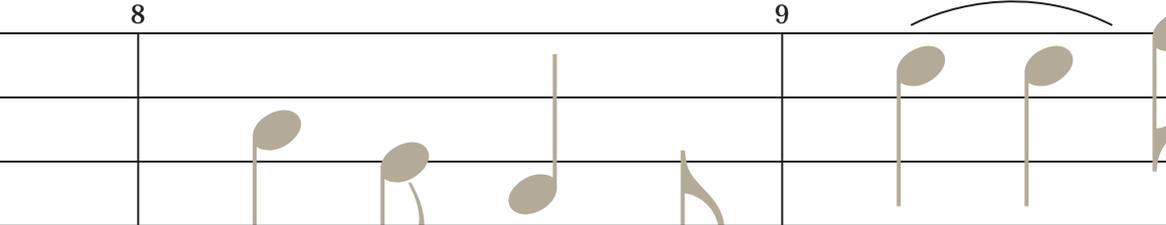
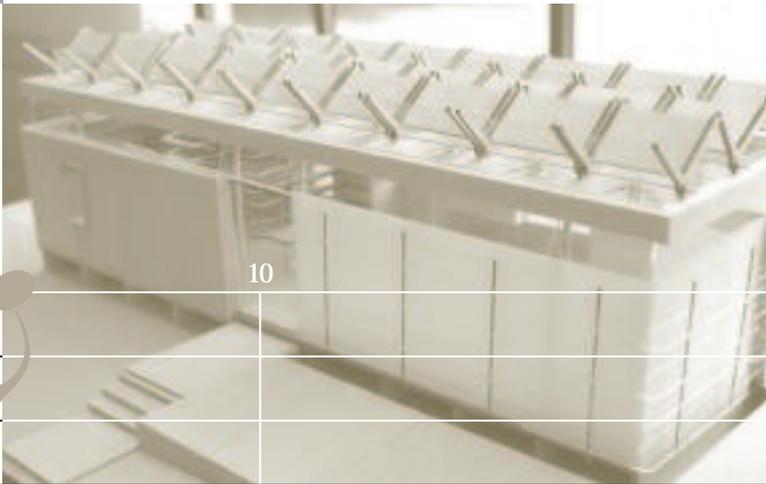


College of Architecture
newsletter

Fall 2006



PROGRAMS:
ARCHITECTURE
ARTS AND TECHNOLOGY/MUSIC
BUILDING CONSTRUCTION
CITY AND REGIONAL PLANNING
INDUSTRIAL DESIGN
PHD PROGRAM



RESEARCH CENTERS:
ADVANCED WOOD PRODUCTS LABORATORY
CENTER FOR ASSISTIVE TECHNOLOGY AND ENVIRONMENTAL ACCESS
CENTER FOR GEOGRAPHIC INFORMATION SYSTEMS
CENTER FOR QUALITY GROWTH AND REGIONAL DEVELOPMENT
CONSTRUCTION RESOURCE CENTER
IMAGINE LAB





Several threads run through this issue of the CoA Newsletter. These include: new developments in broadening the communication capacity of the College; prestigious new awards recently received by our students and faculty, several of which have international dimensions; and several new and emerging pillars of excellence being built by our students and faculty.

First, the capacity of the College to fully communicate our core strengths and achievements is increasingly important in advancing the reputation of our programs and research centers; in getting the word out to prospective students and faculty of the interesting work here at Tech; and in strengthening our infrastructure for facilitating the scholarship of our faculty. To these ends, as noted in the several stories of this issue, we have added staff and have strengthened the staff's capacity to

advance College communications. Several tangible results are already evident: the addition of Dr. Leslie Sharp as director of Special Projects, whose main task is to assist the faculty in the development and dissemination of its scholarship through special symposia, workshops, and seminars; the expansion of the duties of the editor of the CoA Newsletter, Ms. Barbara Christopher, which can be seen in the new electronic newsletter (see Page 3); and the addition of a centerfold focusing on faculty scholarship, in this case the new urban regeneration prospects of the Atlanta BeltLine (see center section following Page 6), summarized by Professors Sabir Khan and Doug Allen.

Second and related, the new awards garnered by our faculty and students continue to be impressive. These awards, many of which are achieved within an international context, include winning first prize in the Dubai competition for Sustainable Urban Development; the experience of our students in Paris on the Pompidou exhibition of the Morphosis; the Interface competition in Paris; the award to one of our Industrial Design students, Arthur Wu, for the Industrial Designers Society of America merit competition; and the selection of our team in the Solar Decathlon 2007 competition, among several others.

Finally, and also related, are the pillars of excellence our faculty and staff are creating within the College. Clearly, the addition of Professor Lars Spuybroek as the Thomas W. Ventulett III Distinguished Chair in

Architectural Design will further extend the excellent work begun by Monica Ponce de Leon and Nader Tehrani. Similarly, the new faculty and staff added this year reinforce our leadership position in building information modeling, AEC Integration, and digital fabrication. Finally, culminating several years of work, we are beginning what should become a new pillar of excellence in the College and at Georgia Tech in music with the recently approved Master of Music Technology degree.

The College continues to move forward in exciting ways. I have all of our alumni and friends of the College to thank for their important support.

With warm regards,

Thomas D. Galloway, Ph.D.
Dean and Professor

Symposium Announcement

2007 Dean's Symposium on the Changing Nature of Practice: Music Technology

Co-sponsored by College of Architecture Alumni Committee

Saturday, March 3, 2007

The 2007 Dean's Symposium on the Changing Nature of Practice will focus on emerging developments in music technology that promise to revolutionize musical performance, composition, analysis, and education. Organized in cooperation with the Music Department, which begins a new Master of Science degree in Music Technology in 2007, scholars and practitioners will discuss ideas and demonstrate developments in areas ranging from new interfaces for musical expression and algorithmic composition to music information retrieval, musical networks, and machine musicianship.

For more information, contact Leslie Sharp at 404.894.1096 or leslie.sharp@coa.gatech.edu.

Award-winning Architect, Designer Lars Spuybroek Joins Faculty as Third Endowed Chair



Lars Spuybroek

Award-winning Dutch architect and principal of NOX Lars Spuybroek was recently named the third Thomas W. Ventulett III Distinguished Chair in Architectural Design. The Thomas W. Ventulett III Distinguished Chair was endowed by and named after the 1957 Tech alum-

nus whose global architecture firm designed many of Atlanta's landmark places including the Proscenium, Technology Square, and the Georgia World Congress Center. The Chair is dedicated to excellence in design and provides funding to advance design research.

"Lars Spuybroek is a leading expert in the area of digital design and computation in architecture," said Chris Jarrett, acting director of the Architecture Program. "NOX Architects in The Netherlands is world renowned for their experimental work. One can hardly enter an architecture bookstore anywhere in the world without seeing a display of their work. There is a complexity in Spuybroek's projects that challenges the mind and eye, but at the same time they are quite accessible and beautiful. We all look forward to Professor Spuybroek's contributions and design leadership here at Georgia Tech."

Spuybroek joined the faculty this fall and will build on the momentum established by the last two chair holders in digital manufacturing.

