Prof. Hamid Rahai loves to bicycle. Bicycling in Southern California, however, is especially challenging for someone highly cognizant of the noxious fumes surrounding him as he rides his bicycle. Rahai has made that challenge his life’s work.

“My affiliation with METRANS is in the area of air pollution assessment and control, development of new methods and technologies for reducing emissions, and improvements of vehicles’ design for increased fuel efficiency,” said Rahai. That is a tall order, but Rahai enjoys it. At the Center for Energy and Environmental Research and Services (CEERS) at CSULB, he directs a wide range of research projects. Rahai’s METRANS research has focused on improving aerodynamics of trucks, reducing diesel emissions, and diffusing diesel particulates in trucks. His environmental interests go far beyond the nuts-and-bolts of pollution generation, however. He is also an expert on renewable energy. In fact, Rahai and CSULB colleague Prof. Hamid Hefazi were recently awarded a patent for a high-efficiency vertical axis wind turbine.

Working With Youth Rahai is very enthusiastic, also, about a new high school summer research fellowship program he developed for advanced high school students. “It is a paid fellowship program,” he explained, “with private sponsors, where we bring advanced high school students from the Long Beach Unified School District to CEERS for five weeks during the summer to work with us on our projects. It has been a rewarding experience, and you will be surprised at the level of ability and talent these students have. “It is an investment in the future,” he feels, “and a huge factor for future development.”

Recognition Rahai has received numerous awards for his research and for his teaching. In 2004, he received the Northrop-Grumman Excellence in Teaching Award. He was previously recognized with CSULB’s 2002-2003 Distinguished Faculty Scholarly and Creative Activities Award.

Education Rahai received his doctorate from the University of California, Irvine, in Mechanical Engineering. “My passion has always been in education and research and development,” he said. “I am an avid reader. I enjoy spending time reading about people, society, and technology and their contributions, although with family and two kids and many other responsibilities, my reading time has shrunk considerably.” If not bicycling, reading or doing research, Rahai can be found enjoying sports and music.
2ND NATIONAL URBAN FREIGHT CONFERENCE ATTRACTS TRANSPORTATION SCHOLARS

Nearly 200 transportation academics and practitioners shared research findings at METRANS’ Second National Urban Freight Conference (NUF) from December 5-7 in Long Beach, California. The unique, cross-disciplinary research conference attracted professionals and researchers from across the country and from abroad.

Contributions to the Field
According to Genevieve Giuliano, METRANS Director, “It is a unique forum for sharing research on urban transportation problems and solutions related to the growth of freight activity. In addition, it fosters research and ultimately publications that will be circulated within both academic and professional communities. “In fact,” she continued, “there were many really good papers and presentations.”

Practitioners, Policy Makers, and Researchers
In keynote addresses, breakout research sessions, and networking events, researchers shared information freely with their colleagues from the world of urban goods movement.

Keynote speaker Dan Gardner, President of Trade Facilitators, Inc., addressed NUF audience at keynote address.

NEWLY RELEASED METRANS REPORTS
The following research reports are now available on the METRANS website, www.metrans.org, in the research section.

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<th>Report</th>
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<td>Ports and Highways Infrastructure Investment and Inter-state Spatial Spillovers</td>
<td>Kristen Monaco, CSULB</td>
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<td>05-06</td>
<td>Assessing Container Terminal Productivity, Experiences of the Ports of Los Angeles and Long Beach</td>
<td>Hanh Dam Le-Griffin, USC</td>
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<td>AR06-01</td>
<td>Evaluating and Improving the Security of RFID Tags in Shipping Containers</td>
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<td>06-02</td>
<td>Incentivizing Truck Retrofitting in Port Drayage: A Study of Drivers at the Ports of Los Angeles and Long Beach</td>
<td>Kristen Monaco</td>
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<td>06-03</td>
<td>On the Formulation and Solution of an Emergency Routing Problem</td>
<td>Darin Goldstein</td>
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<td>06-07</td>
<td>Evaluating the Efficiency of Traffic Mitigation Fees at the San Pedro Bay Ports in a Congestion-Pricing Framework</td>
<td>Seiji S.C. Steimetz</td>
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<td>06-11</td>
<td>Better Delivery/Pick-up Routes in the Presence of Uncertainty</td>
<td>Fernando Ordoñez and Maged Dessouky</td>
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New grants were awarded to 15 METRANS researchers for the 2007-08 year. Their total value is the second highest in METRANS history, according to Genevieve Giuliano, METRANS Director. “We awarded $1.08 million,” she noted, “and are happy to include many new researchers. I anticipate a great year.” The grants span the range of METRANS’ research priorities in transportation, as follows:

- Goods movement and international trade—6 grants;
- Safety, security, and vulnerability—4 grants;
- Mobility of urban populations—4 grants;
- Infrastructure—1 grant.

The full listing of new projects is below. Detailed project descriptions can be found at www.metrans.org. The 2008-09 Request for Proposals was issued February 25, and new projects will be awarded by Fall 2008.

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<td>Combustion and Emission Characteristics of Biofuels Used for Transportation</td>
<td>Co-Principal Investigators: Fokion Egolfopoulos and Theodore Tsotsis, USC</td>
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<td>08-02</td>
<td>Low-Cost Object Detection RF CMOS Sensor Development for Active Safety Systems</td>
<td>Principal Investigator: Hossein Hashemi, USC</td>
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<td>08-03</td>
<td>(Im)Mobility and Health Disparities: Assessing the Accessibility of Nutrition and Physical Activity Options in an Urban Neighborhood</td>
<td>Co-Principal Investigators: David Sloane and Lavona Lewis, USC</td>
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<td>08-04</td>
<td>Integrated Modeling and Simulation Framework for Freight Transportation in Metropolitan Areas</td>
<td>Co-Principal Investigators: Viktor Prasanna and Amol Bakshi, USC</td>
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<td>08-06</td>
<td>Regulation and Response in the San Pedro Bay Ports</td>
<td>Principal Investigator: Genevieve Giuliano, USC</td>
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<td>08-07</td>
<td>Revisiting the Empirical Foundations for Measuring the Capitalization of Access to Transit</td>
<td>Principal Investigator: Christian Redfearn, USC</td>
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<td>08-08</td>
<td>Efficient Wireless Communication in Vehicular Environments</td>
<td>Principal Investigator: Bhaskar Krishnamachari, USC</td>
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<td>08-10</td>
<td>Estimating Behavioral Changes for Transportation Modes after Terrorist Attacks in London, Madrid and Tokyo</td>
<td>Co-Principal Investigators: Detlof von Winterfeldt, Garrett Assay, and Bumsoo Lee, USC</td>
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<td>08-11</td>
<td>XML Based Supply Chain Integration at the LA/LB Ports</td>
<td>Principal Investigator: Burkhard Englert, CSULB</td>
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<td>08-12</td>
<td>Efficient Routing for Safety Applications in Vehicular Networks</td>
<td>Principal Investigator: Konstantinos Psounis, USC</td>
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<tr>
<td>08-13</td>
<td>Emergency Traffic Management Tool for the Los Angeles and Long Beach Harbor Area</td>
<td>Co-Principal Investigators: Darin Goldstein, CSULB, and Hanh Dam Le-Griffin, USC</td>
</tr>
<tr>
<td>08-17</td>
<td>Labor Markets in Goods Movement Occupations in Southern California</td>
<td>Principal Investigator: Kristen Monaco, CSULB</td>
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<tr>
<td>08-19</td>
<td>Identification and Evaluation of Major Issues Involving the Impact of Global Climate Change on Transportation Systems</td>
<td>Co-Principal Investigators: Sami Masri and Roger Ghanem, USC</td>
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<td>08-22</td>
<td>Development of a Portable Remote Sensing System for Measurement of Diesel Emissions from Passing Diesel Trucks</td>
<td>Co-Principal Investigators: Hamid Rahai and Bei Lu, CSULB</td>
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<td>08-23</td>
<td>Safety Concerns Associated with Drug-Using Drivers with Suspended or Revoked Driving Licenses</td>
<td>Principal Investigator: Grace Reynolds, CSULB</td>
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METRANS Education

