council, where educators from throughout the region come together on a quarterly basis to discuss best practices in the STEM teaching fields.

Whether it’s preparing the teachers of tomorrow or enhancing the skills of teachers already in the classroom, STEM education, according to Bernhardt, boils down to “where the rubber meets the road, where real-world teachers are teaching today, and what are their needs.”

“STEM boils down to really good instruction that could be applied to pretty much any area. STEM is for everybody.”

—MICHELE WHEATLY, DEAN, COLLEGE OF SCIENCE AND MATHEMATICS





“We hope to become a model of what’s possible. It’s a different approach.”

—BRIAN BOYD, PRINCIPAL OF DRSS

Dayton Regional STEM School

This new approach to education will be nowhere more evident than at the new Dayton Regional STEM School (DRSS). At its opening in August 2009, DRSS welcomed nearly 100 ninth grade students from Clark, Greene, and Montgomery counties. By 2012, enrollment is expected to grow to 600 students in grades 6–12.

One of only eight STEM schools in Ohio, DRSS is the result of 30 education, business, industry, community, and government partners working together to create the first STEM school in the Dayton region. The integrated curriculum will combine language arts, history, math, science, engineering, fine arts, and Chinese. In cooperation with its regional partners, DRSS will also offer internship opportunities for students.

“We hope to become a model of what’s possible. It’s a different approach,” said Brian Boyd, principal



of DRSS. “We have a diverse set of students and a set of teachers that are working together, working with our regional partners to develop some experiences for kids.”

Anita Griggs enrolled her son in DRSS because she thought the school’s innovative approach to teaching and small class sizes would be helpful to her son, who is dyslexic. “DRSS offers teaching styles that vary from the norm—they use project and team teaching, not just books and notes. The kids will be interactive with a plethora of people both inside and outside of the school, so our son will be offered the higher level of academia in a format in which he is capable of absorbing it, in spite of his disabilities,” said Griggs. “We are very excited about the opportunities

presented by DRSS and believe that the alternative teaching styles will give our son a different perspective on school, which will in turn open his options for the future.”

Lisa Fitzgerald chose DRSS “so that our daughter could experience STEM learning as part of her core academics” and “be exposed to the great scientists at work in our region—such as those at the Air Force Research Lab and others in local technical companies.”

“She will have the opportunity to see math and science applied to real-world problem solving and she’ll be exposed to many careers in the STEM fields. She will also be able to work with Wright State and other university academic partners and we welcome that,” said Fitzgerald. “The teachers are extremely



“We hope the STEM school will be a model of best practice. The kids will get a good education, the teachers will be able to demonstrate their best techniques, and we will be able to have our teaching candidates go over there and see where best practice takes place.”

—GREG BERNHARDT, DEAN, COLLEGE OF EDUCATION AND HUMAN SERVICES

talented and excited about working with the students and molding them into successful workers in the future. The staff that DRSS has hired is truly world class and we appreciate the hard work they’ve already done to lay the foundation for the school.”

According to Bernhardt, the DRSS will be a place where Wright State’s education majors can see the STEM philosophy of education in action. “We hope the STEM school will be a model of best practice,” said Bernhardt. “The kids will get a good education, the teachers will be able to demonstrate their best techniques, and we will be able to have our teaching candidates go over there and see where best practice takes place.”

DRSS will provide hands-on, project-based learning for students. Designing and building solar ovens is just one example of an activity that will engage students.

As mathematics teacher Judy Brown explains, DRSS provides “an unbelievable opportunity for students.” Brown enjoys teaching an integrated curriculum and how it helps students see “the big picture and how they’re related and not separate entities.”

Science and engineering teacher Judy Hallinan wants to get her students excited about math and science, especially the girls. “I was a mechanical engineer for 22 years. I got tired of sitting in conference room after conference room and being the only female in the room,” said Hallinan.



Building the STEM pipeline

Attracting more women to the STEM fields was the impetus for a \$2.86 million grant from the National Science Foundation to create the LEADER consortium, a partnership between Wright State, the University of Dayton, Central State University, and the Air Force Institute of Technology. Since its official launch in November 2008, the consortium has been hosting biweekly meetings to recruit and promote the advancement of women in STEM. “That project has a lot of energy right now,” said Wheatly.

Along with attracting women to the STEM fields, persons with disabilities and wounded war veterans are top priorities. Ohio’s STEM Ability Alliance was awarded a \$3 million National Science Foundation grant to recruit, retain, and graduate students with disabilities in STEM degree programs. Participating institutions include Wright

State, Sinclair Community College, The Ohio State University, and Columbus State Community College.

Disabled students interested in STEM degrees are also eligible for nearly \$2.7 million in Choose Ohio First scholarships at Wright State, Ohio State, Sinclair, Columbus State, and Clark State Community College.

“Consistent with Wright State’s mission, as well as our national reputation for meeting the needs of students with disabilities, this initiative is one of many that are under way across the university to address the special needs of these very, very, talented students,” said Lillie Howard, senior vice president for curriculum and instruction. “This kind of collaboration reflects the direction that Chancellor Eric Fingerhut has set as the mission for the University System of Ohio and helps meet Governor Strickland’s goal of educating 230,000 more students by 2017.”



According to Jeffrey Vernooy, director of the Office of Disability Services, "Almost 60 percent of our graduating high school students with disabilities never make it into the front door of a post-secondary institution. That is a tremendous loss of talent. Our state needs all of its citizens to get appropriate training so that they can get a job and earn an income. This scholarship program, combined with our nationally recognized support services for students with disabilities, will enhance our efforts of guiding students towards productive and rewarding careers."

All of these initiatives have produced what Wheatly refers to as "a banner year" for STEM. "These are things that put a spotlight on Wright State and help us with our mission to be the most diverse university," she said.

Wright State's College of Engineering and Computer Science actively recruits high school students to get them into the STEM pipeline at Wright State. "Direct from high school applications in our college were up 9 percent for fall 2008 and they are currently up 2.9 percent for fall 2009," said Bor Jang, dean of the College of Engineering and Computer Science.

Wright STEPP (Science, Technology, and Engineering Preparatory Program), a nationally recognized program that enhances the development and education of underrepresented youth in the STEM fields, is a key recruiting tool. The three-week program helps students in grades 7–10 from Dayton Public Schools learn more about STEM through classes taught by Wright-Patterson Air Force Base volunteers, and through tours and projects. For each year a student participates, the student is eligible to receive a one-year full-tuition scholarship to Wright State. According to Jang, 160 students participate each year, 40 from each grade level.


The key to the region's future

Building the STEM pipeline is critical to the future of the region and its economy. "STEM is the new industry in the Miami Valley. It was manufacturing. The new factories are the STEM pipeline," said Wheatly. "Instead of creating parts for cars, we're creating the thinkers of tomorrow."

"STEM is about opportunity for our young people and jobs for our community. It is about science, technology, engineering, and math. But the real lessons our students learn through STEM education are how to ask questions and solve problems—techniques that will help them succeed in the arts, in the humanities, in life," explained Susan Bodary, executive director of EDvention, a collaborative of more than 80 partner organizations dedicated to the growth of STEM talent in the Dayton region.

"Virtually all of the programs that we're working on have to do with preparing our students for jobs. There is a greater emphasis on that than I've ever seen before in my 40 years in higher education," said Jack Bantle, vice president for research and graduate studies at Wright State. "Wright-Patterson Air Force Base presents a wealth of opportunities for students in STEM fields to get a job. The BRAC process will also open up doors."