"I am thrilled that Professor Spuybroek is joining our faculty," said Dean Thomas Galloway. "His innovative work and investigations in computing and architecture will enhance the College's initiative toward the integration of the design and built environment professions through emerging technology."

Since the early nineties, Spuybroek has been involved in researching the relationship between architecture and computing.

"Basically computers are there to manage complexity, so, for architecture it means that computers allow us a much more complex architecture," said Spuybroek. "That in itself means nothing, because more complex doesn't immediately imply better. But, it will definitely mean more variable. So, computed architecture will be one of variation; that is an architecture of non-repetitive parts, a non-standard architecture. Soon it will be possible to have completely unique parts in a built structure for a price that before would only be possible through huge amounts of repetition—a variable prefab, or as it is called in production terms, mass

customization. We are dissolving the opposition between elitist handwork and machined parts, between emotionality and high-tech, between Art Nouveau and Bauhaus."

Spuybroek is the principal of NOX, an architecture and art office in Rotterdam. He was editor-publisher of one of the first magazines in a book format (NOX, Forum), and made video art (Soft City) and interactive electronic artworks (Soft Site, edit Spline, deep Surface).

In the last five years, he has focused more on architecture. He received international recognition for his design of the Water Pavilion in Rotterdam in 1997, and a cluster of cultural buildings in Lille, France (Maison Folies), and the Son-O-House in Son en Breugel, Holland, in 2004. In the same year, Thames & Hudson published the 400-page monograph, NOX: Machining Architecture. He has won several prizes and has exhibited all over the world, among them presentations at the Venice Biennale, the Centre Pompidou, the Victoria & Albert, and the Guggenheim Bilbao.

Previously he was a professor at the University of Kassel in Germany, where he chaired the Digital Design Techniques department, and visiting associate professor at Columbia University in New York. As a professor, Spuybroek guides his students "to become strong believers, critical thinkers, and pragmatic managers—the basic impossible threesome of our profession."

He also stresses the importance of understanding the cultural shift in bringing architecture to computing.

"Simply put, the computer means the same to architecture in our time that the invention of perspective meant for Renaissance architecture," he said. "And such a shift doesn't take place in a day; it will take a whole generation, and probably even more generations, of designers. The most important thing is to bring computing to architecture and not conceive it as the other way around. In the nineties we were all doing weird shapes just because the computer allowed for it. What we should focus on is working on the old problems of architecture with new tools, instead of just creating new problems. I don't want to have non-standard architecture cornered as a new (and already lost) futurism. We need to give computing in architecture a much stronger basis than just a new set of stylistic features."

The Thomas W. Ventulett III Distinguished Chair in Architectural Design has been made possible by the generous gifts of Beth and Tom Ventulett and through commitments made by his firm (Thompson, Ventulett, Stainback & Associates) as well as his family, friends, and business associates.

The previous chair holders have been Monica Ponce de Leon (2004-05) and Nader Tehrani (2005-06), principals in Office dA and faculty members at Harvard University.

In Memory: Hugh Stubbins Jr.



Hugh Stubbins Jr., a dedicated Georgia Tech alumnus and internationally renowned architect, died on July 5, 2006, in Cambridge, Massachusetts, at the age of 94. He practiced architecture for more than sixty years.

Stubbins received his Bachelor of Architecture degree from Georgia Tech in 1933. While a student at Georgia Tech, he was an academic class leader and won the AIA student medal as well as the Alpha Rho Chi medal. Copies of some of Stubbins' student work can still be found in the College's Heffernan House archive. He was also the captain of the freshman track team and the art editor of the Blueprint during his senior year.

After graduating from Tech, he earned a graduate degree from Harvard's Graduate School of Design in 1935, where he later served as a professor and chairman. He founded Stubbins Associates Inc. of Cambridge and, in 1967, his firm was among the first to receive an AIA Architectural Firm Award. Stubbins and his firm designed more than eight hundred buildings in eight countries. A few of his noted designs include the Berlin Congress Hall (1958), City Corps Center (New York, 1978), the Federal Reserve Bank of Boston (1983), and the Landmark Tower in Yokohama, Japan (1993).

Stubbins maintained a strong connection with Georgia Tech. He was a member of the Georgia Tech Advisory Board from 1978 to 1984 and served on the College's Development Council from 2005 until his death.

"I feel so honored and fortunate to have known Hugh," said Dean Thomas Galloway. "I will personally remember him as an unwavering and devoted advocate of the College. His advice and counsel as a friend and a member of the College of Architecture Development Council meant a great deal to me. His dedicated support and committed service contributed greatly to the success and excellence of the College and Institute. Hugh will be deeply missed by all of us here."

Over the years, Stubbins made two significant gifts to Georgia Tech. During his fiftieth class reunion in 1984, he contributed to the Class of 1933 Dean Griffin track. While a member of the College's Development Council, he made another significant gift in support of the College. The Hugh A. Stubbins Graduate Design Studio was named in his honor.

"The Hugh A. Stubbins Graduate Design Studio is important because it creates the opportunity for collaborative learning and practice in the studio that parallels the process that exists in the best of contemporary design work," said Galloway. "Hugh has left a legacy that will live forever, providing support to our future architects so they can carry out their dreams."

Stubbins is survived by his children, Patricia Minot, Peter Stubbins, Hugh Stubbins III, and Michael Stubbins; and his grandchildren, Adam, Kurt, Alexandra, Christopher, and Samuel Stubbins; Peter, Judith, and Benjamin Minot; and Diana Reilly.

Keep in Touch: Subscribe to the College of Architecture's New E-Newsletter

The College of Architecture E-Newsletter is a bimonthly publication highlighting the most recent developments in teaching, scholarship/research, and outreach of the College. Each year the College expands its reach and deepens its substantive character in design education and scholarship. Keep in touch with the progress of the College's faculty, staff, students, and alumni as they advance the knowledge and practice for the improvement of the built environment and its artistic and cultural resources.

It's easy to subscribe, just:

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3. You will immediately be sent an e-mail with a password that you will need to activate your subscription. Enter this password in the browser window with your e-mail address. Voila, you are now subscribed.

College News continued

New Faculty and Staff



Tristan Al-Haddad (Visiting Assistant Professor, Architecture Program) holds master's and bachelor's degrees in architecture from Georgia Tech. Al-Haddad will assist in leading the College's efforts in appropriating and radicalizing digital technologies for architectural design purposes.

Having taught a variety of courses in the area of design computing and design studio, he is focusing his current research and teaching on the continuous exploration of digital technology in the design, representation, analysis, and production of geometrically complex architectures.

Al-Haddad is also a research faculty member at the College's Advanced Wood Products Laboratory, where his research is directed in the field of CAD/CAM technologies, finite element analysis, and materiality. He is also a working designer and visual artist.



Donny Allen (Visiting Professor, Music Department) is presently a candidate for the Doctorate in Musical Arts in conducting at the University of Memphis. Allen earned his master's in instrumental conducting and bachelor's in music education

from East Carolina University in Greenville, North Carolina.

Allen will serve as assistant director for the Yellow Jacket Marching Band, conductor of the Georgia Tech Concert Band, and assistant director for the basketball Pep Band. Previously, Allen served as assistant director of the University of Memphis marching band.



