

A blurred high-speed train in motion, with a person visible through the window. The train is moving from left to right, creating a sense of speed and motion. The background is dark, and the train's lights are blurred into streaks of yellow and white.

Georgia Transportation Institute
University Transportation Center

Volume IV, Issue I | Spring 2011

GTI
UTC

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Transportation and Public Health

Statement from Dr. Michael Meyer, director of GTI/UTC



Dr. Michael Meyer

Since the early 1960s, when the federal government became actively involved in transportation planning, it has been a basic tenet of the planning process that transportation affects, and is affected by, a wide range of factors. Thus, over time,

transportation planning has become strongly connected to environmental quality, economic development, community quality of life, safety, and economic productivity. Transportation professionals have accepted for many decades that transportation enables other activities to occur and that the use of the transportation system often results in negative consequences to the environment and to communities. In recent years, another issue has become increasingly important to public officials and decision makers: the relationship between transportation and public health.

To some extent, this emerging public policy issue is not new. The environmental laws of the 1960s and 1970s focused attention on the possible impacts that transportation might have on communities and people. Particular attention has been given to air pollutants and noise levels, with the environmental standards and thresholds for both based on the impact on people's health. However, these considerations occurred within a much broader context of "environmental impacts" with analyses diffused across a wide range of different factors and issues. In recent years, other health-related issues have come to the fore, going much beyond those considered in the environmental studies of the 1960s and 1970s. Transporta-

tion's impact on obesity, asthma, mental health, and psychological well-being are receiving increasing attention from the research community. This newsletter shows examples of how the transportation researchers and health experts are working together to develop approaches for considering health impacts in the context of transportation decision making.

One way of doing this is in the form of a health impact analysis (HIA). Similar in concept to the more general environmental impact analysis, this approach focuses on the range of health-related impacts that can be linked to transportation investments. The intent is to provide additional information to decision makers on the health consequences of actions that are being considered, not unlike all the other environmental analyses that have been around for decades. However, the targeted focus of HIAs is somewhat unique in the history of transportation planning, and as such bears continuing attention from the research community.

The relationship between public health and transportation reminds us of the important role that transportation plays in the world we live in. Without a functional and sustainable transportation system, society as we know it cannot prosper. In addition, this same relationship reminds us of the critically important role that university research can play in not only identifying issues that are critical to the nation, but also by providing the substance that needs to be associated with addressing these issues. The GTI/UTC continues to provide both—focusing on those issues that are critical to the future of the nation, while at the same time providing the substance that is necessary for the transportation profession (as well as other professions) to analyze, assess, and recommend how such issues can be addressed.

Susan Summers Named Administrative Manager



Susan Summers has joined the GTI/UTC staff as administrative manager. Her job is to support the many activities going on in the Center.

Summers grew up a Navy brat, but her parents retired to Orlando, Florida, which became her home. She attended Valencia Community College and began working at Sun Bank. When Sun Bank merged with Trust Company Bank, she relocated to Atlanta and joined the new entity, SunTrust Banks. Most recently, she worked for BearingPoint, Inc. Summers describes her new job as “being helpful,” and says she is still learning what is in store for her as her position develops.

Now living in Scottsdale, Summers is accomplished at needle work. She picked up knitting in the past two years through the Atlanta Knitting Guild. The Guild produces baby blankets and “trauma” bears for needy children. She is also a volunteer at the Cathedral of Christ the King, where she has helped provide administrative support for the priests and has been involved with the weekly bulletin and the Pastoral Care Office.

Student Guest Editor: Arthi Rao



Arthi Rao is a research assistant at the Center for Quality Growth and Regional Development. She is a doctoral student in city and regional planning at Georgia Tech, focusing on the linkages between public health and contemporary planning practice. Her primary research interest is sustainable urban planning for healthy cities.

Prior to attending Georgia Tech, Rao was a visiting assistant professor/lecturer in the Department of Landscape Architecture at Clemson University, where she taught core courses in the undergraduate and graduate curriculum, including design studio and graphic communication. Her previous research and project work have focused on health-based topics (hospital design, therapeutic landscapes), and multiculturalism and its manifestation in the built environment. She has also practiced as an architect in Bangalore, India. Rao has a Master’s degree in Landscape Architecture from Pennsylvania State University and a Bachelor’s degree in Architecture from India.



Introduction to Health Impact Assessments

A Health Impact Assessment (HIA) begins with the broad definition of “health” from the World Health Organization: “a state of complete physical, social, and mental well being, and not merely the absence of disease or infirmity.” An HIA is “a combination of procedures, methods, and tools by which a policy, program, or project may be judged as to its potential effects on the health of a population and the distribution of those effects within the population.” Four values are integral to the HIA: democracy, equity, sustainable development, and the ethical use of evidence that emphasizes a rigorous structured analysis based on scientific disciplines and methodologies.

HIAs explicitly consider social and environmental justice issues, adopt a multidisciplinary and participatory process, and use both qualitative and quantitative evidence as well as transparency in the process. An HIA is intended to make health considerations part of the decision-making process. Furthermore, HIAs seek to link these impacts to particularly vulnerable segments of the population (for example, children, older adults, people living in poverty, or residents of a particular neighborhood). The final product of an HIA is a set of evidence-based recommendations intended to inform decision-makers and the general public about the health-related issues associated with the project. The recommendations provide practical solutions that seek to magnify positive health outcomes and minimize negative impacts.

A comprehensive HIA is an extremely thorough process which may take several years and involve extensive data collection and analysis,

as well as community participation, while a rapid HIA can be completed in days or weeks, uses readily available data and research, and has little community involvement. Some HIAs use a descriptive format and qualitative methodology, while others may employ quantitative modeling. While there are several different methodologies for conducting an HIA, they all share several critical steps. The steps include:

- **Screening**, which determines whether or not there exists the potential for significant and unknown health impacts as the result of a policy, program, or project
- **Scoping**, which establishes the study area boundaries, identifies possible consequences, and determines a management approach for the HIA
- **Appraising**, which considers the nature and magnitude of health impacts and the affected population
- **Recommending detailed steps** to mitigate or improve health impacts
- **Disseminating**, which circulates the results of the HIA to decision-makers, individuals implementing the plan/policy, and community stakeholders
- **Monitoring and Evaluating** to review the effectiveness of the HIA process and evaluate the actual health outcomes as a result of the project or policy.



Center for Quality Growth and Regional Development

Ongoing Projects

Health Impact Assessments of the Aerotropolis Atlanta Brownfield Redevelopment Project

The Center for Quality Growth and Regional Development (CQGRD) is conducting an HIA on redevelopment plans for the site of the former Hapeville Ford Assembly Plant in Hapeville, Georgia. The assembly plant is to be redeveloped as “Aerotropolis Atlanta,” with more than 6.5 million square feet of office, hotel, shopping, and airport parking facilities, as well as a solar energy component. The 122-acre site is bounded by I-75, Hartsfield-Jackson Atlanta International Airport, the new residential development of Asbury Park, and downtown Hapeville. The site was deemed a brownfield, and has undergone remediation for potential contaminants.

CQGRD has identified potential health impacts due to the redevelopment project. The project team seeks to work with Jacoby Development, community members, and local authorities to consider the project’s range of potential benefits and impacts on surrounding communities and to offer a series of practical measures to

maximize health benefits, potentially positioning the Aerotropolis as a catalyst for healthy, sustainable living.

Our objective is to conduct a comprehensive HIA on the brownfield remediation and redevelopment procedures with extensive stakeholder participation and technical assistance. The HIA will ensure the explicit consideration of the human health impacts of the proposed redevelopment project so that health costs are evenly distributed, and all health promoting impacts are considered. This will increase the capacity for HIA practice through activities with community and research partners, and develop a prototypical approach for measuring and improving outcomes when brownfield sites resulting from the abandonment of large-scale industrial sites are redeveloped and reused. Additionally, the team will conduct training and technical assistance for project partners. This project is being co-funded by UTC.