BRAC, the 2005 Department of Defense Base Realignment and Closure Act, is expected to bring more than 1,200 jobs to Wright-Patterson Air Force Base and the region by 2011. Wright State has been engaged in extensive discussions with other regional higher education institutions to prepare for workforce development and the number of graduates that will be needed in targeted areas.

"We're anticipating that our STEM community will probably double or triple [by 2011]. We want to position ourselves to recruit the best caliber of people. We've got quality of life here," said Wheatly. "As this BRAC move takes place, we hopefully will be able to attract people to this region. And that's how we will re-grow the region. It's now or never." 



VISIT www.wright.edu/regionalsummit TO VIEW RELATED VIDEO.

CHOOSE OHIO FIRST Scholars

A collaboration led by Wright State University, in conjunction with Central State University, University of Dayton, Wittenberg University, Clark State Community College, Edison Community College, Sinclair Community College, Southern State Community College, Wright-Patterson Air Force Base, and 450 external partners secured nearly \$4 million in **Choose Ohio First scholarships** for students in the science, technology, engineering, and mathematics (STEM) fields.

“CONSISTENT WITH THE SPIRIT OF INNOVATION of the Dayton region and of Wright State University, Choose Ohio First scholarships will help to transform the economic landscape of the region and the state of Ohio, producing the talented and diverse workforce we need in STEM to guarantee a bright and sustainable future,” said Lillie Howard, senior vice president for curriculum and instruction at Wright State. “The eight higher education institutions, Wright-Patterson Air Force Base, and the more than 450 for-profit and not-for-profit partners involved in this initiative are to be commended for their diligent and collaborative efforts to bring scholarships to the Dayton region.”

Meet some of Wright State’s Choose Ohio First scholars as they share their stories about what this new scholarship program means to them.

Zach Gault

When Zach Gault graduates from Wright State, it won’t be his last time in a classroom.

The physics and philosophy double major, with a minor in mathematics, plans to attend graduate school and eventually earn a Ph.D. from a nationally recognized physics program.

“I would get a Ph.D. in physics even if I made minimum wage afterwards. It’s what I want to do,” said Gault. Curious

about the world, how things work, and why they work, Gault would like to make a discovery of his own someday.

With many years of school and tuition ahead of him, Gault is grateful for his Choose Ohio First Scholarship. “I am on my own financially. This scholarship definitely helps out,” said Gault.

“Having to pay my way through school has helped me get more involved,” said Gault. He works as a tutor and peer instructor and with Jason Deibel, an assistant professor in the physics department, on terahertz research, a form of electromagnetic radiation.

Gault was selected to participate in the 2009 Center for Nanoscale Systems Research Experience for Undergraduates at Cornell University.

Alexandra Williams

Being the mother of two sons, ages 8 and 6, keeps Alexandra Williams on her toes. Add on her schedule as a biological sciences major, and this is one busy lady.

“When you have children, there is always more to be done, which usually means less time for studying. Your studying has to fight for time with soccer games, birthday parties, family dinners, and bath time,” said Williams. “You have to become very adept at balancing several schedules, and you have to learn to be very flexible.”

Williams also faces the daily challenge of parenting a child with special needs. “My oldest child is a high-functioning autistic, and he has several problems in the areas of speech and language. He needs help outside school and therapy. It can be very difficult to balance his time and needs with everyone else’s in the family. Even so, I think he teaches us just as much—or more—than we teach him,” she said.

Williams spent seven years on active duty as a crew chief and jet mechanic in the Air Force. She lived in the United Kingdom and traveled all over the world with the military. “My service time means that I am a fair amount older than many of the students in my classes, but it has also given me a great deal



“I would get a Ph.D. in physics even if I made minimum wage afterwards. It’s what I want to do.” —Zach Gault

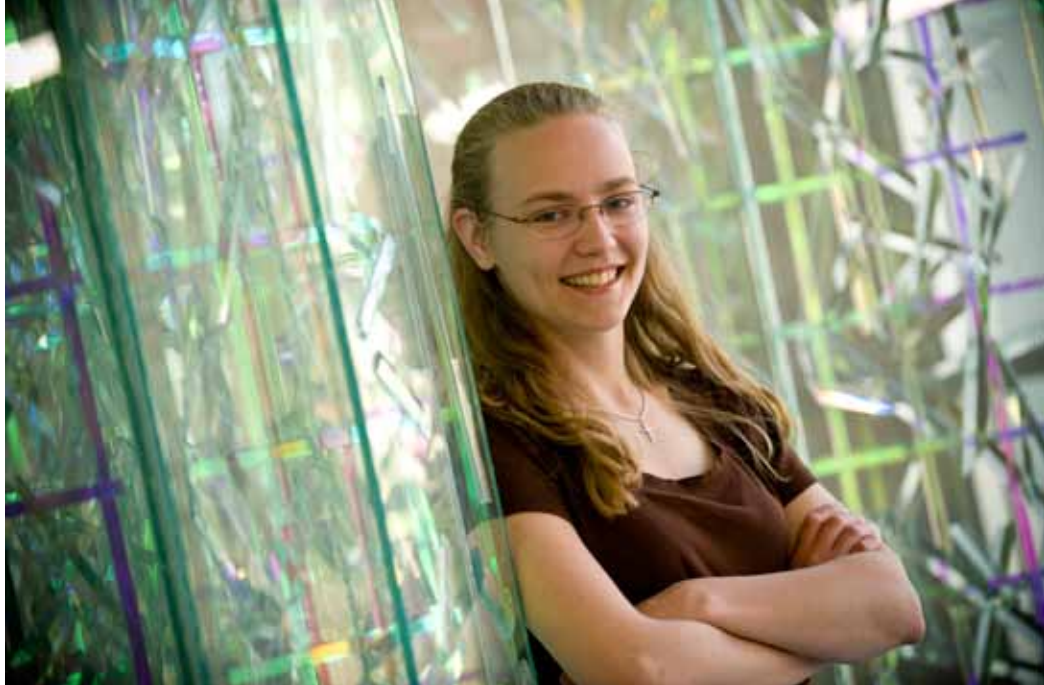
“There are a lot of expenses in going to school When you have children and have to factor in daycare, housing, transportation, etc., the costs are even higher.”

—Alexandra Williams



of experience to draw from as well. I had to grow up quite a bit while in the military. I believe that I now am much more appreciative of the opportunities I have here than I would have been had I attended college straight out of high school,” she explained.

Williams is also grateful for her Choose Ohio First Scholarship. “There are a lot of expenses in going to school, from tuition to textbooks. When you have children and have to factor in daycare, housing, transportation, etc., the costs are even higher,” she said. “Scholarships like this are very helpful in removing some of that cost and making college an affordable reality.”



“I have a job and I work hard to keep my income as high as possible and my expenses at a minimum, but I wouldn’t make it without scholarship money.” —Carla Benton



In the near future, Williams may add on a major in psychology. “I have developed a real interest in how the brain works, specifically in how it processes language,” she explained. Williams would like to attend graduate school at Wright State and eventually work with autistic children with language acquisition problems.

“One of the things I love so much about Wright State is how accessible it is to those with disabilities,” said Williams. “Seeing such an inclusive campus that goes to such lengths to open up so many opportunities gives me a real sense of hope for my son and other children like him.”

Carla Benton

A Choose Ohio First Scholarship has made a world of difference in the life of physics major Carla Benton.