USC’s James Moore Awarded Three Honors by Professional Groups

Prof. James Moore has recently been recognized by three different groups of his colleagues. First, he was elected vice-president and president-elect of the Transportation and Logistics Society, an arm of the Institute for Operations Research and Management Science (INFORMS). Second, he was named Pioneer Educator by the Orange County Engineering Council. Finally, he won the 2008 Distinguished Engineering Educator award from the Los Angeles Council of Engineers and Scientists (LACES).

TSL Vice-Presidency Capping a very long association with INFORMS, Moore assumes the vice-presidency of the Transportation and Logistics Society (TSL) just as it experiences a growth spurt. Among its members are more than 1,600 professionals worldwide. Moore notes that the number of its research sessions in urban transportation modeling has increased dramatically in recent years.

He joined INFORMS, the predecessor organization of the Operations Research Society of America (ORSA), while still a graduate student in 1983. The organization, which has survived multiple mergers and name changes, played an important role in his professional development. “This group introduced me to the fundamental urban transportation problems that oriented me toward the field as a graduate student and which still hold my attention,” he reminisced. “They are a good community of scholars and generous friends.”

Moore enjoys introducing his own students to such valuable professional networks. He credits his mentor Mark Daskin at Northwestern for pushing him to join ORSA over 20 years ago.

Pioneer Educator In commenting about being named “Pioneer Educator,” Moore credits the Department of Industrial and Systems Engineering (ISE), which he chairs, for setting records in enrollment over USC’s Distance Education Network. “We have twice as many students as we had in 2003, and three times as many as in 1999,” he said. Moore believes the award represents the Council’s reminder “that engineering professionals and academics should collaborate actively for the benefit of the engineering profession and the students who will ultimately matriculate and then become professional engineers.”

Distinguished Engineering Educator “I would never have expected to win two engineering educator awards at once,” says Moore. On Feb. 22, LACES saluted Moore. He was nominated for both groups’ engineering awards by his ISE Department colleagues.

METRANS’ Venieris Honored for Diversity Leadership

METRANS Deputy Director Marianne Venieris was recently awarded the 2008 Diversity Leadership Award in transportation by WTS-Los Angeles (formerly Women’s Transportation Seminar).

A reflective Venieris recounted the long journey that led her to her present position. An immigrant from Germany, Venieris recalled a childhood of hard times and hard work. She worked in construction engineering in Germany and, as a woman, has been in the minority of her profession ever since.

In addition to her METRANS role, Venieris is Director of the Center for International Trade & Transportation at CSULB, developing and marketing goods movement courses worldwide.

According to the nomination, “Marianne has helped ensure the transportation and trade industries translate their success into educational, employment, and advancement opportunities for any and all who are prepared to invest time and attention in their own success.”

Venieris’ professional efforts extend far beyond the university, helping create opportunities throughout the state and the nation for those involved in transportation.
METRANS Education

METRANS Student of Year Studies Transportation Economics

Sean Fergus was recently honored as 2007 METRANS Outstanding Student of the Year. A Masters student at CSULB, Fergus has noted first-hand how real estate and transportation are tightly linked. He grew up in Orange County, California, and Fergus sees an “extreme need for transportation economics, especially in Southern California, with all the transportation problems now.”

TRB As the METRANS honoree, Fergus was a participant at the annual conference of the Transportation Research Board (TRB) in Washington, D.C., in mid-January. “Just the trip to Washington, D.C., was amazing,” he said. “The awards ceremony was a big honor to attend. The actual TRB conference was so impressive! You realize how important it is to society and how it affects so many people.”