BeltLine Decision Support Tool

The BeltLine is Atlanta’s most ambitious redevelopment project, impacting approximately seven percent of the city’s land and encompassing thousands of new homes, businesses, public facilities, new parks and trails, transit service, and new or redesigned streets and sidewalks. The enabling legislation for the BeltLine requires these changes to be evaluated through a decision support tool (DST). The DST will measure the impact of Atlanta BeltLine, Inc. and ensure accountability for effective and equitable implementation of the BeltLine. Further, it will build upon and coordinate with existing or ongoing

work regarding environmental impacts, community benefits, planning activities conducted through BeltLine planning units and study groups, and other components of the community engagement and planning process. The tool will organize relevant information, spatially resolve actions of the plan, predict impacts, inform decision making, and generate performance measures and other metrics. Through a competitive process conducted by the BeltLine Tax Allocation District Advisory Committee (TADAC), a CQGRD-led team has been selected to design and implement the DST.

Health Impact Assessment of the Atlanta Regional Plan 2040

CQGRD is conducting a comprehensive HIA on PLAN 2040, the long-term regional comprehensive plan being prepared by the Atlanta Regional Commission (ARC), Atlanta's regional planning and intergovernmental coordination agency. PLAN 2040 will integrate multiple aspects of regional planning, including transportation and land use, housing, green space, water, and air quality through the year 2040. Among the questions being asked are: Will it promote safe, livable, affordable communities with a stable economic base? Will it allow metro Atlanta residents to

choose healthy, active lifestyles? How will it affect everyday activities such as going to work, school, or the store? With the support of the Pew Charitable Trusts, CQGRD will investigate these questions and many others and suggest ways to make PLAN 2040, and subsequently other regional planning efforts, more health-oriented. Through the HIA process, CQGRD seeks to present sustainability, economic benefit, and health as mutually-supportive, attainable goals of transportation and land use planning. A final report is expected in September 2011.

Estimating Safety Benefits of Context Sensitive Design (CSD)

The Federal Highway Administration (FHWA) references Context Sensitive Solutions (CSS) as "a collaborative, interdisciplinary approach that involves all stakeholders to develop a transportation facility that fits its physical setting and preserves scenic, aesthetic, historic and environmental resources, while maintaining safety and mobility" (FHWA, Context Sensitive Solutions, Flexibility in Highway Design, Thinking Beyond the Pavement). CSS has emerged as a strategy for expanding and incorporating community preferences and environmental considerations into project development and design. Simultaneously, increased attention is focusing on the need to make safety considerations a key component in the transportation planning and engineering process. These concepts continue as high priorities and are increasingly adopted by transportation planning agencies. A primary challenge is to better understand and evaluate the extent to which these two approaches may be mutually beneficial in project development.

The key objective of this project is to undertake a comprehensive evaluation of CSD projects and to evaluate safety within this context. Case studies will be used to evaluate the cost/benefit of such projects nationally (with some limited scan of international applications). The case

studies will be used to guide the implementation of context-sensitive design solutions for select Georgia Department of Transportation (GDOT) projects. These projects will be examined using CSD to identify impacts, costs, and benefits. It is expected that this project will help guide GDOT in the planning, evaluation, and implementation of CSD strategies. Additionally, it will provide guidance in future referencing of the assessment of the relationship between CSD and project delivery, time-frames and outcomes.

The project will include an assessment of public involvement strategies typically associated with CSD activities and projects. Stakeholder engagement is a major input in context-sensitive design. The research effort will provide a comprehensive examination of the costs and benefits of CSD, in relation to safety issues, and the feasibility of applying this strategy to selected GDOT projects. This capability will contribute significantly to GDOT's Strategic Goal Number One, which is to "Provide Superior Customer Service."

The results of the project will increase GDOT's responsiveness to customer concerns thereby improving customer service. This project is being co-funded by UTC.



City of Decatur, Georgia Community Transportation Plan and Rapid HIA (2007)

An active, living community is necessary to create opportunities for people of all ages and abilities to engage in routine daily physical activity. It includes safe, healthy transportation choices for everyone; and equitable access to businesses, homes, and neighborhoods. Residents of active living communities get more physical activity, reducing their risk of chronic disease and obesity. Communities that support active living offer co-benefits as well: increased traffic safety, stronger sense of community, reduced emissions, and a better business environment. But how do we design an active living community? The City of Decatur, Georgia, asked this question in its Community Transportation Plan (CTP).

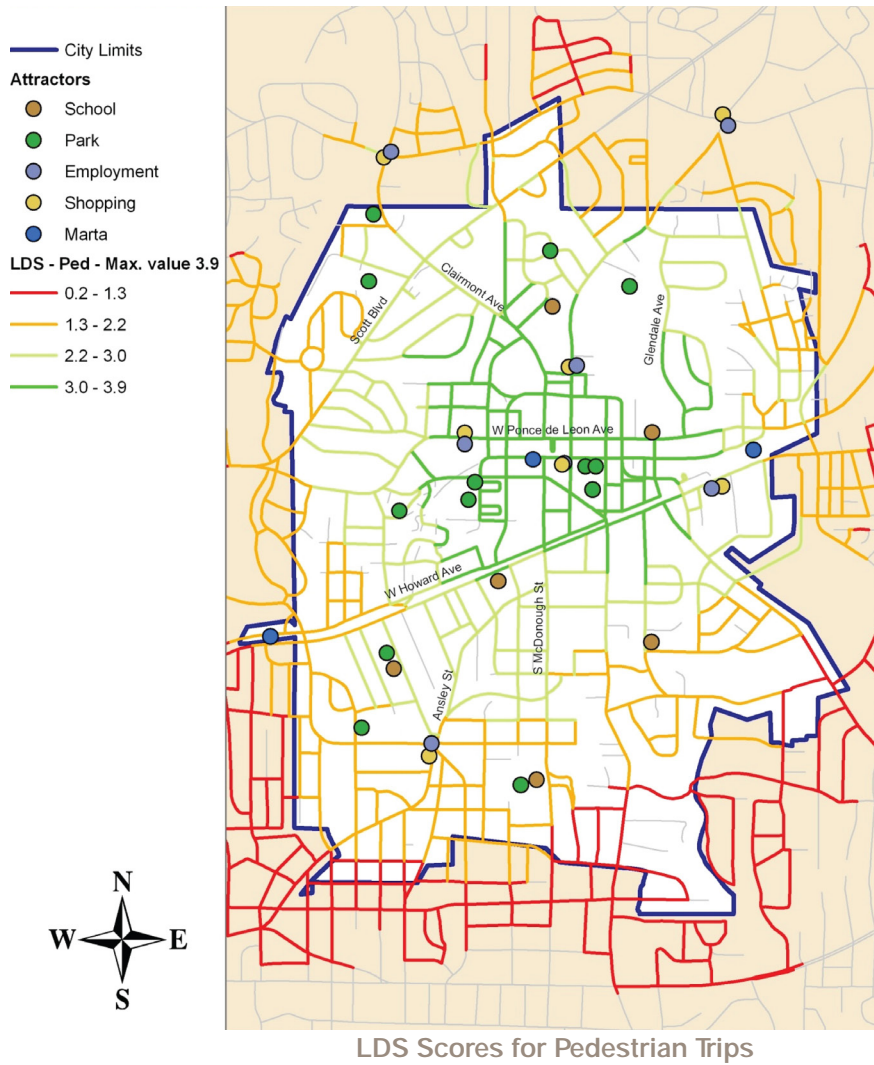
Decatur, Georgia, a city of approximately 20,000 residents located in the largely auto-oriented Atlanta metropolitan area, has chosen to take a different course than many of its neighboring cities. CQGRD partnered with Sycamore Consulting, Inc. and Kimley-Horn and Associates to help the City of Decatur develop a Community Transportation Plan to make active living a serious part of its transportation system. The City of Decatur wanted a safe and efficient multimodal transportation system that improved overall quality of life and well-being. Researchers at Georgia Institute of Technology suggested it undertake a Community Transportation Plan (CTP) rather than the traditional transportation plan. They introduced Decatur officials to a series of tools and methodologies useful in meeting the city's transportation needs and quality of life preferences. The tools included: a Street Typology Overlay, a Quality Growth Audit Bicycle, a Latent Demand Score (LDS) analysis, Multi-modal Level of Service analysis (LOS), and a Health Impact Assessment (HIA).