“Before I started college, I committed to graduating with a 4.0 GPA and no debt. That would have been easy if someone else was writing the check for my tuition, books, and gas every quarter, but no one is. I am paying for it myself,” said Benton. “I have a job and I work hard to keep my income

as high as possible and my expenses at a minimum, but I wouldn’t make it without scholarship money. Receiving a scholarship like this allows me not only to make ends meet but to focus more on my studies.”

Benton works for Doug Petkie, an assistant professor of physics and electrical engineering, in his research lab on projects involving various kinds of sensors for standoff measurement of vital signs and imaging for non-destructive evaluation of aircraft materials. “I have several projects but the one that has been published is using a terahertz radar for remote detection and measurement of human vital signs. Basically, we create an instrument that measures the Doppler shift from the motion of a person’s chest as it moves due to breathing and heartbeat. The details involve a lot of electronics and signal processing but it is mostly just a fancy motion detector. It has potential applications for things like security and disaster relief,” Benton explained.

After Wright State, Benton plans to go to graduate school in either physics or engineering and spend her career doing research.



S. Narayanan, executive director of WSRI
Photo by Lisa Powell

Offering a one-stop shop for business solutions

WRIGHT STATE RESEARCH INSTITUTE

What are the problems you're facing today? What do you need? How can we help?

Those are the questions staff from the Wright State Research Institute (WSRI) ask their customers in business, industry, and government as they form a partnership.



"WE WANT TO FOCUS ON CUSTOMER-DRIVEN PROBLEMS," said S. Narayanan, executive director of WSRI. "It's about being proactive, being nimble, and being responsive to customer needs. Ultimately, it's commitment to excellence and delivering high-quality solutions at a very competitive cost."

WSRI was the vision of David Hopkins, Wright State University's president. Planning for the research institute began when Hopkins was provost of the university. WSRI is structured as a primary driver of the university's economic development activities, linking its academic mission to industry and Wright-Patterson Air Force Base.

Since WSRI began operations in January 2007, it has executed 62 projects and more than \$3.6 million in research, created more than 20 jobs, and supported more than 25 students through research projects and industrial internships.

WSRI prides itself on being customer focused, agile, flexible, and able to provide highly individualized service. "We walk in and we listen. That's not the normal academic approach to research. This is 'let me help you solve a problem' and customers have really responded to that. They can contact the institute and we'll find the resources across campus to solve their

problem," explained Ryan Fendley, WSRI's business manager.

WSRI is composed of core staff members, supplemented by the technical expertise of Wright State's faculty. The capability to draw from any resource within the university to develop a solution to a problem helps WSRI build collaborative partnerships within the university and with outside partners.

Key projects and partnerships

Ongoing research for the Center for Operator Performance is one of WSRI's most successful projects to date. The center brings together a group of petrochemical companies and control system vendors to undertake research of immediate importance that will impact their operations and bottom line. Marathon, Chevron, and Nova Chemicals are just a few of the companies across the United States and Canada who pay membership fees to belong to the center and direct research projects.

Wright State University worked with David Strobhar, president of Beville Engineering and a Wright State graduate, to create the center. "The Center for Operator Performance is improving the safety of oil refineries



and pipelines in Ohio and across North America," said Strobhar. "The center is able to conduct research that would be difficult for any individual company to justify or even know how to do, so it really fills a need. WSRI provides the oversight and rigor to the research that is needed to make multi-million-dollar decisions and/or influence regulatory agencies."

According to Narayanan, "This has given us some great opportunities to work with different companies. Our faculty already has a lot of expertise in human factors and decision making, but now they have the opportunity to apply it to specific industry problems."

Jennie Gallimore is a professor of industrial and human factors engineering at Wright State. She also serves as the university's faculty

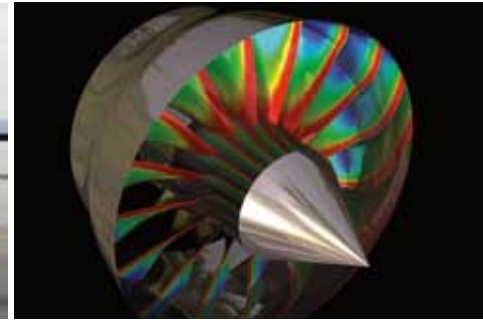


Wright State Research Institute

Since its inception in January 2007, WSRI has:

- Executed 62 projects
- Produced more than \$3.6 million in research
- Created more than 20 jobs
- Supported more than 25 students

For more information, visit www.wright.edu/wsri or call (937) 775-5163.



liaison with the Center for Operator Performance. One of Gallimore's research projects for the center was to look at color guidelines for the hundreds of display screens used by process operators and recommend an industry standard. "The older displays looked like Christmas trees. It was just a big color mess," said Gallimore. During her research, Gallimore recognized that there were more pressing issues at hand than just color. "The biggest problem was, is the information presented in the right way at the right time to make the right decision," she said. This conclusion led to a new project to reduce the number of displays to improve the quality of decision making.

"When a system goes down, it affects the economy. You're directly affecting the economy when you solve problems to keep these plants from going down," explained Gallimore. "If something has to be shut down, they lose millions of dollars. This is very important in terms of solving problems."

The Aerospace Technology Evaluation and Assessment (ATEA) program is Mark Wysong's biggest project. Wysong is program manager for WSRI. The ATEA provides research and engineering for the Air Force

Research Laboratory and Aeronautical Systems Center. Wysong sees this five-year-long project as a good fit for WSRI. "A lot of our capabilities are lined up very well to the Air Force's mission," he said. Working with prime contractor Infoscitex, WSRI will provide operations research and modeling and simulation capabilities for new air vehicle technologies, including unmanned aerial vehicles.

The Automatic Target Recognition Center (ATR) is another partnership between WSRI and the Air Force Research Laboratory. Led by Brian Rigling, an associate professor of electrical engineering at Wright State, the center focuses on sensors technology and target recognition applications. As Rigling explains, ATR uses computers or processors to derive information from sensor data and make decisions. "This kind of technology has fairly broad applications. It's by no means just a military application," said Rigling. Medical imaging is just one example where ATR can be used to highlight potentially cancerous regions in a mammogram or a cervical cancer-screening slide.

An engine for economic development

"Whenever a university wants to grow in their capability to support others on the outside, it should form a research institute," said Bart Barthelemy, associate director of the Wright Brothers Institute and TecEdge. Barthelemy has worked with WSRI since its inception and serves on WSRI's advisory board. "As WSRI's stature and contributions grow, it will really enhance the region. The potential is there for a huge amount of money to come into Wright State and the region. WSRI can be a powerful engine for economic development."

This is a mission wholeheartedly supported by WSRI's leader. "We are focused on increasing the overall research and development portfolio within the university," said Narayanan. "Ultimately, it's about collaboration with industry to help them be more successful, so there are more jobs created within the region."



VISIT www.wright.edu/regionalsummit TO VIEW RELATED VIDEO.

GRADUATION FUND

New financial aid program gives students hope for tomorrow, help for today

A college education can be a financial challenge for many students and their families. In today's economy, that struggle is even more difficult. As the economy declined, Wright State University quickly realized that students needed more financial aid and they needed it now. Thus, **the Graduation Fund** was born.

"Every day we hear about more and more people losing their jobs. These are good people who have worked hard to earn an honest living to provide for their families. Nothing could be more heartbreaking for a parent than having to worry about putting food on the table or making their child's college tuition payment," said David R. Hopkins, president of Wright State University.

"Many of our students at Wright State are paying for their own tuition, while juggling the demands of a full-time job," Hopkins added. "When they or a spouse lose their job, the hope of completing a college education can be quickly dashed."