Daniel Castro-Lacouture (Assistant Professor, Building Construction) received his PhD from the School of Civil Engineering at Purdue University in 2003, a master's in construction management and engineering from the

University of Reading (UK) in 1999, and a bachelor's in civil engineering from Universidad de Los Andes, Colombia in 1994.

Prior to coming to Georgia Tech, Castro-Lacouture served as an assistant professor of construction engineering and management in the Department of Civil Engineering at Ohio University.

Castro-Lacouture will teach courses in construction cost management and estimating. His current research focuses on the applicability and design of B2B e-work solutions for construction processes, sustainability, and automation in construction.



Parag Chordia (Assistant Professor, Music Department) received his PhD in media computer-based music theory and acoustics from Stanford University's Center for Computer Research in Music and Acoustics, and his bachelor's in applied mathematics from Yale University.

Chordia will be part of the music technology group specializing in music information retrieval (MIR) research and applications. Through his research, Chordia attempts to synthesize advances in pattern recognition and signal processing to create systems that can "listen" intelligently. He is particularly interested in creating tools that can be used to advance research in computational music theory and music cognition.



Ellen Yi-Luen Do (Associate Professor, Architecture PhD Program and College of Computing) received her PhD in design computing from the College of Architecture at Georgia Tech, with a minor in cognitive science; a master's in design studies from the Harvard Graduate School of Design; and a bachelor's in architecture (honors) from National Cheng-Kung University in Taiwan, with a minor in urban planning.

Before joining Georgia Tech, Do was on the faculty in the computational design program at Carnegie Mellon University, where she co-directed the Computational Design Laboratory.

Do is committed to building better design tools, from understanding the human intelligence involved in the design process to leading the improvement of the interface with computers.



Mercer "Tripp" Edwards III (Director of the Architecture Shop) earned his master's in industrial design at Georgia Tech and a BFA in sculpture and photography from the State University of West Georgia.

Edwards returns to Tech after a decade of work in the industrial design field building models and prototypes.

As director of the Architecture Shop, he maintains the shop, ensures its safe use, and instructs students as they explore their designs. He will also be instrumental to the future of the shop as it grows its rapid prototyping capabilities.



Yeon-Suk Jeong (Postdoctoral Fellow, PhD Program) received his PhD in the Department of Civil Engineering from Yonsei University, with his dissertation titled "System Integration Framework through Development of STEP-based

Information Model for Steel Bridges." He received his bachelor's and master's degrees from the School of Architecture at the University of Ulsan in Korea.

Before joining Georgia Tech, Jeong was a post-doctoral fellow in the Computational Structural Engineering Laboratory at Yonsei University. Currently, his focus is on a wide scope of expertise including product modeling based on ISO/STEP methodology, computational structural engineering, and mechanics system integration in the IT-based construction industry.



Brenda Morris (Recruitment Officer, Building Construction) received a master's in education from the University of Florida in 1989 and a bachelor's in journalism from the University of Florida in 1986. She is active with several local

professional organizations including Building Owners and Managers Association, Greater Atlanta Home Builders, Southface, Associated Builders & Contractors, International Facility Management Association, and National Association of Women In Construction.



Gernot Riether (Assistant Professor, Architecture Program) studied architecture at the University of Texas at Arlington and the Dublin Institute of Technology. He received his Diplom Ingenieur in Architecture from the

University of Innsbruck, Austria, and a master's from Columbia University.

Riether, an architect based in New York and Vienna, Austria, relocated to Atlanta in August. He is working on a wide range of projects, from the scale of a building to the scale of a 1 million-square-foot master plan.

He was an honorary fellow of the Bundesministerium fuer Wissenschaft und Kunst in Vienna in 1999. He was also an adjunct professor at Columbia and Barnard Colleges at Columbia University. He has also taught at the University of Innsbruck and regularly serves as guest critic at the Cooper Union, Princeton University, and Pratt Institute.



Leslie N. Sharp (Director of Special Projects) received her PhD in history of technology from Georgia Tech, a master's in history with an emphasis in historic preservation from Middle Tennessee State University, and a bachelor's in

history from the University of Georgia.

Sharp came to Tech from Middle Tennessee State University, where she held a joint appointment as an associate professor in the Center for Historic Preservation and History Department.

As director of Special Projects, Sharp will develop and execute special projects to support and expand the scholarly and research initiatives of the College.



Matthew Swarts (Research Scientist I, IMAGINE Lab) graduated from Georgia Tech in 2006 with a bachelor's in architecture. While a student at Georgia Tech, he worked in the IMAGINE Lab as a student

assistant. Now as a research scientist, he will be working on the use of game engine technology for real-time analysis of architectural space and design.



Robert Szurgot (Research Scientist I, Advanced Wood Products Laboratory) holds degrees in business administration from Albright College and an associate's degree in mechanical engineering from Pennsylvania State University.

He is currently working on his MID at Georgia Tech. At AWPL, Szurgot will concentrate on CNC instruction. He also will be working with Professor Russell Gentry to further develop AWPL's research.



Claudia Rébola Winegarden (Visiting Assistant Professor, Industrial Design Program) completed her PhD in information design and her master's in industrial design at North Carolina State University, College of Design. She

received her bachelor's in industrial design from Universidad Nacional de Córdoba.

She recently formed Elemento, an experience design consultancy, where she serves as director. She was a lead designer at Presentation Strategies, a Research Triangle Park-based incorporation, as well as director of Nexo Diseños, a graphic and industrial consulting design firm based in Argentina.

Alumni At A Glance:

1950s

John Portman, BS 1950, was honored by Atlanta's Urban Design Commission for his significant contributions to the architectural history of Atlanta and the world at large.

Thompson, Ventulett, Stainback and Associates (TVS) was recently commissioned by Dubai Properties to design a landmark 650,000-square-foot, 51-story office skyscraper to be located at the main entrance of Business Bay, a 64 million-square-foot "city within a city" development in Dubai that will serve as the new central business district of the Emirate. **Thomas Ventulett III**, BS 1957, B Arch 1958, is founding principal of the firm.

1960s

The Woodruff Arts Center expansion received a 2006 Award of Excellence for the Renzo Piano Workshop from Atlanta's Urban Design Commission. Lord, Aeck & Sargent were the architects. **Larry Lord**, B Arch 1965, is one of the founding principals of the firm.

Eugene Surber, FIAI, BS 1961, B Arch 1965, principal of Surber Barber Choate & Hertlein Architects, received the 2006 Mary Gregory Jewett Award, the Georgia Trust's highest honor, at the Preservation Awards Ceremony in Athens in April.

1970s

Perkins + Will received an Award of Excellence from Atlanta's Urban Design Commission for their Henry Grady High School additions. **Manuel Cadrecha**, BS 1977, M Arch 1979, is design director at Perkins + Will.

Daniel Brooks Jenkins, BS 1977, was named a principal of The John Buck Company. Jenkins, a licensed architect and LEED Accredited Professional, was responsible for design and construction of the world's first LEED-CS Gold Certified project, the fifty-story 111 South Wacker Building in Chicago. Jenkins joined The John Buck Company in 1988. He and his wife, Young-Mi Kim, ChE 1978, have two sons, Mike and Matt, born in 1986 and 1988.