The quality growth audit for Decatur evaluated existing plans, policies, and practices against its desired principles of active living, multi-modal connectivity, and universal design, and included a review of recent visioning exercises. The technical studies focused on facility supply and demand and an innovative classification framework (embedded in an HIA framework). This approach established a strong foundation for the recommendations of the CTP.

The first component of the analysis focused on public demand for pedestrian and bicycle facilities. The Latent Demand Score (LDS) calculations used geographic information systems (GIS) to locate trip-generating destinations throughout the city of Decatur and surrounding areas. The model identified locations of potential demand for bicycle and pedestrian trips on the existing road network, highlighting the greatest intensity of demand for pedestrian and bicycle facilities concentrated within the downtown core and tapering off towards the edges of the city.

The second area of study examined the existing level of service provided by the transportation system. It detailed the multi-modal Level of Service (LOS) scores for city corridors. The automobile LOS measures delay at intersections; and for bicycles and pedestrians, it measures the factors that characterize the quality of travel, such as pavement condition, automobile speed, sidewalk widths, and other influencing details. LOS for all modes evaluated corridors and intersections on a scale of A to F and reported the quality of travel along major routes.

The third area of analysis utilized the street typology categories and results of the quality growth audit to frame the context. The results of all three technical



studies were combined with input from the general public and city of Decatur staff to develop recommendations and prioritize project selection.

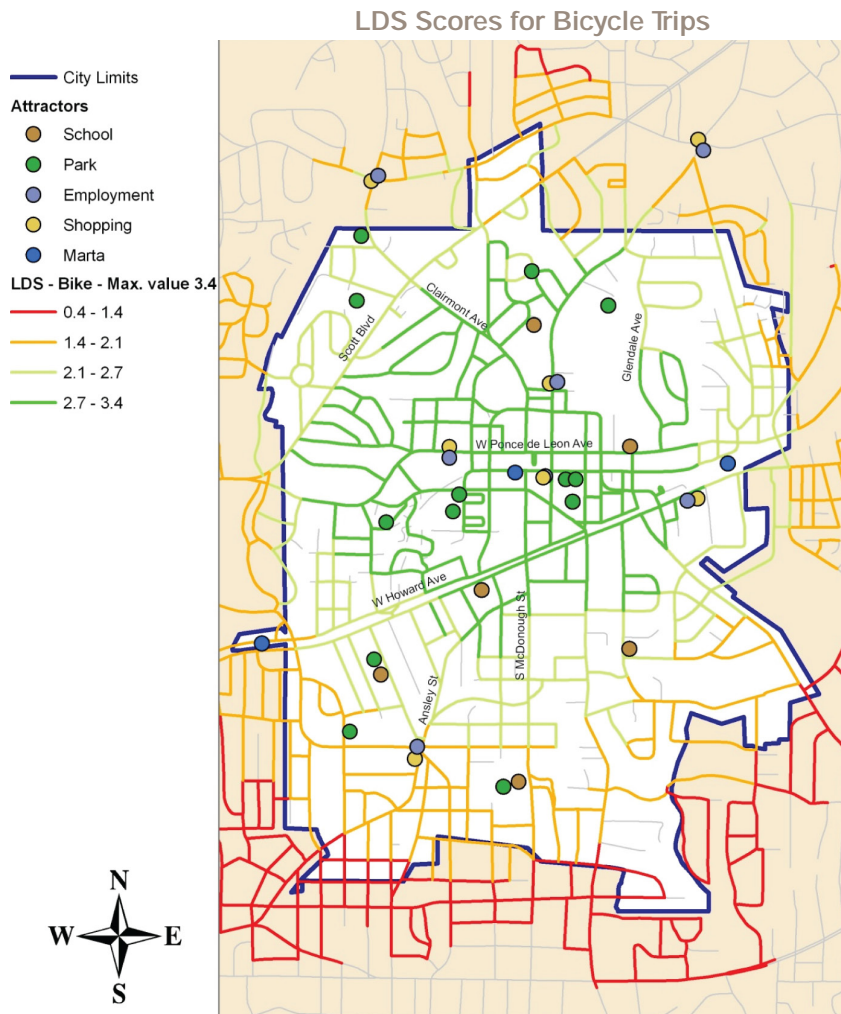
The incorporation of an HIA within traditional transportation planning methodology presents a unique case in promoting community health

and well-being. The scope of the HIA was rapid to intermediate with limited data collection. The Decatur CTP HIA focused on health impacts related to safety, social connections, and physical activity as they are affected by the transportation and land use environment. The HIA was initiated by investigating the concerns of Decatur residents, businesses,

and institutions. It used findings from current research, and insights from local, regional, and national experts in planning and health to identify potential health impacts and recommend strategies to increase positive health outcomes and mitigate negative health outcomes. Decision makers were actively involved; there was a focus on increased opportunities for non-motorized transportation alternatives; a commitment to support existing and future economic development opportunities in the downtown area, and to improve safety and mobility.

The Plan was completed in fall 2007, and Decatur has already taken policy actions to achieve its goals. Foremost, Decatur has created a new

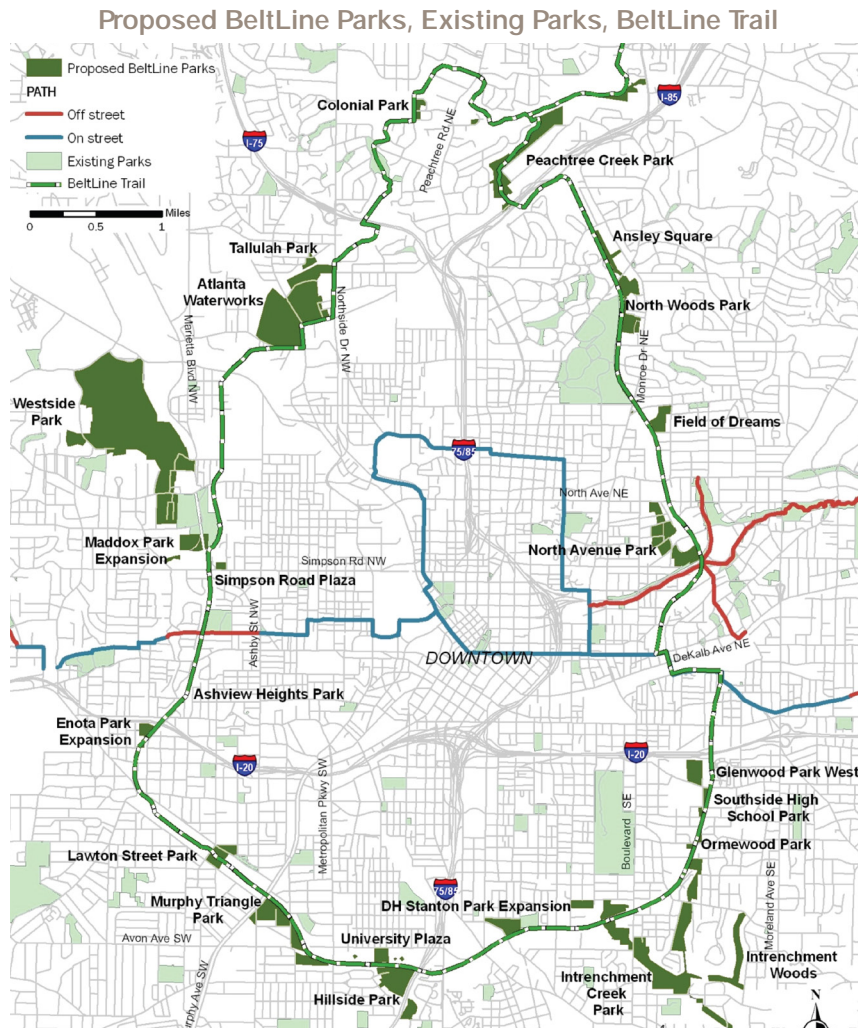
Active Living Division within the Department of Community and Economic Development. The Division combines traditional recreation programs with quality of life programs like environmental sustainability, alternative transportation planning, and efforts to encourage an active living lifestyle in the community. The International City/County Management Association, with an interest in encouraging active living through better government management, has recognized Decatur's pioneering work and is already committed to track the outcomes and community benefits of Decatur's Active Living Division in a two-year study that will identify performance measures and best practices for other cities.