Since his graduation from UC-San Diego in 2000, Fergus has worked in real estate and finance locally. Among his responsibilities were determining maximum bonding capacity of land development projects, how to apportion taxes and assessments for a Community Facilities District, and evaluating development impact fees—including transportation impacts.

Research Experience Today Fergus is a CSULB research assistant in Transportation Economics. Under the direction of Prof. Seiji Steimetz, Fergus helped implement a METRANS-funded study to assess the efficiency of traffic mitigation

(Continued on page 6)

USC Student’s Team Wins Mock Transportation RFP Competition

USC planning student Robert Zappia and his team of transportation students were named winners of a recent “Mock Request for Proposals” competition. The competition was sponsored by the California Transportation Foundation (CTF) which promotes and recognizes excellence in transportation.

“We were actually told to create a set of pre-qualifications,” said Zappia. “We had to interview several key stakeholders and develop ‘pre-quals’ based on what we found would interest them most. At the end, we had to present our ‘pre-quals’ to the stakeholders and defend why we would be the best team suited for the project.”

The competition is held annually as part of CTF’s Transportation Education Symposium, which invites 35 university students to meet a similar-sized group of practitioners.

Zappia’s team consisted of five civil engineers and himself—the only Urban Planning major. Zappia noted, “Being an Urban Planning major, I have developed some solid presentation skills and was able to exhibit these in our presentation. USC has done a great job fostering my speaking abilities and allowing me to grow in that fundamental skill,” noted a proud Zappia.

Robert Zappia, Class of 2008

TRANSPORTATION STUDENTS SALUTED IN NUMEROUS AWARDS

Outstanding transportation students in METRANS-affiliated programs have been recognized recently by scholarships and awards from numerous off-campus, professional organizations.

Eno Transportation Foundation Edwin Quinonez, USC Master of Civil Engineering student, was selected by the Board of Regents of the Eno Transportation Foundation to participate in the 2008 Eno Leadership Development Conference in Washington, D.C., May 19-22, 2008.

WTS Scholarships Graduate students Jela Ellefson and Alison Linder, both pursuing doctorates in Urban Planning at USC, received WTS scholarships. Melissa Hughes, a CSULB M.A. student in Global Logistics, and two CSULB undergraduates, Krista Katayama and Kelly Pilarski, both

(Continued on page 6)
is only recently realizing it is forcing more imported goods into few urban hubs or “network nodes,” whose 1950’s-era infrastructure was not designed for this tremendous load. She challenged the group to re-think research on urban land use, transportation system management, congestion pricing, etc.

Research Sessions  Twenty-two concurrent research sessions covered a wide range of original research in urban goods movement. In a final “mobile session,” attendees toured the Target Logistics Services distribution center and a Customs Examination Station at Price-Transfer Inc.

Getting the Word Out  Many NUF research papers and presentations are available at the METRANS website. In addition, the Journal of Commerce recently carried two stories about NUF presentations, an evaluation of PierPass at the local ports and a commentary by Mortimer Downey III, former Deputy Secretary of Transportation, about future federal transportation funding.

Acknowledgements  Giuliano noted that the conference required the diligent work of many people involved with METRANS. She thanked the numerous program chairs and other research colleagues who reviewed the papers prior to acceptance in the program. “We really appreciate our sponsors, as well,” noted Giuliano. They include conference sponsoring partners Caltrans and the U.S. Department of Transportation, as well as the Federal Highway Administration, and the American Association of State Highway and Transportation Officials.

Giuliano also saluted METRANS staff for their many contributions, including Deputy Director Marianne Venieris, Applied Research Coordinator Tom O’Brien, Administrator Vicki Valentine, and Conference Coordinator Alix Traver.