Today, more students than ever need our help. Many families are facing unforeseen financial struggles, having to choose between tuition or house payments, books or utility bills. Some of these students never needed financial aid—until now.

We won't let tough economic times stand in the way of our students' hope for tomorrow. Wright State's Graduation Fund is giving them financial help so they can stay the course and graduate.

Together with our alumni, faculty, staff, and friends, Wright State is doing everything in its power to ensure that our students become the alumni who will shape our region's future.

"We have an obligation to provide a high-quality education that is affordable and accessible for all of our students," said Steven Angle, provost of Wright State University. "Higher education is the key to the success of our students, our region, and the state of Ohio."

Since introducing the Graduation Fund this spring, many students have already begun to benefit from this initiative. Not just a one-time commitment, this program will be ongoing in order to help students for years to come.

We invite you to meet some of the students who are fulfilling their dreams of a college education, thanks to the Graduation Fund.

Stefanie Dodge

It was a birthday present Stefanie Dodge will never forget. Two days

STEFANIE DODGE



before her birthday, Dodge received a telephone call from the Office of Financial Aid that she would be receiving scholarship money from the Graduation Fund. "It was like a birthday present from the university! I couldn't wait to call my mom," said Dodge. "Every bit is so helpful. I am just so grateful for this."

Like many students, Dodge balances both school and work. She is a tutor in the University Writing Center and works in concessions and catering at the Ervin J. Nutter Center. During the summer, she helps her parents with their concession business at festivals and tractor shows.

A double major in vocal performance and music education, Dodge fell in love with opera during high school and would like to audition for an opera company when she graduates. At some point in the future, she wants to earn her master's degree and teach.



TONY GIBSON

Tony Gibson

"The more money I get from scholarships, the less time I have to spend working and the less money I have to take out for loans," said Tony Gibson. "This helps a lot."

The first generation college student from Marion, Ohio, has enjoyed his first two years at Wright State. "When you get into your major, the classes are small enough that you can interact with your professors, but the university is big enough to get to know a lot of other people."



AMBER ZIEMER

Amber Ziemer

For nursing student Amber Ziemer, the Graduation Fund and other scholarships have given her the opportunity to concentrate on her studies, without having to work an inordinate number of hours. Ziemer plans to attend graduate school after Wright State to become either a nurse practitioner or a nurse anesthetist.

Ziemer commutes to Wright State from her family's home in Bellbrook and would like to remain in the region. Growing up, she always wanted to be a pediatrician. "I have always liked kids. I am the oldest child," said Ziemer. But over the years, she decided she would rather be a nurse instead of a pediatrician. She also developed an interest in nursing from her aunt, who is a nurse for premature babies. "I like caring for people and helping people," said Ziemer.

Tim Drake

For psychology major Tim Drake, receiving support from the Graduation Fund meant that "I could continue to go to college. Every dollar I get helps. It also gave me the feeling that someone

TIM DRAKE



was investing in me and gives me the responsibility to perform up to expectations."

Active in Psychology Club and Psi Chi, an honor society for psychology students, Drake hopes to become a child psychologist. "I could do a lot of good there. My main goal in a career is to help other people," said Drake. "If I was a child psychologist, I could make a difference in people's lives."

With plans for graduate school in his future, Drake appreciates the financial support he is receiving now as an undergraduate. "It means a lot to me to even be considered for the Graduation Fund. I would like to thank everybody who contributed," he said.



TIFFANY PAUL

Tiffany Paul

Tiffany Paul admits she was relieved when she found out that she would be getting help from the Graduation Fund. "It's hard to fully concentrate on your studies and pay for every expense that you have," said the Zanesville, Ohio, native, who is financing her own college education.

The biomedical engineering major is active in the Society of Women Engineers and enjoys the opportunities for networking at regional and national conferences. Paul will be president of the Wright State chapter during the 2009–2010 school year.



CHRISTINA MEADOWS

Christina Meadows

Christina Meadows understands the importance of the Graduation Fund and the difference it will make in her life. "It means a lot to me. I see a lot of students who stop coming to college because they can't afford it. It helps me to stay in college and achieve my goals of becoming successful and being able to receive a higher education. This is a huge opportunity to move forward and continue my education," said Meadows.

The senior biology major plans to attend graduate school and earn a master's degree in nursing. "I always wanted to work in the health care field," said Meadows, who has a six-year-old cousin who suffers from frequent seizures. "Seeing what she goes through has influenced me. I want to help those in need."





Challenging Perceptions, Diversifying the Workforce

The University System of Ohio (USO) has charged higher education to enroll 230,000 more students in the state by 2017. Wright State is doing its part by stepping up its efforts at recruiting underrepresented populations, including Latino, transfer, and veteran students, as well as students with disabilities.

includes improving our education in the STEM fields of science, technology, engineering, and mathematics, as well as improving our enrollment and retention of Latino, transfer, veteran, and disabled students.

Latino students

“The Latino population will probably be the largest minority population by the year 2025, if not before,” says Tony Ortiz, director of athletic training and Hispanic community liaison for the university. While Wright State has seen increases in African American students over the last five to six years—a 14 percent increase just in the last year—the number of Latino students has remained relatively flat. Diversity encompasses more than African American students, and the Latino student is going to become increasingly more important to American universities.

As of the 2000 Census, there were 22,408 Latinos in our 16-county region. Yet in 2008–09, Wright State had only 283 undergraduate students who identified themselves as Hispanic or Latino. Ortiz would like to see this number dramatically increase to numbers closer to those of our African American students, as the Latino proportion of the population increases over the next decade.

In addition to his roles on campus, Ortiz also serves as the president of the League of United Latin American Citizens (LULAC). On June 20, LULAC hosted a large conference at Wright State, featuring a job fair, workshops, and a community awards and scholarship luncheon. Among the award recipients were several current and future Wright

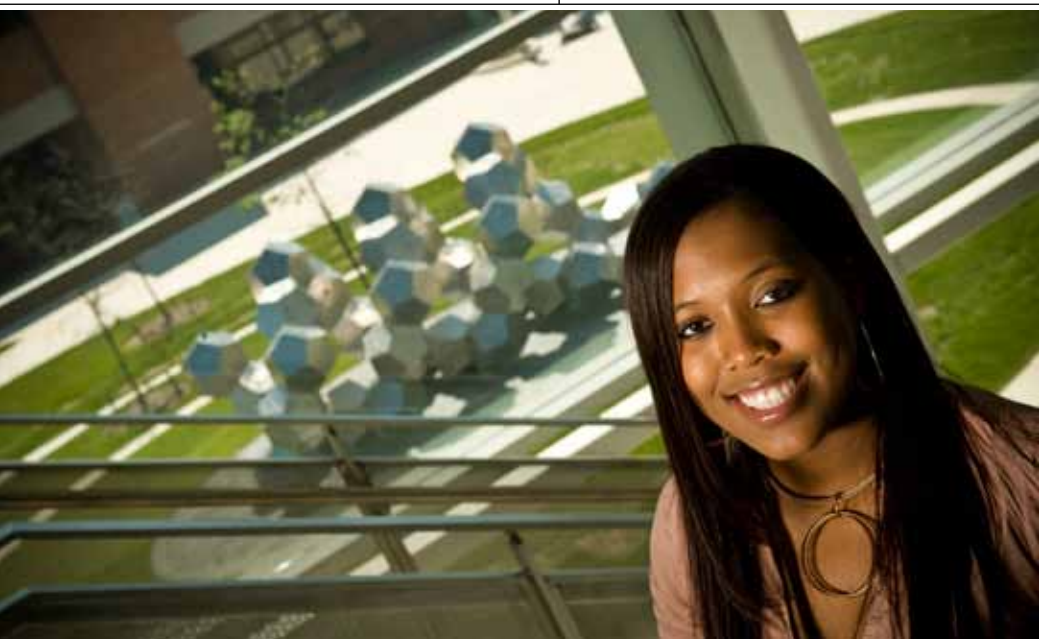
Why are these populations so critical?