Atlanta BeltLine Health Impact Assessment (2007)

The Atlanta BeltLine will convert a 22-mile span of freight railway into a transit and trail loop, surrounded by parks and residential and commercial development. While many people debate the architectural style, density, or purpose of a new development; everyone can agree that a development should contribute to the health of the people who live, work, and go to school there. But there are many questions: Is the new development project a healthy place? Does the community understand the health impacts of a new development? To answer these questions for the Atlanta BeltLine redevelopment project, CQGRD conducted a Health Impact Assessment (HIA).

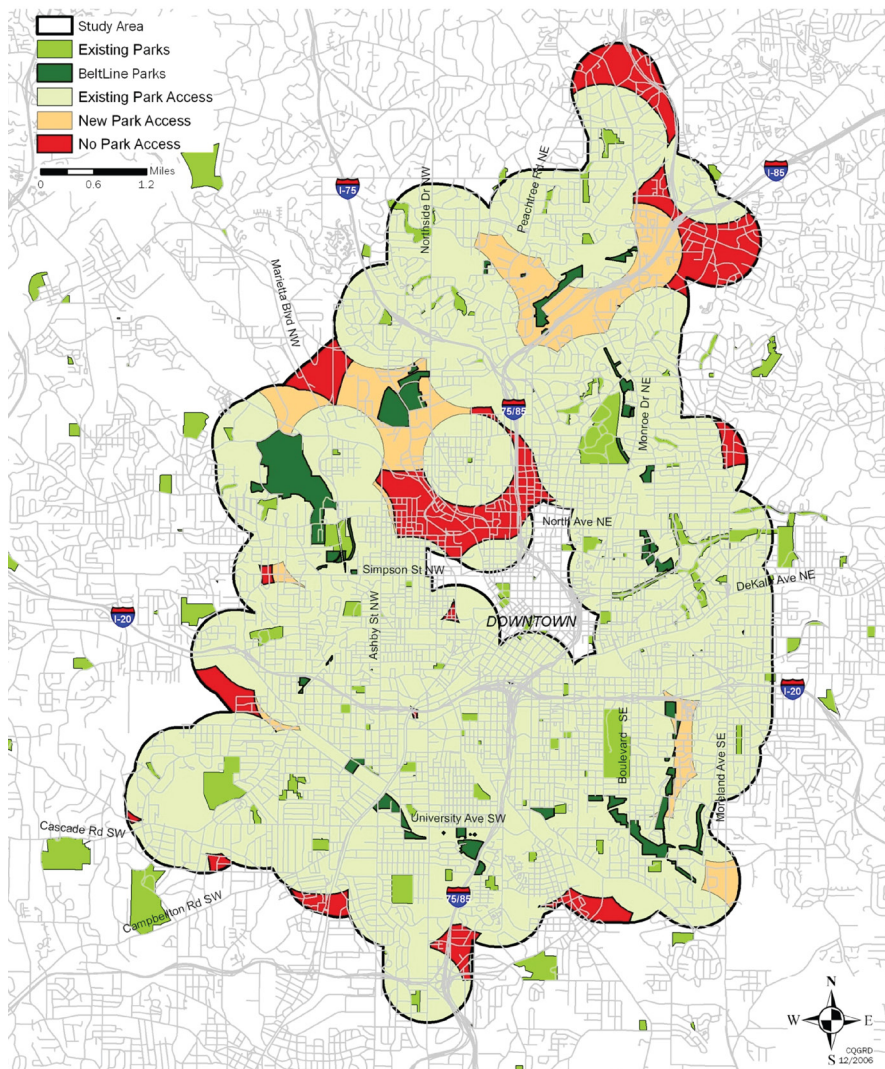
An interdisciplinary team including the Centers for Disease Control and Prevention (CDC) and the Center for Quality Growth and Regional Development (CQGRD) at the Georgia Institute of Technology conducted a preliminary review of the health literature associated with transportation and urban development, and concluded that the BeltLine could have the potential to significantly impact health. The team proposed further investigation through HIA to understand the direction and magnitude of the impacts, and which populations would bear the potential benefits or burdens. Since the project plans and design were not finalized, the HIA was prospective, which appeared to



increase the potential to impact the project. In 2005, the Robert Wood Johnson Foundation funded the HIA of the BeltLine project.

The research team appraised changes in equitable access to health supports, in particular access to parks and trails, transportation, healthy housing, and healthy food. For access to parks, the analysis used existing GIS data to define existing and proposed parkland. Researchers calculated the number and percentage of residents who had access to parks now and in 2030, based on forecasts; and the composition by age, race, income, poverty or carless status, and planning subarea. About 26,000 people, or 13 percent, in the BeltLine study area did not have access to a park prior to the BeltLine project. The analysis showed that park access would increase for study area residents and for the City of Atlanta.