**Save the Date**

3rd National Urban Freight Conference

Fall 2009

Watch for details at www.metrans.org

### METRANS STUDENT OF THE YEAR, cont.

フェーズ近郊のサンペドロ湾ポートで行われました。

In a recent METRANS project with Prof. Wade Martin, Fergus focused on greenhouse gas emissions and transportation sector impacts using a computable general equilibrium model of Southern California. Finally, he has also worked with a CSULB Economics faculty team—Profs. Joseph Magaddino, Kristen Monaco, and Lisa Grobar—ascertaining the economic impact of international trade and transportation related to the Port of Long Beach.

**The Future**  With barely weeks to go until graduation, Fergus is focusing his sights on either doctoral studies or finding a job with an economics consulting firm. His research experience will no doubt be helpful.

His roots are firmly set in Southern California, being the grandson of Carl’s Jr. restaurant founder Carl Karcher and the eldest of a family of six children. It is not surprising, then, that he would like to get a Ph.D. from either UCLA or his alma mater, UCSD.

“It really is a dream!” he said, “I can get my Ph.D. It would be a dream!”

**STUDENT HONORS, cont.**

(Continued from page 5)

Engineering students, also were awarded WTS scholarships.

**Port of Long Beach**  Four CSULB students were honored with Port of Long Beach scholarships. They are Hui (Lisa) Liu, Paul Merritt, and Cara Royds, all students in the M.A. in Global Logistics program, and Andrea Bigi, who is enrolled in the Global Logistics Specialist program.

**Institute of Industrial Engineers (IIE)**  Luca Quadrifoglio, USC Ph.D. graduate in Industrial and Systems Engineering, received the IIE Pritsker Doctoral Dissertation Award. Quadrifoglio has recently been appointed Assistant Professor at Texas A&M University.

“We are very proud of all of these students,” said METRANS Director Genevieve Giuliano, “and we enjoy working with them.”
METRANS Executive Committee

Genevieve Giuliano, Director
Associate Dean, Research and Technology, School of Policy, Planning & Development, USC

Marianne Venieris, Deputy Director
Executive Director, Center for International Trade & Transportation, CSULB

Petros Ioannou, Associate Director
Professor, Electrical Engineering Systems, USC

Mahyar Amouzegar, Associate Dean for Research & Development, College of Engineering, CSULB

Anastasios G. Chassiakos, Executive Director of Assessment, College of Engineering, CSULB

Maged Dessouky, Professor, Daniel J. Epstein Department of Industrial & Systems Design, USC

Joseph Magaddino, Chairman, Dept. of Economics, CSULB

James E. Moore II, Chairman, Industrial & Systems Engineering; Professor, Civil Engineering and Public Policy & Management, USC

Vicki Valentine, Administrator, USC (victoria.valentine@usc.edu)
Alix Traver, Coordinator, CSULB (atraver@uces.csulb.edu)
Thomas O’Brien, Ph.D., Assoc. Dir., METRANS CSULB Programs (tobrien@csulb.edu)
M.E. Barton, Ph.D., METRANS News Editor (mebarton@aol.com)

METRANS Faculty

METRANS has funded 75 faculty at USC and CSULB who are now members of the METRANS Center. Given METRANS’ interdisciplinary theme, they are experts in engineering, business, economics, geography, information sciences, public policy, planning, public administration and health sciences.

California State University, Long Beach:
Anastasios Chassiakos  Electrical Engineering
Robert Chi  Information Systems
Burkhard Engler  Computer Eng. & Computer Science
Mohammed Forouzesh  Health Sciences
Robert Friis  Health Sciences
Darin Goldstein  Computer Engineering
Lisa Grobar  Economics
Karl H. Grote  Mechanical, Aerospace Engineering
Ken James  Electrical Engineering
Christine Jocoy  Geography
Tim Jordanides  Electrical Engineering
Melody Kiang  Information Systems
Shui Lam  Computer Engineering
Christopher Lee  Geography
Bei Lu  Mechanical & Aerospace Engineer’g
Tracy Bradley Maples  Computer Engineering & Science
Joseph Magaddino  Economics
Kristen Monaco  Economics
Tom O’Brien  Ctr for Int’l Trade & Transportation
Emily Parentela  Civil Engineering
Hamid Rahai  Mechanical Engineering
Grace Reynolds  Health Care Administration
Tariq Shehab  Civil Engineering
Seiji Steimetz  Economics
Reza Toossi  Mechanical & Aerospace Eng
Jalal Torabzadeh  Mechanical Engineering
Suzanne Wechsler  Geography
Henry Yeh  Electrical Engineering
Hsien-Yang Yeh  Mechanical & Aerospace Engineering