Two of Sizemore Group's projects recently won Build Georgia Awards for Best in Construction. Holder Construction Group LLC, general contractor for Goizueta Business School's Center for Research and Doctoral Education at Emory University, won first place in the Construction Management at Risk category. Cork-Howard Construction Company, general contractor for the revitalization of The Center for Family Resources in Cobb County, won the competition in the Design-Bid-Build Renovation category. **Michael M. Sizemore**, B Arch 1966; **Thomas M. Sayre**, BS 1977, M Arch 1978; **William J. de St. Aubin**, BS 1983, M Arch 1985; and **Ben R. Darmer**, M Arch 1980, are principals of the firm. **Bruce E. Morris**, BS 1981, M Arch 1985; and **Adem Gusa**, MCP 2005, are associates of the firm.

James "J. M." Turner, B Arch 1974, has been elected mayor of Huntsville, Texas. This is Turner's first election to public office after a twenty-six-year career as a licensed architect.

1980s

Sally Bethea, MS CP 1980, was named among the "100 Most Influential Georgians" by Georgia Trend magazine. Bethea is executive director of Upper Chattahoochee Riverkeeper. The organization has rallied considerable support for the maintenance of the river, which provides water to 70 percent of the population of the metropolitan Atlanta area.

Steve Cover, BS 1978, M Arch 1981, MS CP 1981, of Atlanta was appointed by Atlanta Mayor Shirley Franklin as commissioner of Planning and Community Development. Cover, who will oversee day-to-day operations of the Planning and Community Development Office, previously was director of the Environmental and Community Development Department for Fulton County, Georgia.

James H. Determan Jr., BS 1983, M Arch 1986, has been promoted to vice president of Cochran, Stephenson and Donkervoet (CSD). Determan has been with CSD's education studio since 1998, where he specializes in K-12 private and public schools and in university work.

Lisa Stevens Epstein, BC 1983, has founded LSE Enterprises of Northwest Florida, a property development and construction management firm. The company's flagship project will be Robinson's Mill, a residential development in Pensacola. Epstein and her son, Austin, live in Navarre, Florida.

The Atlanta Urban Design Commission recognized architectural firm Harrison Design Associates with a 2006 Urban Design Award of Excellence in New Construction for The Row Houses at Inman Park Village. **Bill Harrison**, B Arch 1995, is the founding principal of Harrison Design Associates.

Richard Kramer, BS 1980, M Arch 1982, has been promoted to associate with the firm of Pieper O'Brien Herr Architects. He had been with the firm for more than two years and is director of pre-design services. Kramer lives in Alpharetta, Georgia, with his wife, Regina, and their three children. Christopher, their oldest child, is a junior at Georgia Tech majoring in computer science.

Manuel Mergal, BS 1979, M Arch 1981, was recently named a senior associate at Cooper, Robertson & Partners.

George Nicholas, AIA, Esq., M Arch 1984, joined the law firm of Vandeventer Black LLP in Norfolk, Virginia, as an attorney-architect in October 2004. Nicholas concentrates his practice in construction, architectural, and public contracts law.

The Glen Hotel received a 2006 Award of Excellence for historic preservation from the Atlanta Urban Design Commission. Stevens & Wilkinson Stang & Newdow were the architects. **Ron Stang**, BS 1977, M Arch 1983, is one of the principals of the firm.

Janice Wittschiebe, BS 1978, M Arch 1980, received the Outstanding Alumna Award for her fortitude and contributions to the Georgia Tech community at the Women's Leadership Conference in November 2005. In July, Wittschiebe succeeded Bill Goodhew, IM 1961, as Georgia Tech's Alumni Association chair. Wittschiebe is a partner with Richard + Wittschiebe Architects of Atlanta. She is a member of the Georgia Tech Foundation board as well as the College of Architecture development council and program advisory board.

1990s

Michael Arad, M Arch 1999, recently announced the birth of his daughter, Ariel Zohar Arad. Ariel was born on August 27. Mother **Melanie**, MCP 1997, and new daughter are doing well. Nathaniel, Ariel's brother, is being very sweet to his sister.

David E. Curovy, B Arch 1999, MS IDT 2002, was named vice president of technology of operations for The Home Depot and relocated back to the Atlanta area from New York over the summer.

Sarah Lorenzen, M Arch 1997, principal of Plasmatic Concepts, participated in the New Blood: Next Gen exhibit at the A+D Museum in Los Angeles. Plasmatic Concepts also recently received a Graham Foundation grant to make a documentary film about the Los Angeles River Redevelopment Project.

J. Scott Odom, LEED, M Arch 1998, of Sasaki Associates, has been promoted to an associate of the firm. Odom's work has received awards from the American Institute of Architects and the American Planning Association and includes the University of California, Davis Segundo Commons; the University of California, Santa Barbara Recreation Center expansion; Yosemite National Park design and construction of Yosemite Lodge, expansion of Camp 4, and relocation of Northside Drive; and, most recently, the design of the firm's new offices in downtown San Francisco.

Robert S. Rule, M Arch 1990, started a new full-service architecture and interior design firm with R. Joseph Trammell, Arch 1968, and two other partners. Rule and his wife Cindy live in Marietta, Georgia, with their three children, Christian, 7, Ben, 6, and Lexie, 3.

John T. Wood, BS 1994, was named an associate at CMH Architects, a Birmingham, Alabama, design firm that focuses on retail, office, hospitality, and education architectural design. Wood, his wife Chere, and son Nicholas live in Birmingham.

2000s

David Bingham, MID 2006, has moved to Louisville, Kentucky, to join GE Consumer Products as interaction design manager. This position is new to GE's industrial design operations and crosses all appliance categories such as refrigeration, laundry, and cooking as well as all GE brands including Hotpoint, GE, Profile, and Monogram.

Tracey De Paolo, MID 2003, and partner Dave Lynn, MID 2006, have recently formed Laughing Dog Design Studio LLC, specializing in functional interiors, transportation design, and graphics. For more information, visit www.laughing-dog.us.

Rhonda Johnson, BS 1999, M Arch 2002, received her Georgia architecture license and married Sean Donehoo of Duluth, Georgia, last November.

Cathlyn Newell, BS 2003, received her master's in architecture from Rice University and is the recipient of the grand SOM Foundation Prize, a \$50,000 research and travel grant created this year to celebrate the Foundation's twenty-fifth anniversary. The special prize enables Newell to do in-depth research, collaborate with other designers, and pursue independent study outside the realm of established patterns. She will visit six Nordic countries to study the effects extreme weather conditions have on the design of structures and building sites. Her research has timely implications as architects and engineers grapple with the aftermath of recent natural disasters and continue to expand on the promise of environmentally conscious design. Newell currently is an entry-level designer with Office dA in Boston, the firm of Monica Ponce de Leon and Nader Tehrani, previous chair holders of the College's Thomas W. Ventulett III Distinguished Chair in Architectural Design. While at Georgia Tech, Newell was a President's Scholar.