THE NUMBER OF STUDENTS attending college straight out of high school is expected to decline, as population figures drop for these age groups. Colleges and universities must begin to target other student populations in order to fulfill the region’s need for educated employees.

Additionally, the region is suffering from a perceived lack of adults with a

college education. In the United States, 24.4 percent of adults over the age of 25 have a bachelor’s degree or higher. In Ohio, that number drops to 21.1 percent. Sadly, our Dayton/West Central Ohio region has an average of only 16.11 percent, making the perceived lack of college-educated adults a reality.

In order to change the course of our region, we must develop a more competitive and educated workforce to appeal to corporations considering a move to the area. This





“Winning this scholarship helps to lighten the burden for me and my parents.”
—Juan Munoz

Juan Munoz ✨ **History major**

Globetrotting has always been in the cards for Juan Munoz. Born in Puerto Rico, he moved to the United States during the seventh grade. He was raised speaking Spanish in the home and English in public. “In school it seemed like the Spanish programs were lacking in their strength, and the French students were more proficient,” says Munoz. “I hope that the Spanish language remains intact as the Latino population increases in the country.” Now a senior at Wright State, Munoz is a history major with a Spanish minor. His goal is to become a college professor of medieval Spanish history. To prepare for this future, he has enrolled in a six-week summer exchange program in Morocco, as well as a Fall Quarter exchange program in Salamanca, Spain.

This summer, Munoz was the recipient of a \$1,000 scholarship from the League of United Latin American Citizens. Winning this scholarship “helps to lighten the burden for me and my parents,” says Munoz. He believes that by offering scholarships to Latino students, Wright State is making a great start at increasing the Latino population on campus.

Anthony Enck ✨ **Integrated Language Arts Education major**

After three tours of duty in Iraq with the U.S. Marine Corp., Anthony Enck was ready for a change of pace. “I called a buddy of mine in Alaska, and ended up studying at the University of Alaska—Anchorage for a year,” remembers Enck. Missing his family in Champaign County, Ohio, Enck found himself looking for a program of study in the area that would prepare him to be a high school English teacher. “Wright State’s Integrated Language Arts Education program is nationally ranked. That’s pretty impressive,” he added.

During his time in Iraq, Enck was involved in the invasion of Fallujah. “It was real intense, urban conflict. Going over walls...I fell off a wall at one point. My back, elbow, and knee are done, and I’ve got a pretty gnarly scar from concertina wire.” Suffering from service-related disabilities, Enck has spoken with Wright State’s Office of Disability Services on a number of occasions about helping veterans with disabilities. He also works in the Office of Veterans Affairs, helping others who share their own stories of service to their country. To help unite the veterans on campus, Enck and fellow former Marine and Wright State student Craig Sheppard have formed the Wright State Veterans League. They currently have about 20 active members, and another 50 with varying levels of involvement.



“Wright State’s Integrated Language Arts Education program is nationally ranked. That’s pretty impressive.”
—Anthony Enck



“I feel like I was somehow pre-accepted at Wright State. Before I knew it, I was already in classes.” —Melissa Brigden

Melissa Brigden ✨ **Fine Arts major, concentration in Photography**

“I’ve been enrolled at a lot of colleges. The biggest challenge is all the paperwork,” says Melissa Brigden, a fine arts major and marketing minor at Wright State. After studying at The Ohio State University, Franklin University, Columbus State Community College, and Sinclair Community College, Brigden realized that Wright State was the place for her. The transition to being a student here went smoothly on all fronts. “I feel like I was somehow pre-accepted at Wright State. Before I knew it, I was already in classes,” she recalls.

After meeting a new friend in one of her classes, Brigden quickly became involved in student life and activities. She has served as both the marketing chair and the president of the University Activities Board. She hopes that her experience in marketing and her concentration in photography will help pave the path to her dream job, owning her own photography business and becoming an art director. “I love photography. It’s always a challenge to take a project and make it your own—be different.” Already reaching high, Brigden independently published a book of her artwork, *Journeys*, in spring 2009, chronicling her path to self-discovery as an artist.



State students and Jacqueline McMillan, associate provost for enrollment management at Wright State.

“Being recognized for our efforts to increase Latino student enrollment is a reflection on the work of the entire university community,” stated McMillan. “In the words of President Hopkins, Wright State is known for our ‘inclusiveness rather than our exclusiveness.’ These are critical times for our region, and Wright State seeks to ensure that we have an educated workforce, capable of delivering us into the next era.”

Transfer and adult students

Wright State has recently noted a 31 percent increase in applications from transfer students. This rise reflects a number of economic and societal factors. “A large pool of these applicants are students coming from local community colleges, ready to complete their bachelor’s degree,” says Cathy Davis, director of undergraduate admissions. “We’re also seeing a surge in the number of students transferring from out-of-state privates, as well as in-state private colleges. The third increasingly large category we’re seeing is local students who went to another public university, but are returning home and coming to Wright State.”

Additionally, Wright State is serving the needs of the countless displaced and underemployed adults in the region. Whether they are returning after a long period away from college, or are new to the college experience, they are being welcomed at Wright State. The flexible hours and weekend classes are especially appealing to this population,

“In order to significantly increase enrollment goals in the state of Ohio, you have got to look at people with disabilities.” —JEFFERY VERNOOY, DIRECTOR, OFFICE OF DISABILITY SERVICES

as evidenced by an increase in enrollment from these groups in these time slots.

With a volatile market, it is virtually impossible to predict enrollment trends in the near future, though Davis believes we’ll continue to see a robust number of transfer and adult students. With Wright State’s quality of education and family-friendly tuition, students and their families will continue to embrace the value and services the university offers. In 2008–09, there were 1,062 undergraduate transfer students and more than 5,000 adult students over the age of 25. More are expected this year.

To better serve this expanding population, plans are in the works to develop additional resources to help transfer students get acclimated to the university and serve their unique needs. Currently, University College

works with many of these students. “University College plays a pivotal role in making students’ transition from community colleges to a four-year university seamless,” says Anita Curry-Jackson, Ph.D., dean of University College. “University College’s outreach and partnerships with area community colleges (Clark State, Edison, and Sinclair) foster the educational continuum and the achievement of baccalaureate degrees for students, especially students over the age of 25.”

Veterans and students with disabilities

While one may not naturally place veterans and students with disabilities in the same category, Jeffery Vernooy, director of Wright State’s renowned Office of Disability Services, is equally concerned with both. “Ninety percent of



the soldiers who are injured in war are still living today. We've never seen a number so great before. Many of these veterans are suffering from lifelong disabilities. Wright State is equipped and able to help this population and we're actively reaching out to them and to people who have their fingers on the pulse of this group."

Not just veterans with disabilities, but all people with disabilities are on Vernooy's recruitment list. People with disabilities make up the second-largest minority population in the state of Ohio. "In order to significantly increase enrollment goals in the state of Ohio, you have got to look at people with disabilities," says Vernooy.