University of Southern California:
Garrett Assey  CREATE
Tridib Banerjee  Policy, Planning & Development
Satish Bukkapatnam  Industrial & Systems Engineering
Maged Dessouky  Industrial & Systems Engineering
Fokion Egolfopoulos  Aerospace & Mech. Engineering
Roger Ghanem  Aerospace & Mech Engineering

Genevieve Giuliano  Policy, Planning & Development
Martin Gunderson  Physics & Astronomy
Peter Gordon  Policy, Planning & Development
Randolph Hall  Industrial & Systems Engineering
Hossein Hashemi  Electrical Engineering
John Heideman  Information Sciences Institute
Petros Ioannou  Electrical Engineering Systems
Claire Irázabal  Policy, Planning & Development
Erik Johnson  Civil Engineering
Behrokh Khoshnevis  Industrial & Systems Engineering
Ilias Kosmatopoulos  Electrical Engineering Systems
Bhaskar Krishnamachari  Elect Eng’g & Computer Science
John Kuprenas  Civil Engineering
Bumsoo Lee  CREATE
Hanh Dam Le-Griffin  Civil Engineering
Lavona Lewis  Health Services Administration
Sami Masri  Civil Engineering
Naj Meshkati  ISE, CE and PPD
James E. Moore II  Industrial & Systems Engineering
Dowell Myers  Industrial & Systems Engineering
Fernando Ordonez  Industrial & Systems Engineering
Kurt Palmer  Industrial & Systems Engineering
Alice Parker  Electrical Engineering Systems
Konstantinos Psounis  Elect Eng’g & Computer Science
Viktor Prasanna  Industrial & Systems Engineering
Christian Redfearn  Policy, Planning & Development
Harry Richardson  Policy, Planning & Development
Paul Ronney  Mechanical Engineering
Jefferey Sellers  Political Science
David Sloane  Policy, Planning & Development
Maria I. Todorovska  Civil Engineering
Mihailo D. Trifunac  Civil Engineering
Theodore Tsotsis  Chem. Eng’g & Materials Science
Niraj Verma  Policy, Planning & Development
Detlof van Winterfeldt  CREATE
Chris Williamson  Geography
Hung Leung Wong  Civil Engineering
Maria Yang  Industrial & Systems Engineering

METRANS Staff

METRANS Website

Information on transportation research, publications, education, training & technology transfer can be found at the METRANS website: www.METRANS.org. The site also lists faculty, news, links to other relevant sites, and information on USC & CSULB transportation education programs.
Dear Reader:

Welcome to our Spring 2008 Newsletter. This year is shaping up to be the year of awards. As you will see in this issue, our faculty, students and staff have won a variety of awards and scholarships. More awards will be announced in the next issue. The awards list we distributed at our recent METRANS Advisory Board meeting was two full pages long. I am pleased to repeat something I’ve said in these letters before: the quality of our research, education and outreach activities is the direct result of the excellence of our METRANS leadership and faculty, and of our students at USC and CSULB.

In this issue you will also read about our second National Urban Freight Conference. The conference attracted participants from throughout the US, and they represented many different fields. Participants included faculty and students as well as industry and government professionals. We are on track in developing “NUF” as our signature academic event and in becoming the focal point for urban freight research in the US. A successful conference requires a great deal of effort, and I am grateful to our excellent faculty and staff who made it happen. A special note of appreciation goes to our many sponsors.

Genevieve Giuliano
Director, METRANS Transportation Center