The entry of **Travis Ridenbaugh**, M Arch 2004, and **Ning Wang**, M Arch 2004, in Architectural Record's High Density on the High Ground competition was named to the short list of commendable projects in February. The competition focused on examining post-Katrina housing typologies in New Orleans and was aimed at designing high-density housing and mixed-use on an area of high ground along the Mississippi River. Ridenbaugh and Wang's entry included an urban strategy derived from a historical, social, and formal analysis of the city as a whole. Their boards will join the other winners in a traveling exhibition. So far, they have been to Ogden Museum in New Orleans and the AIA convention in Los Angeles. The boards will also hang at the Venice Biennale this year.

Stay in touch with us. Visit the "Alumni News" section at

<http://www.coa.gatech.edu/resources/alumni/submit.php>

and let us know what you are doing.

New Digitally Manufactured Installation Explores Dimensionality



The Thomas W. Ventulett III Distinguished Chair in Architectural Design, an endowed chair that was originally launched in 2004, has become a central component of the intellectual life of the Architecture Program at Georgia Tech. Established by Thomas W. Ventulett III, the chair is dedicated to research, outreach, and the intellectual development of an emerging scholar or practitioner. The recipient of the 2005-06 Thomas W. Ventulett III Chair was Nader Tehrani, principal of the Architecture firm Office dA in Boston.

Dedicated to research on fabrication, Tehrani and co-instructor Tristan Al-Haddad led a team of both graduate and undergraduate students through a series of explorations that focused on possible innovations in materials studies, assembly techniques, and structural explorations. After a semester of small exercises and mock-ups, the second semester brought the students together to design and fabricate a full-scale installation that would materialize the theoretical and intellectual project of the research.

Working with Makrolon polycarbonate sheet donated by Bayer and Sheffield, the team explored the basic question of how to fabricate a three-dimensional construct out of two-dimensional surfaces. Using a computer numerically controlled router, the team cut out more than 1,500 customized pieces whose arrangement illustrates the material's structural phase change from 2-D stacked plate, to boxed beam, to expanded truss, and back to beam as the installation spans from the ground up over the beams of the College.

The installation has been fabricated on the south face of the Architecture Building. The installation will be followed by a publication, edited by Tehrani, that will document the pedagogical objectives of the research, the construction process, and final installation, in addition to featuring pointed articles that speak to new advances in architectural pedagogies and technologies.

Georgia Tech's Architecture Program Wins Dubai Competition

Georgia Tech's Architecture Program won first place in the student design competition of the Dubai Forum on Sustainable Urban Development (DSUD). The international competition sought the best proposal for rehabilitating Dubai's Central Business District. Georgia Tech took the top prize, while Pavia University (Italy) placed second.

The Georgia Tech team, which included graduate students Shauna Achey, C. Scott D'Agostino, Chad Stacy, Jeffrey Williams, and Professor Richard Dagenhart, presented their proposal in Dubai. The proposal included suggestions on broad principles, design strategies, and specific courses of action for next steps.

The winning team received a cash prize, part of which will be split among the students with the rest going to the College of Architecture to promote

urban design and research, including recruitment of students to the program.

The competition included five universities from around the world representing different regions. The four other universities were South Australia (Australia), Tongji (China), Pavia (Italy), and Aleppo (Syria). An international jury of architects and urban designers—from Australia, Canada, Egypt, Malaysia, France, and Scotland—reviewed the competition projects and selected the winners.

Georgia Tech Solar Decathlon Model Unveiled

Georgia Tech has unveiled a solar-powered house that is the epitome of high technology and environmental consciousness. The Tech team will compete in the U.S. Department of Energy's Solar Decathlon in Washington, D.C., in the fall of 2007 with nineteen other Decathlon teams. Team sponsors include Georgia Tech and the Southern Company.

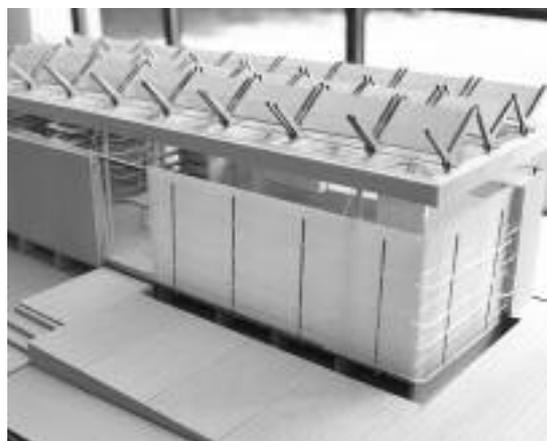
Tech's Solar Decathlon team, led by Professors Ruchi Choudhary, Chris Jarrett, and Franca Trubiano from the College of Architecture, is highly interdisciplinary and collaborative, reaching nearly all corners of the university. It comprises a large number of students, faculty, and staff across the Institute, as well as several consultants. Specifically the team includes four Institute-level partners, participation by four of the six colleges at Georgia Tech, and the support of three research centers—one each from Architecture, Engineering, and Sciences. The Tech team also includes three project managers; seven faculty advisors; more than fifty undergraduate, graduate, and PhD students; and four consultants.

With the project having such strong interdisciplinary ties, it has given students a unique opportunity and experience.

"I've always been in an engineering environment with a bunch of engineers, and so it has been a different experience working with people who are coming to the project from a different perspective," said Adam Boyd, a graduate student in mechanical engineering. "We've been combining our thought processes and ideas and have really come up with something impressive out of it."

"It is quite a fruitful experience because different students have different perspectives on the same project," said Amine Alami, PhD student in electrical engineering. "Some see it from an architecture standpoint, while the engineers see it from a focus more on the technical parts of it and are more energy oriented. It is very interesting to see how we can all find a middle point, where we can combine all these ideas and please everyone in the design part of it."

Tech's Solar Decathlon team will continue to modify the project as they prepare for the next phases of the competition. For more information on the team, visit <http://solar.gatech.edu>.



Paris Program Students Assist with Installation at Centre Pompidou

In February Libero Andreotti, director of the Paris Program, was contacted by Graham Ferrier, exhibit designer, looking for people to help with the installation of an exhibition of twenty-four recent projects by Morphosis, the highly regarded Los Angeles-based architecture firm. Andreotti felt that it would be a "great experience" for his students to work "with one of the top architectural firms today."

"The students were able to meet the principal of Morphosis, Thom Mayne, winner of the most prestigious 2005 Pritzker Prize for architecture," said Andreotti. "It was a great chance for them to see Mayne's work up close and contribute directly to this important show."

Andreotti hand selected eight of his best students to work on this project: Alex Deutchmann, Matt Garner, Anu Akkineni, Elliott Grochal, Jonathan Henry, Vineet Diwadkar, Laura Williams, and Alyson Rae Smith. Over two weeks, the students rotated working full time repainting and restoring some of the models to get them in good exhibition condition, and then installing them to get the exhibit ready in time for the opening.

"The students were well beyond helpful on this project, and without their committed assistance the show would have been difficult to pull off," said Ferrier. "We were lucky to have them."

