



NEWS

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New Transportation Center Established

The University of Akron is the lead institution of the Ohio Transportation Consortium (OTC), a recipient of U.S. Department of Transportation funding as a Tier II university transportation center (UTC).

The consortium consists of eight universities throughout the state of Ohio: Case Western Reserve University, Central State University, Kent State University, Ohio State University, Ohio University, The University of Akron, University of Cincinnati, and the University of Dayton. The OTC mission is to promote

transportation systems research and education by pooling the excellence of knowledge and expertise currently existing in its member universities throughout Ohio.

Each member university brings with it a unique perspective and combination of expertise and resources. Case Western Reserve University (CWRU), located in Cleveland, is comprised of more than 9,000 students and 2,500 faculty members in eight schools and colleges. The Case School of Engineering has a history that can be traced

to the 1880 founding of the Case School of Applied Science which eventually became the Case School of Engineering in 1992. The School is nationally ranked as one of the top engineering schools offering an accredited Bachelor of Science degree along with Master of Science and Doctor of Philosophy degrees in Civil Engineering. Faculty and students in CWRU's Civil Engineering program are actively involved in research projects related to design, analysis, and testing.

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Dr. Ping Yi, OTC Director

With its large roadway network to support a population base of over eleven million, Ohio must play an active role in education and technology innovation for the improvement of our transportation systems.

A Message from the Director

Ohio has the fifth largest interstate roadway system carrying the fifth largest traffic volume in the nation, and has the second largest inventory of bridges which support the fourth largest total number of motor vehicles. The Ohio Transportation Consortium will act as a regional leader in sponsoring innovative transportation research and information exchange.

It will also exist to promote partnerships with public agencies and private entities to involve as many resources as possible in the effort to improve transportation mobility and infrastructure. Our focus is on new and advanced efforts that are cost effective having the potential to significantly advance methods and techniques for field applications.

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Central State University (CSU), located in Wilberforce, established the International Center for Water Resources Management (ICWRM) in 1987 which integrated engineering aspects of water resource management with socioeconomic and environmental dimensions. The ICWRM, the focal point for environmental related studies at CSU, is under the Dean of the College of Business and Industry and works closely with the Manufacturing Engineering and the Department of Natural Sciences, Mathematics and Computer Science programs through research and course offerings. This interdisciplinary program promotes research on a broad range of environmental engineering related issues. CSU is also involved in the Summer Transportation Institute (STI) supported by the Federal Highway Authority (FHWA) and the Ohio Department of Transportation (ODOT) which exposes students in grades nine through eleven to highway design, transportation, intermodalism, laws, regulations, safety, and career opportunities in the transportation industry.

Kent State University (KSU) is located in the city of Kent and has an enrollment of over 33,000 students. The Geology Department at KSU, which offers undergraduate as well as graduate degrees in Geology, provides expertise in the areas of urban and economic development and the natural environment and its resources as well as a minor emphasis in urban studies and planning. Faculty interest and research includes the development of comprehensive transportation plans, research on mitigating traffic congestion and an active Joint Traffic Study.

The Ohio State University (OSU), with an enrollment of almost 60,000 students, offers both undergraduate and graduate degrees in Civil and Environmental Engineering and Geodetic Science at its Columbus campus. The Department

offers three undergraduate programs – civil engineering, environmental engineering (civil engineering with and environmental option), and geomatics engineering as well as minor programs in environmental engineering and surveying and mapping. Specializations at the graduate level include construction, environmental, geotechnical, remote sensing, structural, and transportation areas. OSU also houses The Center for Mapping which was established under a 1986 NASA grant as a Center for the Commercial Development of Space (CCDS). Core competencies of this program are at the intersection of geoinformation science, geomatics and spatial information systems; imaging and image understanding; and experimental engineering development and benchmarking. The Center for Mapping combines all three competency areas and is able to embed that knowledge into its research and development activities. OSU is also an active member of the Region V University Transportation Center led by Purdue University. Established in Athens in 1804, Ohio University (OU) is comprised of over 17,000 students and is the oldest public institution of higher learning in the state of Ohio. In 1987, OU founded The Ohio Research Institute for Transportation and the Environment (ORITE) which promotes research and education in pavement design, construction, and evaluation. ORITE conducts government and industry supported research as well as developing and sponsoring workshops, conferences and other technology transfer efforts. The center was one of the first in the nation to integrate environmental and geotechnical engineering and has conducted nationally recognized research on pipes and culverts for more than a decade.