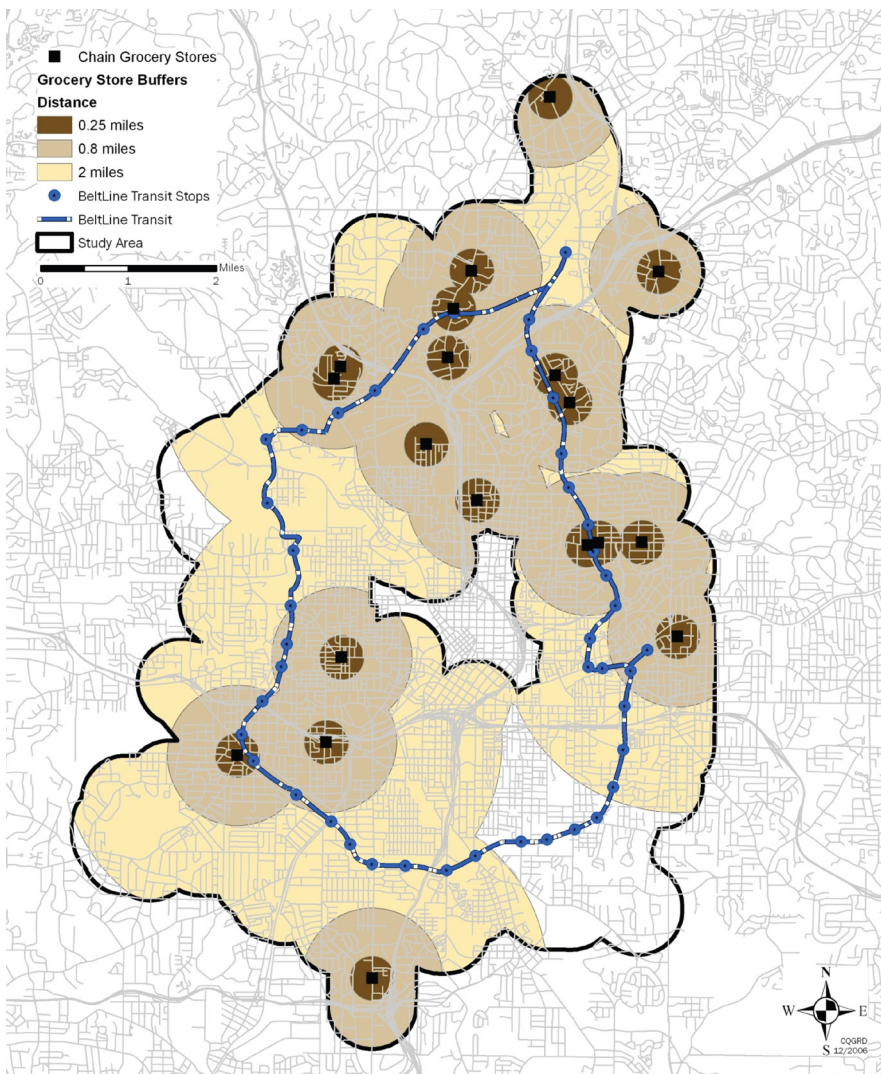
The study team evaluated the location of full service chain grocery stores, since the literature suggested that access to grocery stores was associated with a healthier diet. This GIS analysis indicated that 8 percent of the study area population did not have a grocery store within two miles. Grocery stores were much more likely to be located near white and higher-income residents with access to a car. Only 53 percent of the study area was in walking (0.25 mile) or bicycling (0.8 mile) distance from a grocery store, and non-white households were



Study Area Park Access

under-represented in this group (50.1 percent versus 62.2 percent of the entire study area). Based on these analyses, the recommendations emphasized making parks and trails more prevalent, connected, and conducive to pedestrian access, especially in underserved areas; locating housing and businesses near trails and transit; creating programs to support affordable housing and prevent displacement; and ensuring equitable distribution of development and transportation facilities.

Investigators recommended that the BeltLine should increase physical activity by prioritizing pedestrian access to transit; incorporating uni-



Access to Chain Grocery Stores

versal design principles to enable and encourage the elderly, people with disabilities, and children to use the facilities; providing lighting and emergency call boxes in order to increase perceived safety of the facilities; and providing a variety of recreational amenities. The HIA recommended appropriate designs for pedestrian and bicycle facilities to reduce the risk of crashes; safe design and maintenance for transit infrastructure; and crime prevention through environmental design (CPTED) principles. In response to redevelopment proposals in BeltLine plans, the HIA report encouraged public participation in planning activities; public spaces that promote socialization; and

strategies to prevent displacement of current residents and businesses.

An environmental analysis was conducted based on projections for the year 2030 from state and MPO agencies and BeltLine documents for ambient air pollution levels and the number of housing units in local air pollution hotspots. This analysis indicated that the BeltLine could improve ambient air quality by off-setting motor vehicle travel, but that some new buildings could potentially be vulnerable to locally-elevated air pollution levels. The HIA recommended monitoring local pollution levels at suspected hotspots and relocating or mitigating effects on proposed developments there. Investigators proposed that the BeltLine had the

potential to improve health by remediating and redeveloping brownfields. They also recommended mitigating noise and storm water runoff from BeltLine property.

Successful components of the HIA included timing, which allowed adequate time for a full, prospective HIA to be conducted. Sufficient time and resources were available to address unanticipated stakeholder concerns. Collaborative aspects of the work helped increase interdisciplinary knowledge and working capacity. Also, process and outcome evaluation should help establish effective practices for HIA in the U.S.



MARTA Interns

(L-R): Phillip Cherry, Matt Crane, Chris Silveira, Jean-Pierre Bourget

GTI/UTC and the Metropolitan Atlanta Regional Transit Authority (MARTA) are continuing the summer intern program, now in its fourth year. The program, designed to attract new talent to the transit industry, gives students the opportunity to work closely with MARTA staff on the real issues that transit agencies face today. The 2011 interns are:

Phillip Cherry is a second-year master's student in the Georgia Tech transportation program. Cherry is working on the Atlanta Streetcar Project (<http://georgiatransitconnector.com/>), designed to facilitate economic development and connect downtown tourist attractions. Cherry is a graduate research assistant at Georgia Tech and has completed internships with Kimley-Horn Associates and HNTB Corporation. Originally from Dallas, Cherry earned his bachelor's in civil engineering at Purdue University.

Matt Crane, a first-year master's student in Georgia Tech's civil engineering program, is also a part of the Atlanta Streetcar Project and may work on the 2012 transportation referendum later in the summer. A co-op student, Crane has interned with Lusk & Associates and Southern Company. He is an Eagle Scout and has received the Mundy and Toyota scholarships.

Chris Silveira is a second-year master's student at Georgia Tech, earning two MS degrees: City and Regional Planning, Transportation; and Civil Engineering, Transportation. Silveira is assigned to the Special Projects & Analysis division of the Office of Transit System Planning on bus stop management projects, and he also assists with GIS mapping and data analysis. Later this summer, he expects to work on the Atlanta Streetcar Project. Silveira earned his bachelor's in history and geography at The College of William & Mary.

Jean-Pierre Bourget is a rising senior at the University of Georgia. He is majoring in sociology, but plans to go to graduate school to obtain a degree in urban planning. Bourget works with the office of Transit Oriented Development, which focuses on developing livable transit-oriented communities on properties owned by MARTA, including Lindberg Center Station, as well as the Clifton Corridor, and the 1-20 East project.

According to Dr. Michael Meyer, Director of the GTI/UTC, "our continuing partnership with MARTA represents a win-win situation for MARTA, the UTC and most importantly our students."



UTC Co-sponsors First World Symposium on Transport and Land Use Research

UTC is co-sponsoring the inaugural meeting of the World Symposium on Transport and Land Use Research (WSTLUR) to be held in Whistler, British Columbia, July 28-30. The conference brings together academics and practitioners in transport and land use whose interests lie at the intersection of economics, planning, and engineering.

“The Whistler Conference brings together leading-edge thought leaders who are shaping the land planning theory and practices for now and the future,” says Catherine Ross, the Harry West Professor of City and Regional Planning and director of the Center for Quality Growth and Regional Development at Georgia Tech.

The three-day symposium will feature many sessions, an opening reception, dinner, and thought-provoking speakers. In addition to presentations based on rigorously peer-reviewed papers, the conference program will include confirmed plenary presentations from:

- **Ed Glaeser**, Fred and Eleanor Glump Professor of Economics, Harvard University, Keynote Address
- **Robert Cervero**, Professor of City & Regional Planning, University of California, Berkeley, Featured Luncheon Speaker
- **David Banister**, Professor of Transport Studies, Oxford University, Featured Luncheon Speaker

WSTLUR grew from the successful Access to Destinations conferences held in 2004 and 2007. The first meeting will include approxi-

mately 60 participants. It is expected to meet every three years in the future.

On Wednesday, July 27, there will be an optional mobile tour of the city of Vancouver. Mike Shiffer, vice president of planning, strategy, and technology at TransLink, will lead a tour to see how the Vancouver region’s transportation system connects with transit-supportive land use in one of the most livable regions in the world. Those who attend will see a comprehensive regional network of major roads, ferries, buses (including North America’s largest fleet of electric trolley buses), commuter rail, and the world’s most extensive fully automated rapid transit network.