The Morphosis exhibition was literally under the looking glass. The exhibit structure was a glass walkway overlooking twenty-four architectural models, images, drawings, and sketches that are lit from below. Most of the models were suspended in the glass structure using aluminum brackets. The exhibit also includes a series of video and webcams illustrating progress on Mayne's projects in real time.

Falconer Takes First Place in Interface Competition

The Paris Program and Interface SA recently announced Nick Falconer the winner of the Interface Competition.

Interface, founded in 1973 by Ray Anderson, IE 1956, is a recognized leader in the commercial interiors market, offering floor coverings and fabrics. Interface sponsored the competition as a challenge to design an exhibition stand for their products. Because Interface has a stated goal of sustainability and is doing business in ways that minimize the impact on the environment, the theme of the project was sustainability and flexibility. Fifteen students in the Paris Program out of twenty-five participated.

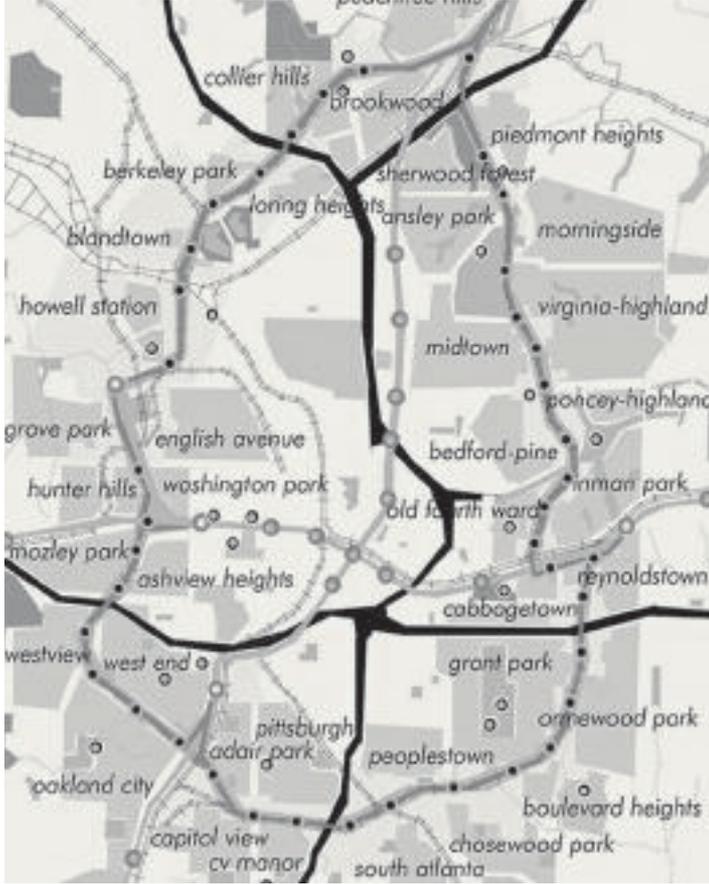
The winning project by Nick Falconer was a simple modular system using cardboard tubes and wood joints. "We were all very interested in his design because of its simplicity," said Libero Andreotti, director of the Paris Program. "It was lightweight, very easy to transport, and also had aesthetic qualities and ecological aspects."

The jury was composed of three representatives from Interface: Bruno Sevin, marketing director; Laure Rondeau, director of communications; and Didier Poisson, as well as three representatives from the Paris Program: Professors Frances Hsu, Anja Valero, and Andreotti.

Strategies for Urban Regeneration

The Atlanta BeltLine: A Public Discussion

Sabir Khan, Associate Dean of Undergraduate Studies and Creative Activity and Associate Professor;
and Doug Allen, ASLA, Associate Dean of the College of Architecture and Professor



The annual Dean's Symposium on the Changing Nature of Practice provided an opportunity for the College of Architecture, its alumni, and members of the community at large to spend a focused day on a topic that is both current and important. Last year the topic was "Architecture and Memory" with the afternoon session devoted to Michael Arad's (M ARCH 1999) winning proposal for the World Trade Center Memorial Competition.

This year's symposium focused on the BeltLine, another project close to the College since its conception and initial formulation in Ryan Gravel's (M ARCH, MCRP 1999) thesis project. Over the past six years, Gravel has continued to play an active role in the evolution of the project; this past summer he was appointed senior project planner for the BeltLine in the City of Atlanta's Bureau of Planning.

His new position is just one example of how quickly this project has grown from the early volunteer-led grassroots advocacy to the establishment, in June 2006, of the Atlanta BeltLine Inc., the operating entity that will coordinate the implementation of the BeltLine. A diverse group of people and organizations have been, and continue to be, actively involved in shaping and moving the vision along. The vote approvals by the Atlanta City Council, the Fulton County Commission, and the Atlanta School Board would not have occurred without the engagement and enthusiasm of the wider public: citizens,

professionals, city officials, politicians, and developers. Certainly each constituency sees the BeltLine somewhat differently, but the broad consensus on the importance of the BeltLine as a collective enterprise necessary for reshaping the city's future marks the project as unique in Atlanta's history.

The Dean's Symposium grew out of a desire to provide a forum that would draw upon and acknowledge the different perspectives of the BeltLine's diverse constituents. The goal was two-fold: to give proponents of particular points of view an opportunity to talk about the BeltLine as they see it; and to give the audience a chance to appreciate the layered complexity of the BeltLine project. To this end, the day was divided into three sessions. The first session brought together a planner, a transportation engineer, a developer, and a neighborhood advocate. The second session focused on strategies being developed within the College for connecting neighborhoods adjacent to the BeltLine. The final session was a moderated discussion between a group of people who are closely involved in overseeing, planning, and shepherding the BeltLine.

The recommissioning of twenty-two miles of underused or abandoned freight railroad lines into the organizing framework for a braid of trails, parks, transit, and higher-density in-town development presents the city of Atlanta with a tremendous opportunity to reshape its physical and social landscape. The presentations and the ensuing discussions during the symposium—summarized in the pages that follow—make clear both the promise of the BeltLine and the problems that lie ahead. Perhaps they also make evident the need for articulating a larger civic and political vision within which to locate the BeltLine project. Given the extended time frame of the project—anywhere from twenty-five to one hundred years, according to various participants—the BeltLine project will require a robust political will and vision; without this commitment, it risks ending up less than the sum of its parts. There are lessons aplenty for the BeltLine, both good and bad, from Boston's Big Dig to the 'Barcelona Model,' the name given to the processes that drive that city's continuous transformation.

Large-scale transportation projects have a history of being divisive, slicing and segregating communities along racial and class lines. Whether the BeltLine will end up zipping back together both sides of the tracks remains a challenge. The politicians, professionals, intellectuals, and citizens who articulated a governing ethos for post-Franco Barcelona were very aware of how development remakes a city. They recognized the need for all development projects, large or small, to have immediate and tangible results for each neighborhood in order to keep everyone enfranchised and onboard. But they also continually affirmed the larger goal: to produce a civic space, a new post-Franco public realm, within which all the residents of Barcelona would begin to see themselves as part of a collectivity. The BeltLine will undoubtedly change the city of Atlanta. But what sort of a city, what sorts of citizens, and what sort of a polity it will end up shaping is still an open question. This symposium was a small contribution to what one hopes will be a robust and inclusive discussion.