The University of Akron's (UA) College of Engineering has a history of academic excellence dating back to 1913. The Civil Engineering Department was established in 1914 and currently offers a Bachelor of

Science in Civil Engineering degree as well as a Masters of Science in Civil Engineering and an interdisciplinary Ph.D. degree in engineering. A highlight of the Civil Engineering program is the transportation engineering specialization offered at both the master's and doctorate level. Researchers in UA's transportation engineering, aided by a cutting-edge transportation lab, a highway materials lab, GIS lab, and an urban planning lab, focus on intelligent transportation systems, computer modeling and system analysis. The transportation engineering program at the University of Akron maintains active connections with the local and state transportation agencies and private transportation industry as well as collaborations with local and nationwide universities.

The University of Cincinnati (UC) was founded in 1819 and has an enrollment of over 35,000 students. The Department of Civil and Environmental Engineering (CEE) at UC offers both undergraduate and graduate degree programs. The CEE program at UC is the largest in Ohio employing twenty-six tenure track faculty and typically consisting of over 450 undergraduate and graduate students combined. The Civil Engineering Division includes graduate programs in Infrastructure Design (with focus areas in Geotechnical and Structures and Materials) and Infrastructure Systems (with focus areas in Construction and Transportation). Each focus area offers its own course of study leading to either the M.S. or Ph.D. degree in Civil Engineering. The transportation engineering program is designed to provide state of the art education in Intelligent Transportation Systems with emphasis in Traffic Engineering, Highway Safety, and Engineering Technologies in Transportation. The Transportation Engineering Lab at the University of Cincinnati supports research and educational activities in traffic operation and system analysis.

The University of Dayton

(UD), founded in 1850, offers ABET certified undergraduate and graduate degrees in the Civil and Environmental Engineering and Engineering Mechanics Department. The department strives to offer a comprehensive, practice-oriented program with an emphasis on design. UD's world-class graduate programs support national research efforts and enjoy a strong association with local civil/environmental and construction engineering firms. The Center for

Infrastructure Innovation at UD is the cornerstone of the School of Engineering's plan to enhance infrastructure for innovation. The Center uses long wave infrared technology to enable enhanced vision in dark, foggy or other unfavorable conditions for traffic operations.

The OTC plans to utilize the diversity of its members in all initiatives of research, education, and technology transfer. By pooling this excellence of knowledge and

expertise found in its partner universities and dedicating its resources to the research and development of educational and outreach opportunities, the OTC will pursue its mission of promoting transportation systems research and education in the field of *Transportation Mobility and Infrastructure Management*.

Student Paper Competition

The Ohio Transportation Consortium (OTC) invites students from their partnering universities (Case Western Reserve University, Central State University, Kent State University, Ohio State University, Ohio University, The University of Akron, University of Cincinnati, and the University of Dayton) to join a student paper competition. The competition is to recognize scholarly activities and award distinguished research in transportation engineering in support of the OTC theme of

Transportation Mobility and Infrastructure Management.

The paper chosen will be highlighted in the next issue of OTC NEWS and the student-author will receive a \$400 First Prize award. The selected student must be a U.S. Citizen or have permanent U.S. residency status.

All submitted papers will be reviewed by the OTC research committee and the final selection will be made by the OTC Board of Directors. Please send your papers to:

Ohio Transportation Consortium
The University of Akron
302 Buchtel Common
Akron, Ohio 44325-6106

Or send your papers electronically to:
otc@uakron.edu

Clearly indicate **Student Paper Competition** on your submission. All papers must be submitted by October 31, 2007 and the selection will be made by December 1, 2007.

OTC Board of Directors

Dr. Deogratias Eustace

The University of Dayton

Dr. Dave Kaplan

Kent State University

Dr. Mark McCord

The Ohio State University

Dr. Gayle Mitchell

Ohio University

Dr. Robert Mullen

Case Western Reserve University

Dr. O.M. Salem

University of Cincinnati

Dr. Subramania Sritharan

Central State University

Dr. Ping Yi

The University of Akron

Related Sites

www.CUTC.tamu.edu

www.UTC.dot.gov

www.dot.state.oh.us

www.rita.dot.gov

OTC to Fund Seven Research Projects

The Ohio Transportation Consortium (OTC) received several research proposals and will partially fund seven of those proposed projects. Three of the proposed projects will support activities that encourage student interest and continued education in transportation fields while the remaining four projects attempt to solve local as well as regional transportation problems.