Another optional event that day is a book discussion of *Two Billion Cars: Driving Toward Sustainability* by Dr. Dan Sperling. The book can be purchased from the conference website.

The conference is organized by the Center for Transportation Studies at the University of Minnesota under the direction of the Organizing Committee and with advisement from the Scientific Committee. Organizing partners include: Georgia Institute of Technology/University Transportation Center, the University of California Transportation Center, UC-Davis Sustainable Transportation Center of the Institute of Transportation Studies, the Center for Transportation and Livable Systems at the University of Connecticut, and the University of Vermont Transportation Research Center.

Lisa Rosenstein Recipient of CEE Appreciation Award



Dr. Lisa Rosenstein has been awarded the 2011 CEE Appreciation Award for her continuing efforts to implement a new model of engineering education—one that directly links communication skills with course

content and helps students prepare to present themselves and their projects.

Rosenstein came to Georgia Tech in 1998 for a joint appointment as director of The Engineering Communications Programs in CEE and Materials Science Engineering. She earned her bachelor's degree in English at Connecticut College, followed by master's and doctorate degrees in English at Emory University.

Rosenstein is known for continually reaching beyond her job description to assist others. She helps undergraduate students with their written reports and oral presentations and prepares graduate students for theses, dissertations and defenses. She also works with faculty members

on publications and presentations and directs writing and presentation workshops for students and for faculty members.

"Lisa has played an instrumental role in our recent fellowship success," says Laurie Garrow, UTI/GTI assistant director of research. "In the past three years, she has worked closely with more than a dozen transportation students, often going through more than six iterations with the students and spending hours with each application. She has helped the transportation group alone secure more than \$1.3 million in graduate fellowships and scholarships in the last three years."

"I'm honored to receive this year's Appreciation award," says Rosenstein. "I truly enjoy all the work I do with students outside my formal teaching responsibilities, and it's a thrill to be recognized for these efforts."

The CEE Appreciation award is given annually to a Civil and Environment Engineering general faculty member who has brought honor and recognition to the School or who has benefited the School, profession, or general public in an exemplary manner.

Christina Barry Selected for GDOT Transportation Program



Christina Barry is the 2011 recipient of the Transportation Engineers of the Future scholarship. This scholarship, funded by area transportation professionals and the Georgia Department of Transportation (GDOT),

is the equivalent to a graduate research assistant, offered to Georgia Tech students pursuing a master's degree in Transportation.

Barry completed her Bachelor's of Science in Civil Engineering this spring. She originally sought a degree in bassoon performance at Carnegie Mellon University but when she discovered she had an interest in civil engineering, decided to switch majors and transfer to Georgia Tech.

While an undergraduate, Barry interned with the Federal Highway Administration in Alabama and with the Eastern Federal Lands Highway division. She earned Dean's List and Faculty Honors. She was the president of Chi Epsilon for the 2010-2011 school year and was also member of the CEE student advisory council. She is a member of the American Society of Civil Engineers and has earned her EIT. She still pursues her love of music as a member of the First Baptist Atlanta Sanctuary Orchestra.

Barry looks forward to working with GDOT upon completion of her master's, a requirement of the scholarship. The Transportation Engineers of the Future scholarship is open to students interested in structural engineering, geotechnical engineering, environmental engineering, transportation engineering and planning, finance, public policy, and construction engineering. Recipients agree to work a minimum of three years for the GDOT.



Transportation Students Tour Hartsfield-Jackson Atlanta Airport

Twenty Georgia Tech transportation students were given an exclusive look at one of the world's largest airports spring semester. Visiting UTC speaker Seth Young, associate professor and director of the Center of Aviation at the Ohio State University, arranged the tour of the Atlanta airport through a former student, Chaim Van Prooyen, an operations agent; and colleague Monique Williams, an aviation planner.

After listening to Young speak on the complexity of the nation's current aviation system infrastructure, the group hopped on MARTA (of course) for the trip to the airport. Everyone had a great time, says third-year doctoral candidate Brittany Luken. "We really got an inside look at how airport operations work at one of the busiest airports in the world," she says. "We are especially grateful that Chaim and Monique came in on their day off to show us around."

Highlights of the tour included:

- Aircraft Rescue and Firefighting Station, including a water canon demonstration
- Radar Hill
- The Terminal E Ramp Tower
- Aircraft maintenance equipment, including snow removal equipment and friction testing vehicles
- The "wrap around" taxiway that lets aircraft get from the outboard runway to the terminal without having to cross the inboard runway.

Donny Katz, a second-year doctoral candidate, was one of the students on the tour. "Getting to go behind the scenes at ATL was a great opportunity to see some of the aspects of airport management that aren't apparent to the casual traveler," Katz says. "Even as a student in aviation, it was a chance to learn new information about airside and landside operations, and experience facets that I've only been able to read about before. Touring airports always gets me thrilled to be part of this industry!"

GTI/UTC Students Earn National Recognition



National Science Foundation Graduate Research Fellowships

GTI/UTC is pleased to announce that two of our graduate students have been awarded 2011 National Science Foundation (NSF) Graduate Research Fellowships. Josephine "Josie" Kressner and Susan Hotle are among the 2,000 national awardees recently honored by NSF. Jamie Fischer and Greg Macfarlane received Honorable Mentions.

NSF Graduate Research Fellowships provide three years of support for graduate study leading to research-based masters or doctoral degrees. They are intended for students in the early stages of their graduate study. The Graduate Research Fellowship

Program (GRFP) invests in graduate education for a cadre of diverse individuals who demonstrate their potential to successfully complete graduate degree programs in disciplines relevant to the mission of NSF.

The National Science Foundation GRFP helps ensure the vitality of the human resource base of science and engineering in the United States and reinforces its diversity. The program recognizes and supports outstanding graduate students in NSF-supported science, technology, engineering, and mathematics disciplines who are pursuing research-based master's and doctoral degrees in the U.S. and abroad.



Josie Kressner has completed her second-year as a doctoral student. Her research investigates ways to use credit reporting data and other highly disaggregated data to model household movements over time, particularly in transit-oriented developments, and effectively quantify short- and long-term impacts of infrastructure investments on populations and communities. She received a President's Fellowship from Georgia Tech, an Airport Cooperative Research Fellowship, an \$11,500 Dwight David Eisenhower Graduate Fellowship (see below), and she was recently named the 2011 recipient of the WTS International President's Legacy Scholarship, which recognizes women who demonstrate leadership in the transportation industry and a commitment to community service.

Kressner was recognized for her work in co-founding Revive Atlanta (www.revatl.org), a non-profit organization created to convert underutilized properties into community assets, such as parks, edible community gardens, and playgrounds. Through her research into the people and neighborhoods of Atlanta, Kressner seeks to make a lasting, positive impact on the quality of life for everyone in Atlanta.



Susan Hotle conducted research under the advisement of Dr. Laurie Garrow, and she is now planning her graduate studies. As an undergraduate, she helped develop teaching modules based on airline planning software; these modules have been used in Georgia Tech's Freight and Airports course, a high school summer camp on simulations, and high school math classes in Georgia. Hotle is interested in researching the effects of product debundling in the airline industry. She recently submitted a journal article on the topic.

Hotle is an Engineer-in-Training, and recipient of the Women in Transportation's Sharon D. Banks Undergraduate Scholarship, the Mundy Travel Scholarship, Institute of Transportation Engineers Scholarship, and President's Undergraduate Research Award. With the Mundy Travel Scholarship, she traveled to Egypt and Dubai to study transportation systems in the Middle East. She also earned a partial Eisenhower Fellowship. She is interested in using simulation methods to study air passenger behavior as part of her graduate studies.