There are more than 315,000 people with disabilities living in the region today, and more than 1.9 million in the state of Ohio (U.S. Census Bureau). Our Office of Disability Services estimates that they served 500 students in the 2008–09 academic year. Clearly, there are thousands of potential students in our area who may not know that they too can go to college and have a successful career. To assist with his goal of recruiting these students, Vernooy created the award-winning DVD, *Striving & Thriving: A Guide for College-Bound Students with Disabilities*, to help students and their families learn how to select the right college for them and how to prepare for the journey.

Other Wright State initiatives assisting students with disabilities and veterans include *Starting Wright*, a series of Internet broadcasts for middle school and high school students with disabilities, funded by the Johnson Scholarship Foundation; and the new Learning Community course for Fall 2009, Returning to Learning for Veterans. Many other projects are in the works to benefit both of these populations.

The Office of Veterans Affairs on campus is constantly working to encourage and support all veterans and active duty military, from collaborations with other departments to provide counseling services to hiring Work



Study students who were involved in combat. They currently serve 391 undergraduate students. To encourage more veterans to go to college, including all of the 958,000 Ohio veterans, Governor Ted Strickland has created the Ohio GI Promise, which will assist veterans in affording a college education. Eric Fingerhut, chancellor of the Ohio Board of Regents, has referred to it as "a magnet to lure veterans to come and build a life in Ohio."

Impact on the region

By focusing efforts on these underserved populations, Wright State will make an impact not only on the diversity of the campus community, but also on the economic outlook for the region as a whole. With the recent departures of NCR and other businesses, our region needs to keep abreast of what employers are looking for in a business community

environment. Offering the right majors, being active in the most in-demand research, and providing a steady flow of highly qualified, educated employees are just part of the solution. By reaching out to the Latino community, veterans, transfer students, and people with disabilities, we can help to bring the region together, working toward a common goal. "The graduation of these students with baccalaureate degrees will increase the college-educated citizens of this region and state because they tend to have more roots here and to stay after earning their baccalaureate degrees," adds Curry-Jackson. "This is beneficial to the economic future of our entire region."

Wright State is working to make the region more productive and attractive for prospective residents and employers. As Ortiz says, "we are getting ready, but we can't do it alone. Collaborating with different groups out in the community will help Wright State and everybody to achieve more."



More on the web VISIT www.wright.edu/regionalsummit TO VIEW RELATED VIDEO.



CONNECTING TO CHINA

Wright State programs expand global horizons

TYLER HAHN admits he was an “unmotivated, OK student, putting in minimal effort.” But something just clicked in the Wright State student after participating in a four-month-long work-study exchange program in Dalian, China, in fall 2008. After falling in love with Chinese culture and learning he had a knack for the language, Hahn said, “I have found my focus. It was really a door opener for me, so fulfilling and worthwhile.”

Hahn’s experience is a familiar story to Laura Luehrmann, associate professor of political science and director of Wright State’s Master of Arts Program in International and Comparative Politics. “I love to listen to people when

they have come back from their first experience in Asia, because it can be so transformative. I always hear that. I don’t care if it’s a first-year college student, if it’s a graduate student, or if it’s a high-level university administrator. They almost always come back and say this was life changing and transformative.”

More students will have the opportunity to travel to Asia later this year when Wright State offers its first ambassador program to China. Led by Chinese language instructor Haili Du, the three-week journey through Beijing, Dalian, Xian, and Shanghai will introduce students to Chinese language, culture, and history. “I want to take

them to see the real China,” said Du. “For those who don’t have any Chinese language background, they will get a taste of Chinese language and learning. They will also get to interact with Chinese students.”

According to Stefan Pugh, chair of the Department of Modern Languages, interest in Chinese language by Wright State students has been growing over the last seven to eight years. “It took on a life of its own,” said Pugh. A Title VI grant from the U.S. Department of Education in 2008 allowed Wright State to expand its Chinese language program to offer third-year classes and to establish a full-time instructor in Chinese.

Title VI grants also helped enhance





PHOTOS COURTESY OF TYLER HAHN AND ANDREW LAI

Wright State's international studies major and establish its international business and international trade programs during the last decade, along with business language courses in German, Spanish, and French. This fall, Wright State will begin offering a new minor in Chinese studies. "Students with three years of Chinese language and a few other approved courses in history, political science, religion, or art can graduate with a concentration in Chinese studies," said Pugh.

In today's global economy, knowledge of Chinese language and culture gives Wright State students a competitive edge. "We need to educate our students when it comes to Asia and China to prepare them for the world that we live in right now," said Michelle Streeter-Ferrari, director of Wright State's University Center for International Education. "Being able to send students to go study there and learn Mandarin, it's going to certainly set them apart from other students who haven't done that."

Collaborating across campus and the community

"There are very exciting collaborations taking place across the colleges," said Luehrmann. "To get the real picture, you have to cross disciplines and colleges. It's very exciting that the Title VI grant has enabled us to facilitate that."

One example is a seminar on environmental issues in China taught by Huntting W. Brown, Wright State's director of sustainability. "What China—or any other country—does or does not

do with respect to the environment can have international as well as domestic consequences," explained Brown.

"Air and water pollution travel beyond national borders. Also, natural resources are often extracted (e.g., minerals) or harvested (e.g., fisheries, lumber) elsewhere and then imported. The magnitude of the resources imported and the care with which they are obtained impacts the environment within the countries of origin. While these issues are true for any country, China's large population and its

developing economy combine to make it a major player on the world stage. What China does matters to us all."

Joseph Petrick, professor of management and international business in the Raj Soin College of Business and executive director of the Institute for Business Integrity, teaches a course on international business ethics that includes a focus on China. "In terms of business interests and business education, there has been a growing concern for Asian studies in business because of the tremendous growth in both China and India," said Petrick. Students in the class stay up-to-date on current events in China thanks to direct access to Chinese newscasts broadcast in English. "That adds a dimension of currency and relevance that our business students thrive on," added Petrick.

In January 2010, the Honors Institute will host a symposium focusing on China, featuring James Fallows of the *Atlantic* magazine and Minxin Pei of the Carnegie Endowment for International Peace.

"Wright State is becoming a center for Chinese studies in this region."
 —STEFAN PUGH
 CHAIR, DEPARTMENT OF MODERN LANGUAGES

"Wright State is becoming a center for Chinese studies in this region," said Pugh. With many area school systems offering Chinese language classes, Pugh hopes that students who have already had a year or two of Chinese will matriculate to Wright State. A dual-enrollment program with city schools in Bellbrook, Bellefontaine, and Oakwood offers students college credit for high school classes. These schools use Wright State's textbooks and follow the university's syllabus for their classes. "High school language classes tend to be somewhat slower paced. One high school semester counts as one college quarter," Pugh explained.

China MBA program links to region's businesses

Since its creation in 2003, Wright State's China MBA program has graduated more than 300 senior Chinese executives. Students are chosen by the Chinese government through a competitive selection process to participate in the 12-month-long intensive program on Wright State's campus. "It's based on their language skills, and more importantly, their managerial experience and professional knowledge in their own field. It's their potential to be a leader in their enterprises. These are the people they want to cultivate to do business not only in China but internationally," explained Andrew Lai, professor emeritus of information systems and operations management and coordinator of Wright State's China MBA programs.

A doctor at a blood center in China, Li Qinwei hopes his MBA training will help him become a better administrator. "This is a good chance for me to go abroad to learn the language and the culture. It will give me knowledge of economics and management," he said.

Camilla Chen, a graduate of the China MBA program, says her experience helped her to "understand more about the culture and social structure" in the United States and to develop new relationships. "We have many good



friends already, such as our host family and friends we met on a cruise to Alaska. Some of them visited us in 2008 and 2009," she said.