Research by professors at Case Western Reserve University (CWRU), Central State University (CSU), and the University of Dayton (UD) will focus on education initiatives. Dr. Aaron Jennings (CWRU) is creating a Research Internships in Transportation (RIT) program. This program will place CWRU students, along with students from other Ohio universities, into summer research internships in transportation engineering focusing on infrastructure management. This program will increase the number of engineers pursuing advanced degrees in Transportation Engineering and lead to innovative transportation research. Dr. Subramania Sritharan (CSU) will hold a Summer Transportation Institute (STI) centered on increasing interest in transportation fields among high school students. Students will be introduced to careers in transportation, futuristic aspects of transportation including space

travel, basic physics and mathematics associated with transportation, and renewable energy in transportation. They will learn through a combination of field visits, laboratory research and hands-on work. Dr. Deogratias Eustace (UD) will pilot a program this fall that concentrates on problem-based and cooperative learning for transportation engineering students. Junior-level engineering students will actively learn through hands-on data collection, data interpretation and presentation of results. Group work will be incorporated giving students real world experience as engineers.

Professors at Ohio University (OU), the Uni-

versity of Cincinnati (UC), Kent State University (KSU), and The Ohio State University (OSU) are researching ways to improve infrastructure management and transportation mobility. Dr. Shad Sargand of OU's Ohio Research Institute for Transportation and the Environment (ORITE) will be researching the use of cone penetrometers as an alternative means for creating holes for Time Domain Reflectometry (TDR). Dr. Sargand will also compare fiber optic performance to that of traditional TDR cable systems to determine which is more durable and resistant to damage. The benefits of this research will be reduced installation costs and increased durability of TDRs. UC's Dr. Heng Wei will research Dynamic Dilemma Zone (DDZ) issues affecting safety and mobility at signalized intersections in Ohio. Results of this research will help traffic engineers improve signalized intersection design and aid research on new alternatives at coordinated intersections throughout the state as well as provide a basis for future DDZ issues detection systems when applying ITS measures or adaptive signal control systems. Dr. David Kaplan (KSU) will research ways to reduce congestion throughout the city of Kent and KSU while improving mobility both in and around the campus and the city. This study will strive to increase the non-vehicular movement across campus and into downtown Kent through an interactive map and a website that will give insight into the potential for engaging in non-automotive transportation across campus. Dr. Mark McCord (OSU) will research the effectiveness of automatic vehicle location (AVL) data available from the commercial-grade smart systems that have been installed on OSU campus buses. Passenger satisfaction with the transit information system will also be assessed in this study. Data from the system will be incorporated into existing OSU courses, specifically Civil Engineering, and potentially utilized in future research and education programs by Region V UTC partners.

Look for the results of these and other research projects in future issues of OTC News.

OTC Becomes Member of CUTC



The Ohio Transportation Consortium is proud to announce its official membership in the Council of University Transportation Centers (CUTC). With the support of Dr. George Haritos, Dean of the College of Engineering at The University of Akron, the OTC has cemented its place among over 60 other university transportation centers throughout

the United States. Membership in CUTC will give the Ohio Transportation Consortium a forum for the coordination and integration of projects concerning research, education, and technology transfer.



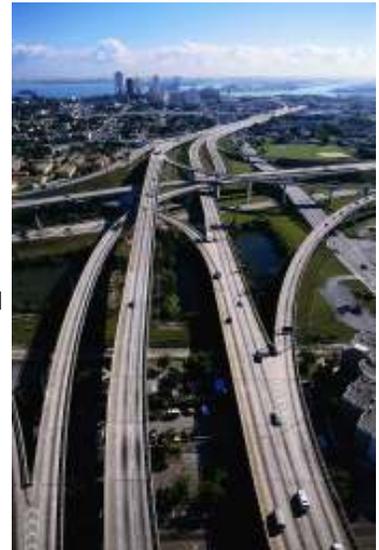
Scholarships

The Institute of Transportation Engineers (ITE) has \$1,000, \$3,000 and \$4,000 scholarships available to graduate students in Transportation Engineering. For details or to apply, visit: <http://www.ite.org/education/scholarships.asp>

The American Society of Civil Engineers (ASCE) has several scholarships and fellowships available to both graduate and undergraduate engineering students. Visit their

website for more information or to apply: http://www.asce.org/inside/stud_scholar.cfm

The National Society of Professional Engineers (NSPE) has scholarships available to graduate and undergraduate students. Applications are available at: <http://www.nspe.org/scholarships/sci-peg.asp>



Calendar of Events

October 2007

**National Rural ITS
Conference**
October 7- October 10
Traverse City, MI

**Ohio Transportation Engineering Conference
(OTEC)**
October 23 – October 24
Columbus, OH

December 2007

**Workshop on Improving
National Transportation
Geospatial Information: Working Together for
Better Decision Making**
December 14, 2007
Washington, DC