Speakers and Panelists:

Speakers:

Ms. Barbara Faga, FASLA, is a principal in the multidisciplinary landscape architecture, planning, and urban design firm EDAW Inc., where she serves as the chair of EDAW's board of directors.

Dr. Michael Meyer is a professor of civil and environmental engineering and former chair of the School of Civil and Environmental Engineering at Georgia Tech.

Mr. Carl Westmoreland is an attorney and partner with Powell Goldstein LLP, headquartered in Atlanta, with offices in Washington, D.C., and Dallas.

Ms. Liz Coyle is a communications consultant and founding member of the BeltLine Neighbors Coalition, a grassroots community organization.

Mr. David Green is a principal in the firm of Lord, Aeck, and Sargent, headquartered in Atlanta, and a member of the faculty at Georgia Tech's College of Architecture.

Dr. John Peponis is professor of architecture in the College of Architecture at Georgia Tech. His research concerns the principles and constraints that govern the generation of built form and its social, cultural, and cognitive functions.

Panelists:

Moderator: Mr. Mark Johnson, FASLA, is founding principal of CIVITAS Inc., an urban design, planning, and landscape architecture firm located in Denver.

Ms. Mary Norwood is an at-large member of the Atlanta City Council.

Ms. Mtamanika Youngblood is president and CEO of the Center for Working Families and a member of the Board of Directors of the Atlanta BeltLine Partnership.

Mr. Ryan Gravel is senior planner/project manager for the BeltLine team at the City's Bureau of Planning and originator of the BeltLine concept.

Ms. Tina Arbes was director of special projects at the Atlanta Development Authority at the time of the symposium. She is now chief operating officer of Atlanta BeltLine Inc.

Mr. Jay Tibi is chief of staff for Atlanta City Council Member Kwanza Hall, District 2.

The BeltLine and Urban Regeneration—Multiple Views: Presentation Summaries

Barbara Faga

Barbara Faga gave an overview of the BeltLine planning process carried out by EDAW, the planning and landscape architecture firm. Her presentation focused on the public and participatory nature of this process and the particular challenges that long-term and complex projects such as the BeltLine pose. “When you start, everyone has a different vision . . . you try to get people to at least some commonality of vision.”

Establishing public consensus and a shared vision was crucial to moving the BeltLine project forward quickly toward approval by the Atlanta City Council, the Atlanta School Board, Fulton County, and other organizations and groups. Using the video that EDAW developed for this purpose, Faga reviewed the process by which her team built a shared and realistic understanding of the project—its scope, limits, and possibilities—among its disparate constituencies.

Faga highlighted some of the significant questions and concerns that the process to date has brought to the fore and which the development plan sought to address. Lack of imageability, uncertainty regarding the time frame for project-related development, and the fear of rampant redevelopment of in-town neighborhoods all came up repeatedly in public meetings.

Over the course of hundreds of such meetings, the basic principles and elements of the BeltLine were discussed and reiterated. Single-family neighborhoods are to be protected; development is to be encouraged in all quadrants of the city; and work force housing, activity centers, streetscapes, historic preservation, environmental clean-up, transit, parks, and trails are to remain integral parts of the BeltLine project.

Faga also identified some challenges that the project faces: getting all the “pieces we need in place;” figuring out, through public dialog, what “all this might actually look like.” Given the complexity, funding, and extended time frame of the project, however, Faga wondered aloud whether all the elements proposed would get developed. “Do we think there will be rail all around this? You know, I don’t know. But I know that what we will get out of this is much more organized development [that will] attract people into the city.” And she reminded the audience of the unprecedented opportunity this project offers to transform Atlanta. “I have never seen anything this big going on in the city. I mean the [1996] Olympics was a big project, but did it touch every neighborhood?”

Obstacle to Success:

“The biggest obstacle will be bringing the public along as each piece of this is planned and built and implemented so that the public understands this the entire way...it’s got to be at the foremost front and center of every discussion that is going on in the city.”

Measure of Success:

“I think just keeping the discussion open, things happening...I think the public should be able to judge success by an early success: the quarry.”

Barbara Faga

Michael Meyer

As a transportation engineer with many years of government and policy experience, Meyer brought an eye-opening perspective to the transit component of the BeltLine proposal. He challenged the audience to really think about transit in a substantive and systemic way, going beyond the “pictures of light rail and streetcars” that populate BeltLine literature and the popular imagination.

Whatever shape or form the transit component ultimately takes would be, he hoped, the result of a careful consideration of both technical and financial issues, an analysis that, he cautioned, was far from complete at present.

Throughout his talk Meyer encouraged the audience to think of transit not simply in modal terms (rail vs. bus vs. bike, for example), but as a series of interconnected systems that operate at different scales and with nested local, citywide, metropolitan, and regional dimensions. The BeltLine, he said, is a City project with regional and federal implications that cut across technical as well as funding questions.

He began by quickly reviewing the range of considerations that come into play in the selection, design, and implementation of a transportation network. The BeltLine project, with its professed desire to not only connect different areas of the city, but also to connect to other transportation systems, puts into play the full range of issues that the design and implementation of any transportation network would need to address: engineering issues with regard to right-of-way and grade elevations; operation costs; the difficult funding context given the range of proposals from the region competing for federal funding; and the complex technological and political math that would determine the location of stations based on potential ridership and projected land uses.

Meyer proposed an alternate reading of the BeltLine project. Rather than seeing the transit component driving development, he characterized it as primarily a development and open space project with a transportation component to it. “Transportation, he said, is clearly a part of it, but it is really being driven by other issues.” Given this reading, the two main concerns, he suggested, would be getting funding and ensuring that the proposed development does indeed occur. Throughout his talk Meyer tempered his enthusiasm for the potential benefits of the BeltLine project with a call for making sure technical analysis, “based on good assumptions, on good data, and valid models,” is carried out for the transit component of the BeltLine.

Obstacles to Success:

“There are so many unanswered questions with regard to the transportation element that it is very difficult for me to say, ‘Here are the greatest obstacles.’ There are at least nine groups in the region who think they are going to get federal funds for transit...if in fact the BeltLine does become the one [to get federal funding]...I suspect the way the feds work is that the entire twenty-two miles will not be funded. If they fund the most cost-effective segment [the eastern segment], it would raise all sorts of interesting financial, equity, and engineering issues.”

Measure of Success:

“I would say it is successful if it provides the opportunity for the community to really become what it wants to become...[if it] helps define Atlanta as a, if not the, model of what a city of the twenty-first century could be.”

Michael Meyer

Carl Westmoreland

Carl Westmoreland, an attorney with expertise in real estate finance, zoning, and land use issues, spoke of the BeltLine from the perspective of a “responsible developer.” He acknowledged that all the members of the development community do not share the same view regarding the scope and potential of the BeltLine project. He suggested, however, that the proposed BeltLine has changed the development landscape in Atlanta in significant ways, in the process raising a common set of issues for developers who take on BeltLine-related projects.