Eisenhower Graduate Research Fellowships

GTI/UTC is pleased to announce that eight transportation graduate students have won Eisenhower fellowships worth \$195,000 for 2011. Six doctoral students and two M.S. students were recently awarded the nationally competitive Eisenhower Fellowships to conduct transportation research. Doctoral students Tom Wall and Greg Macfarlane were awarded \$69,500 multi-year fellowships. Doctoral students Josephine Kressner, Brittany Luken, John Patrick O'Har, and Brent Weigel received \$11,500 awards. M.S. students Aaron Greenwood and

Susan Hotle received \$5,000 awards. This represents two new records for Georgia Tech. This is the first year that Georgia Tech has received two full Eisenhower awards. It is also the largest number of Eisenhower awards Georgia Tech has ever received in a single year (the previous record was six awards). The Eisenhower Fellowship recruits qualified students to study transportation workforce development in all modes of transportation and promotes innovation of the U.S. transportation community. The program is administered by the Federal Highway Administration for the U.S. Department of Transportation.

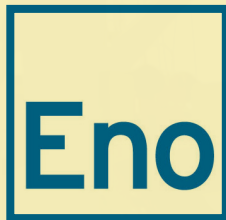


Thomas Wall is a doctoral student in transportation systems engineering at Georgia Tech. Originally from Seattle, Washington, he holds an Honors B.S. in Civil Engineering from Oregon State University and an M.S. in Civil Engineering from Georgia Tech. Wall's current research involves the development of risk-based policy and planning strategies in order to prioritize transportation infrastructure for adaptation to the likely impacts of climate change. His goal is to develop an analysis tool that can be used by transportation agencies and infrastructure managers to enable more efficient strategic investment in local, regional, and national transportation infrastructure. Wall is actively involved with the Georgia Tech chapters of the Institute of Transportation Engineers (ITE) and Engineers Without Borders (EWB). For the past two summers, he has teamed with a local high school, helping to develop transportation modules for an introductory engineering class. He has also mentored high school students in a college engineering summer immersion program. For the 2010-2011 academic year, Wall was awarded a Fulbright Scholarship by the U.S. State Department to study transportation and infrastructure adaptation strategies currently under development in the United Kingdom and the Netherlands.



Gregory Macfarlane is finishing his first-year as a doctoral student in the Transportation Systems Engineering section of the School of Civil and Environmental Engineering. He came to Atlanta and Georgia Tech from a job at the Utah Transit Authority in Salt Lake City. He and his wife, Leslie, are both Utah natives and alumni of Brigham Young University. He became interested in transportation networks during his missionary work overseas. He observed how the adequacy of transportation networks in Southeast Asia directly impacts the quality of people's lives. Singaporeans use their efficient transit and highways systems to access jobs, get to school, and most importantly, get home to their families. He also saw the social cost incurred by families in Sri Lanka and poorer Malaysian cities who could not quickly or safely return home from work because the universal need for a safe and efficient transportation system had not been met.

Macfarlane's research at Georgia Tech is focused on the applications that confidential data records, such as those produced by government agencies or private companies, may have in transportation planning activities. He seeks ways to use previously existing data to reduce the costs of regional transportation surveys. His other academic interests include automobile ownership patterns and policies, travel demand modeling, and transportation planning policy. He plans to become a professor so that he can continue to improve the transportation field and can share his passion with a new generation of engineers.



Eno Leadership Development Conference

Three GTI/UTC students recently participated in the 2011 Eno Leadership Conference. Elise Barrella and Donny Katz, doctoral students in Civil and Environmental Engineering, and Brittany Luken, a joint degree student in Civil Engineering and Industrial and Systems Engineering. Elise Barrella was selected as the PB/WTS nomination through a national competition. Donny Katz, in addition to being named an Eno Fellow, was honored with one of four Eno fellowship distinction awards, namely the Dr. Thomas D. Larson Fellowship. All three students

attended the one week conference in Washington, D.C. This meeting introduces students to the intricacies of policy development in transportation and allows students to meet some of the nation's transportation leaders. GTI/UTC has a long history of sending students to the leadership conference, and has several faculty members who are alumni of this program.

Dr. Michael Meyer serves as chair of the Eno Board of Regents. The GTI/UTC subsidized half of the costs associated with Katz's and Luken's participation in the conference.

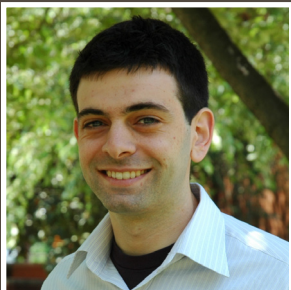


(L-R): Brittany Luken, Donald Katz, Elise Barrella



Brittany Luken is a doctoral candidate in Georgia Tech's Transportation Systems group. Her research efforts are focused on investigating how online airline pricing and seat map information can be used to develop multi-airport choice models. She is the recipient of a \$10,000 Airport Cooperative Research Program (ACRP) Graduate Research Fellowship, for which she completed a paper analyzing airport catchment areas; the recipient of a Georgia Department of Transportation and Gordon W. Schultz Graduate Fellowship, and past recipient of the National Science Foundation Fellowship.

Luken is heavily involved in educational outreach. She has developed activities to introduce seventh and eighth grade girls to Transportation Engineering during the Technology, Engineering, and Computing Girl's Camp. She has participated in Scout Day at the Fernbank Museum, where she taught elementary-school age Boy Scouts and Girl Scouts about science. She has also mentored a number of undergraduate students at Georgia Tech.



Donald Katz is a second-year doctoral student in civil engineering, performing research on domestic and international airline networks and airport systems. His Master's thesis focused on the role airports and airlines play in connecting mega regions and the urban agglomerations that arise as metropolitan regions grow and blend borders, both internally and between one another. Before arriving at Georgia Tech, Katz spent one year on a Fulbright Scholarship in Dhaka, Bangladesh. He developed a research project to study the effects of overcrowding in buses on the operation and safety of the bus and its riders. The project was sampled to include a variety of door configurations, sizes, and fare collection systems.

He continues to aid with the Fulbright program by mentoring potential applicants and serving as a panelist and facilitator at Fulbright events. His first paper on the Dhaka buses was published in the 2010 Transportation Research Record. Katz has received numerous awards for his work at Georgia Tech. In 2010, Donald earned a National Science Foundation Graduate Research Fellowship to perform his research in aviation. In addition to his appointment as an Eno Fellow, he was awarded the Dr. Thomas D. Larson fellowship. Katz also was awarded a Dwight D. Eisenhower fellowship, an Institute of Transportation Engineers (ITE) Georgia Section scholarship, and a scholarship to attend the Helsinki Summer School in Transportation in 2010. He served as the vice president for Outreach in Georgia Tech's ITE chapter, and rowed for the Georgia Tech rowing club.



Elise Barrella was awarded a full Eisenhower Graduate Fellowship to support her dissertation research. Barrella is a doctoral student in Georgia Tech's transportation systems group, with interests in sustainable transportation infrastructure, planning, and community development. Barrella, originally from Harrisburg, Pennsylvania, earned her bachelor's degree at Bucknell University. She hopes to join academia, focusing her research on projects that take a systems view of transportation infrastructure investments in an effort to shape public policy and planning practice, either in the U.S. or in developing countries. Since coming to Georgia Tech, she has been involved in the classroom as a guest lecturer, teaching assistant and lead instructor.

Barrella assisted with an FHWA-sponsored project to produce a guidebook to help agencies incorporate sustainability into the transportation planning process. Her dissertation research will build on this work by developing a self-assessment method to help transportation agencies easily identify, prioritize and implement sustainability best practices. This spring, Barrella participated in a Study Tour of Ghana to learn about the sustainability challenges facing the country and begin a dialog with academics and leaders in the country about steps toward sustainable development. In addition to her academic achievements, Barrella is a campus leader participating as the president of Women's Transportation Seminar and Marshall of Chi Epsilon Honor Society.