The China MBA program goes well beyond teaching. Lai connects his students to businesses and communities throughout the region. "We have been working very closely with local companies and communities to help them extend their business to China. Our area has been affected by globalization—we've been exporting a lot of jobs," he explained. "We're not just teaching them [our students], we're helping them to be resources for our community. That's where our program is different from other universities' [programs]. Most universities basically give them an education. We consider them not only our students, but also our resource for helping our local businesses. We are building bridges between China's enterprises and our own businesses here in the local community."

Each month, Wright State hosts a Global Executive Forum where Lai "takes the best and the brightest MBA executives to meet with local executives to exchange ideas and forge relationships." The meetings alternate each month between Wright State's Dayton Campus and Edison Community College in Piqua, a more convenient location for businesses in the northern part of the region.

For business leaders, networking with China MBA students and alumni has

been invaluable. Chris Meyer, who is currently director of energy programs for the Dayton Development Coalition, worked with China MBA students when he was with a company that produces high-performance insulation to transport temperature-sensitive products like blood, vaccines, and pharmaceuticals.

Meyer had a contact in China who was helping him look for a new core material. Lai and some of his MBA students and alumni helped Meyer with translation and served as liaisons between him and the supplier. "We were able to create a trade relationship that they helped us with," said Meyer. "The opportunity to make international business contacts benefits the entire community."

Herbert Lee, vice president of Fifth Third Bank in Dayton, has spoken to China MBA classes and has given students tours of Fifth Third's operations center in Cincinnati. "The reality is we are moving towards a global economy," said Lee. "Programs like this educate our future leaders. The diversity of the student body is amazing—from all industries. You don't get that kind of access anywhere else."

Dan Carbaugh, president of Global Sourcing Ltd., provides source components for the automotive and appliance industry. He has visited the China MBA classes to talk about his work representing suppliers around the world. His interaction with the students has led to new contacts in China.

"Networking is one of the beauties of the program," said Carbaugh. "Once you get to know people and how they work, it increases the comfort level of working with people off shore."

A conduit for communication and economic growth

"My personal interest in Chinese language and culture stems from literature and film mainly. With such a long history filled with passion, struggle, and mysticism, I find it difficult not to be awestruck by a culture and language that is rooted in such antiquity," said Casey Holycross, a graduate student in materials engineering. "I feel that studying the Chinese language is a great way to enhance my marketability when I begin the job search. Foreign language is no longer just a conduit for communication, but more importantly economic growth."

Holycross and several other students recently created Club China to enhance the experiences of students from China as well as American students studying Chinese language. Joshua Patterson is interim president of Club China. "We hope to boost cultural understanding between both [Chinese and American] students and promote academic success among the language students. Club China will also act as an advocate for the exchange students and help them integrate into the Wright State way of life for the year they are here. Club China is just getting off the ground and it's really an exciting time to see where we can go."

As for Tyler Hahn, he will return to China this fall and serve as student coordinator for the exchange program at Dalian Jiatong University. "I am looking forward to introducing Wright State students to all of the things I found so exciting and valuable."

"The reality is we are moving towards a global economy. Programs like this educate our future leaders."

—HERBERT LEE, VICE PRESIDENT FIFTH THIRD BANK, DAYTON



Soaring to New Heights

Wright State's micro air vehicle takes off

"THIS WAS MY PASSION. Having a small-size airplane that looks like a fly is a dream," explained George Huang, chair of Wright State's Department of Mechanical and Materials Engineering.

Using nature for inspiration, Huang and his team of researchers have created a micro air vehicle (MAV) modeled after the dragonfly. The MAV has a seven-and-a-half-inch wingspan and weighs 10 grams—the weight of two nickels.

According to Huang, there are many military and non-military advantages of having a plane this size, including rescue missions and spying on enemies in urban areas.

"Terrorists are in buildings, not open fields. You need to go in and see what the enemies are doing, find out where radioactive materials are located. That can only be done with a smaller object that can maneuver like a fly, not an airplane," Huang explained.

To develop the MAV, Huang and his team studied the dragonfly and how it can sense the flow direction, going up or gliding down as needed to conserve energy. While the MAV is currently radio controlled, Huang hopes to develop sensors for the body of the MAV so it can determine flow direction and react accordingly.

"There are different types of engineering working together to get to that stage," said Huang. "It's an interdisciplinary approach covering a broad range of knowledge from electrical engineering to computer science to human factors."

Huang and his students also tapped into the expertise of local companies, including Mound Laser & Photonics Center, Inc., in Miamisburg. According to president and CEO Larry Dosser, his team used laser micromachining to create parts for the MAV and laser welded them together. "MAV work is ideal for us. We took a wing from a fly, scanned it, and converted it for the lasers to replicate," Dosser explained. "The MAV is a classic example of how we can apply our technology to develop something that the Air Force and Department of Defense can use. A lot of this technology has defense or sensing applications, but there are also very similar applications in the medical device fields."

As the design of the MAV continues to evolve, Huang is looking for other partners and funding to support the project. "We see the opportunities to work with the Air Force and local companies to develop a micro air vehicle," said Huang, who cites the Air Force's goals of releasing a palm-sized MAV by 2015 and an insect-sized MAV by 2030.

MICRO AIR VEHICLE

- 7½ inch wingspan
- Weighs 10 grams

For more information, contact:

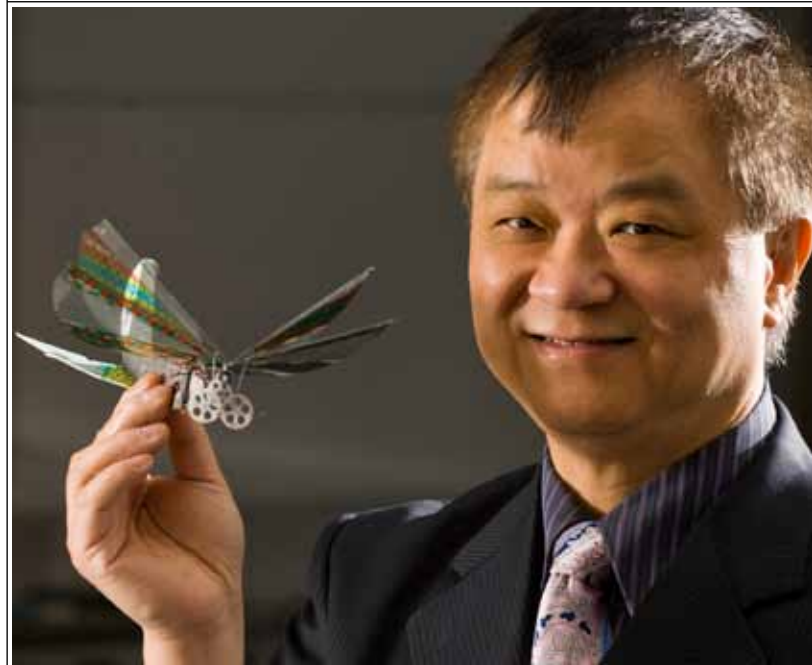
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"Just as the Wright brothers created the first airplane and changed the world, Wright State can be a leader in this new type of aircraft—the micro air vehicle. This cutting-edge technology could change the future of both military and civilian operations, ranging from rescue missions to gathering information. By creating partnerships with Wright-Patterson Air Force Base and local aerospace companies, the Dayton region can once again lead the world in flight," said Bor Jang, dean of Wright State's College of Engineering and Computer Science.