Practitioners in the Classroom

(L-R): Vance Smith, Jr., Smith, GDOT Commissioner, J.P. O'Har, ITE President of GA Tech Chapter



Valerio Oricchio, Transportation Analyst, Wilbur Smith, discussed the planning and design of high speed rail between Tampa and Orlando, with special attention given to how public and political concerns enter into deliberations on project design.



Dr. John Crocker, Director of Regional Service Coordination & Special Projects, MARTA, described the latest thinking in the Atlanta region concerning regional transit coordination and how such coordination could be provided institutionally.

Paul Grether, Manager, Atlanta Streetcar project, MARTA, showcased the proposed streetcar line in Atlanta and the current status of planning and project development.

Dr. Beverly Scott, General Manager, Metropolitan Atlanta Regional Transit Authority, discussed her experience in the transit industry and what students need to know to be successful transportation professionals.



Vance Smith, Jr. Commissioner, Georgia Department of Transportation discussed pending transportation legislation in Georgia, GDOT revenues and revenue forecasts, the status of the Department's workforce, and new and upcoming GDOT projects. Smith's session coincided with a cookout, co-sponsored by Georgia Tech's ITE Chapter and the Georgia ITE Chapter.

GTI/UTC Seminar Speakers



Juan Carlos Munoz Abogabir
Associate Professor
Pontificia Universidad
Católica de Chile
*What Services Should You
Operate in a Bus Corridor?*
February 25, 2011



Peter Appel
Administrator
Research and Innovative
Technology Administration
U.S. Department of
Transportation
Driver Safety Behavior
March 16, 2011



Robert Bertini
Deputy Administrator
Research and Innovative
Technology Administration
*Transforming Transportation
Through Connectivity*
November 23, 2010



David Boyce
Adjunct Professor
Northwestern University
*Unique User-equilibrium Road
Traffic Flows for Two User
Classes*
October 29, 2010



Laetitia Dablanc
Senior Researcher
French Institute of Science and
Technology for Transport,
Development and Networks
(IFSTTAR, ex INRETS)
Smart Policies for Urban Freight
January 21, 2011



Gary McVoy
New York Department of
Transportation Director
Operations Division
*Sustainability, Transportation,
and Perspective*
September 2, 2010



Anthony Perl
Professor and Director
Simon Fraser University
Urban Studies Program
*Planning for Post-Carbon
Mobility: How to Make the Most
of Coming Transport Revolutions*
December 10, 2010



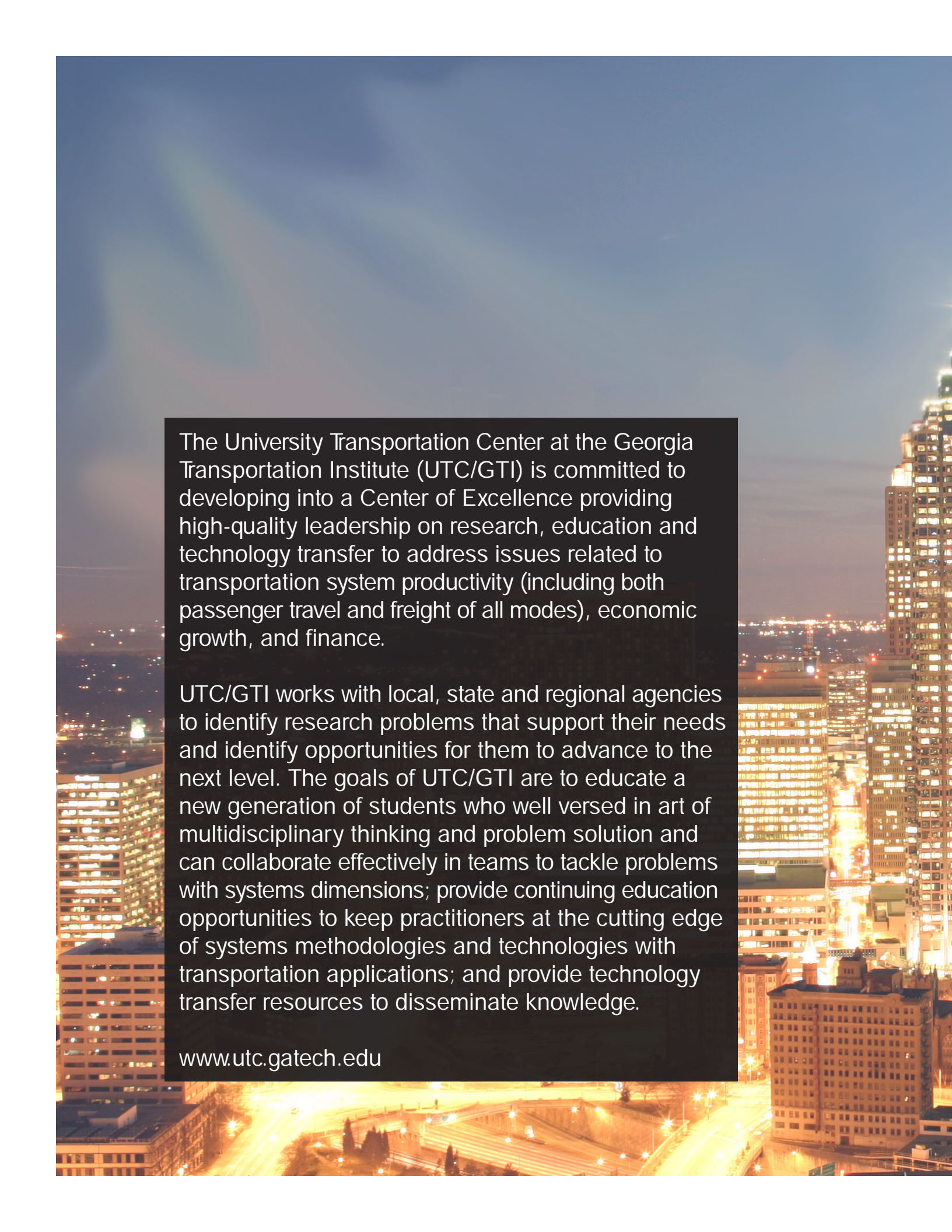
Lucio Soibelman
Professor
Carnegie Mellon University
*Data Management,
Visualization and Knowledge
Discovery for Advanced
Infrastructure Systems*
September 17, 2010



Ardalan Vahidi
Assistant Professor
Clemson University
*Predictive Energy Management
in Networked Vehicles:
Exploring Traffic and Terrain
Preview for Fuel Savings*
September 24, 2010



Seth Young
Associate Professor
Department of Aviation,
The Ohio State University
*On the Forefront of a New
Generation of Aviation System
Performance*
May 13, 2011

A nighttime photograph of a city skyline, likely Atlanta, Georgia, featuring illuminated skyscrapers and a highway interchange with light trails. A large, dark, semi-transparent rectangular box is overlaid on the left and center of the image, containing white text.

The University Transportation Center at the Georgia Transportation Institute (UTC/GTI) is committed to developing into a Center of Excellence providing high-quality leadership on research, education and technology transfer to address issues related to transportation system productivity (including both passenger travel and freight of all modes), economic growth, and finance.

UTC/GTI works with local, state and regional agencies to identify research problems that support their needs and identify opportunities for them to advance to the next level. The goals of UTC/GTI are to educate a new generation of students who well versed in art of multidisciplinary thinking and problem solution and can collaborate effectively in teams to tackle problems with systems dimensions; provide continuing education opportunities to keep practitioners at the cutting edge of systems methodologies and technologies with transportation applications; and provide technology transfer resources to disseminate knowledge.

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