"This is the new industry of the 21st century. The Dayton region can evolve from making cars to creating micro air vehicles that you can hold in your hand," said Dosser. "The collaboration between Wright State and our company will help all of us stay on the leading edge of this technology."

Huang hopes the Dayton region will become the Silicon Valley for micro air vehicles. "Companies will come here and this will become a center for micro air vehicle technology," said Huang.



VISIT www.wright.edu/regionalsummit TO VIEW RELATED VIDEO.

SkillsTrac

Lake Campus program helps workers retain jobs

Workers in advanced manufacturing can gain a competitive edge thanks to the **SkillsTrac Training Consortium**. This partnership links Wright State's Lake Campus, Edison Community College, Sinclair Community College, and Upper Valley Joint Vocational School with industry partners to help workers acquire new skills.

"WE HAD TO ENGAGE BOTH OUR EDUCATIONAL PARTNERS AND THE COMMUNITY to make this happen," said Julie Miller, director of the Business Enterprise Center at Lake Campus. Funded by a grant from the Department of Labor, SkillsTrac trains workers in such areas as electrical safety, automation, and robotics. Twenty-nine companies have more than 200 workers enrolled in the program.

"The SkillsTrac program provides outstanding training to area employees to enhance or develop new skills in this ever-changing economy," said James Sayer, dean of Wright State's Lake Campus. "People need different job skills today than they did five or 10 years ago. The SkillsTrac program gets people ready for today's and tomorrow's economy."

Greg Bruns, a unit manager for Crown Equipment Corporation, has eight employees participating in the SkillsTrac program. "SkillsTrac has opened the doors for Crown

maintenance professionals to further strengthen their technical skills, sanity check their current skills, and build lasting relationships with peers at other organizations. SkillsTrac has provided the tools for the students to navigate out-of-the-box ideas and to prepare for the next step of their careers," he said.

John Jessup is an instructor at the Lake Campus lab. "Any technical training to bring the workforce up to present-day standards is highly beneficial," he said. "Our students are learning some technology that companies don't even have yet. They will be well qualified for a better position and looked upon more favorably than someone who hasn't had this training."

Multiple locations, along with a web-based curriculum, make the SkillsTrac program convenient

for workers. "They can go to any one of the colleges and get the same training," said Miller. The program also attracts older workers, bringing nontraditional students to campus. "Some of these folks have never set foot on a college campus before."

"We're retraining for jobs that we know will be there when the economy turns around."
— JULIE MILLER, DIRECTOR
BUSINESS ENTERPRISE CENTER,
LAKE CAMPUS



Tim Schoen, a maintenance operator for the Mercer County Sanitary Department, enjoys the convenience of the program. "I do the labs online at home at night and then come here to learn newer technology," he said.

"You can fit it into your own schedule at your own pace," said Dustin Dailey from St. Mary's Foundary. "I would recommend it to anyone in the maintenance industry."

"We're trying to match people's skills with the demands of an advanced workforce," explained SkillsTrac instructor Ray Lufkin. After mastering more than 30 labs and five skill levels, students receive a certificate when they complete the program.

Phil Goecke, who was recently laid off, hopes his SkillsTrac training will get him back into the workforce. "It's important to an employer that you have this certification," he said.

"We want to see more displaced workers get involved with this program," said Miller. "We're retraining for jobs that we know will be there when the economy turns around."



DIGGS LABORATORY awarded LEED Gold Certification

The Matthew O. Diggs III Laboratory for Life Science Research is rated LEED NC-Gold by the U.S. Green Building Council. This prestigious award places Wright State University at the forefront of green building design.

"As the Wright brothers are known for innovation, so is Wright State University with our recognition as the first laboratory building within the state of Ohio to receive the LEED Gold Rating," said Vicky Davidson, associate vice president, facilities planning and development. "Starting with the initial concept sessions, the administration saw this as an opportunity to show leadership in design, save natural resources, and offer the students a physical example of sustainability. The benefit of this direction was not only realized during initial construction, but also will provide ongoing cost savings as fewer utilities are needed to operate the facility."

"Wright State University has been using energy-saving design in all their building projects but decided to receive formal recognition for Diggs Laboratory, back in the early planning stages, and become an environmental leader in the community," explained Bev Denlinger, senior project manager, WSU Engineering and Construction.

The LEED (Leadership in Energy and Environmental Design) building rating system is the nationally accepted benchmark for the design, construction, and operation of high-performance green buildings. LEED certification is available in four progressive levels: Certified, Silver, Gold, and Platinum. The Diggs Laboratory received 40 out of a possible 69 points, placing it in the Gold category.

While a research laboratory typically consumes four times more energy than a normal classroom building, the Diggs Laboratory uses 40 percent less energy than the standard laboratory. Some of the green building technologies used in the 48,000-square-foot building are:

- **A REDUCTION IN "HEAT ISLAND EFFECT"** through a white roof and white concrete that absorbs less heat in the summer
- **WATER-EFFICIENT LANDSCAPING** with no irrigation
- **A 40 PERCENT REDUCTION IN WATER USE** from installing waterless urinals and low-flow plumbing fixtures
- **OPTIMIZING ENERGY PERFORMANCE** by installing efficient heating and air conditioning equipment and reclaiming air from laboratory exhaust for energy recovery

- **A CHECK-AND-BALANCE SYSTEM** that thoroughly tests the mechanical and electrical systems for peak performance and adherence to design standards
- **AT LEAST 50 PERCENT OF THE WASTE FROM CONSTRUCTION AND DEMOLITION WAS RECYCLED** or salvaged instead of being sent to landfills
- **AT LEAST 5 PERCENT RECYCLED MATERIALS** and 20 percent local/regional materials were used in construction
- **THE USE OF LOW-EMITTING MATERIALS** and an indoor air-quality management plan, including an "airing-out period" before the building was occupied
- **DESIGNATED PARKING SPACES FOR CAR POOLING** and fuel-efficient vehicles
- **INDOOR CHEMICAL AND POLLUTANT SOURCE CONTROL**
- **THE USE OF GREEN CLEANING METHODS** and recycled paper products

"The Diggs Laboratory will act as a learning tool, and not just because it is a life sciences research building," said Hunting W. Brown, Wright State's director of sustainability. "Students, faculty, and staff from throughout the university, and the community at large, will also be able to see firsthand this building's advanced design. Hopefully, they will take away ideas that will assist them in greening their own homes and businesses."

The Diggs Laboratory houses highly productive research labs for the Environmental and Biomedical Sciences Programs, Molecular Genetics, Biochemistry and Molecular Biology, and Cell Biology.

About the Diggs Family

A GENEROUS GIFT FROM MATTHEW AND NANCY DIGGS helped support construction of the building, named in memory of their son, Matthew O. Diggs III. "Matt was very interested in nature, ecology, and the environment, and the entire Diggs family thought this project would be a fitting way to honor his memory," said Vicky Davidson.

"The Diggs Laboratory is a fitting memorial to a young man who had a passion for life, a concern for conservation, and a love of the natural world," said David R. Hopkins, president of Wright State University. "Much of the vision for this project rests in the mind and heart of Matt's father—one of the most dedicated and effective Board of Trustees members Wright State has ever had. As chair of our Board of Trustees's Building and Grounds Committee, Matt helped us identify needs and craft a plan to create a state-of-the-art, first-class research space for the life sciences. He and his wife, Nancy, a Wright State graduate, helped see this project to fruition. We are deeply honored for the support of the entire Diggs family."



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