Developers, Westmoreland said, study and

follow market trends, two of which—in-town development and in-migration—have been evident in Atlanta over the last few years, but which the BeltLine will clearly accelerate. The unique promise of the BeltLine, according to Westmoreland, is that it links areas of the city where development would not typically have occurred. “If anything can encourage some wider and perhaps more equitable distribution of development by moving the market, which I think is what developers will respond to, it may well be the BeltLine.”

In order to ensure denser and more equitably dispersed development, it is imperative that the City take the lead in providing a clear framework for future development. “As a matter of equity, good planning, and political reality, there needs to be a framework” in place, Westmoreland said, one that takes into account the longtime horizon of BeltLine development as well as the diverse needs of the different neighborhoods along the BeltLine. He suggested various instruments through which the City could provide a comprehensive yet flexible framework, from a BeltLine amendment to the City’s Comprehensive Development Plan to the use of Special Public Interest regulations or Special Administrative Permits.

From the development community’s perspective, Westmoreland concluded, the BeltLine is the necessary catalyst that will push the City toward acceptance of higher densities. It is the City’s task, however, to work with developers to encourage development that would be in line with the goals of the proposed BeltLine. For the successful implementation of the BeltLine proposal is predicated upon future development, projects that would not only increase potential transit ridership, but also generate Tax Allocation District (TAD) funds.

Obstacle to Success:

If the City were not to move “proactively with regulation which will make development possible...we don’t need fights again on a parcel-by-parcel basis [along] the BeltLine to get what everybody should realize needs to happen.”

Measure of Success:

“...when you have development.”

Carl Westmoreland

Elizabeth “Liz” Coyle

Liz Coyle spoke on behalf of the BeltLine Neighbors Coalition, a group that represents the approximately forty neighborhoods that adjoin it. Her presentation focused on how neighborhoods view the BeltLine—their hopes and their fears. The BeltLine represents a unique opportunity to integrate Atlanta’s neighborhoods, parks, transit, and economic development. For this to occur, Coyle emphasized the need for “a regional plan that is good for the city of Atlanta,” and a planning process that invites and is open to direct citizen participation. “We must ensure that the avenues for citizen input and involvement are clear and open.”

Coyle summarized several key neighborhood concerns that the BeltLine planning process would need to address. First, the need to preserve the character of the existing city and historic neighborhoods that are adjacent to the BeltLine; second, the need to protect the quality of life that would be hurt by over-density; and third, the need to prevent the displacement of existing neighborhoods. “Social equity is critical,” she said. “We have a black Atlanta and a white Atlanta. And we need to see this BeltLine as an opportunity to knit together the social fabric, so that we can say one Atlanta.”

An important step in the planning process would be for the City to reaffirm the fifteen-year land use designations in the Comprehensive Plan. Doing this, Coyle said, would ensure that development is compatible

with adjacent and existing single-family uses. In addition to this, the City must have in place a traffic and transportation master plan of the area that addresses the impact of increased automobile access on adjacent neighborhoods as well as mitigation strategies that do not depend on widening streets and intersections. “Appropriate connectivity” between the BeltLine developments and surrounding neighborhoods and parks is crucial if the BeltLine is to live up to its promise of transforming Atlanta into a walkable city. She concluded her presentation with a stark set of choices. “The city can be designed with skyscrapers and narrow sidewalks that contribute to not wanting to walk. Or, we could have five-story buildings with wide sidewalks. There is an obvious difference.”

Obstacles to Success:

“One would be if we confuse the ends with the means, and two would be if we treat this like a sprint instead of a marathon. It may be twenty-five years before we see new trains running on old tracks.”

Measure of Success:

“When I was recently in San Antonio, I found it to be an incredibly walkable city. There is a river walk and miles of walking trails all around it, and cafes, and shops, and people out enjoying each other’s company and milling about. So, twenty-five years from now, I would like to see an Atlanta that has those kinds of opportunities.”

Liz Coyle

Emergent Strategies for the BeltLine: Connecting Atlanta’s Neighborhoods

David Green

David Green, a partner in the firm of Lord, Aeck, and Sargent and member of the faculty in the College of Architecture, presented planning proposals for BeltLine neighborhoods that his students have worked on for the past two years. The studios did not approach planning through the conventional mechanisms of zoning and land use regulation. Rather, the focus of each studio was on developing a framework for the “no man’s land” that lies between the railroad and the surrounding neighborhoods. The studios, Green said, attempted to establish a framework of streets, blocks, and parcels with dimensions that would be able to accommodate the widest possible set of future buildings and land uses. The challenge was to establish this framework in such a way that it could contribute to the welfare of both the neighborhoods surrounding the “no man’s land” and the city as a whole.

The studios began by analyzing Atlanta neighborhoods that were developed before zoning became commonplace, neighborhoods that today are “by acclamation, places we like, places that work.” Students were asked to figure out how these places came to be and how they evolved over time. The goal was to “develop a set of rules concerning things like block size, street configuration, and the designation of public space.” These “rules” were then used to develop planning

frameworks for different segments along the BeltLine, subdivisions of territory that would allow these neighborhoods to accommodate a variety of possible uses over time. To date students have developed plans for several neighborhoods and about 2,800 acres of industrial and abandoned land, almost half of the approximately 6,000 acres of land that lie within the BeltLine.

Green presented proposals for one such area in greater detail: University Avenue with its very large parcels of abandoned industrial big boxes and the Pittsburgh and Capital View Manor neighborhoods on either side with a fine grain of single-family houses. The students subdivided the parcels along University Avenue, setting up a plan of streets and blocks that they then tested against possible desires, densities, and uses. “The students tested their subdivision framework for mixed use, then for high-density residential, and then for mixed use at a ‘probable’ density. By doing this, we were able to insert what the developers want, insert what the neighborhoods want, and see how the proposed public framework accommodates each. This is where the negotiation occurs, but it occurs after the framework is put into place.”

Green reiterated the importance of having a framework in place to shape the development. The frameworks developed by his studio, he suggested, would allow both testing and visualization of the impact of different densities on neighborhoods and, in the process, make possible the necessary negotiation between neighborhoods, developers, and the City. Green concluded by listing the neighborhoods for which his students have developed frameworks and his hope for continued study. “We don’t have everything, but further study in much greater detail in each of these areas needs to continue.”

Obstacle to Success:

“We have to put this or some other similar public framework in place first, because without it we have no idea, in any way whatsoever, who will have any control of the infrastructural expansion of the city.”

Measure of Success:

“When I don’t have to get in my car to drive everywhere and I can walk to most of what I want or need to do.”

David Green

John Peponis

John Peponis, professor of architecture in the PhD Program, presented his research on the correlation between “street connectivity” and urban fabric to suggest that the BeltLine—and the development of new parcels and neighborhoods alongside it—offers an opportunity to “not only absorb new growth, but also to improve the larger urban fabric [by re-tuning] the relationships between Atlanta’s neighborhoods.”

Peponis began by giving a quick overview of the concepts and analytical techniques employed in his research on connectivity within an urban fabric, the mesh of streets and blocks that we traverse by car or on foot, as we go about our lives. Two such concepts are “Street Connectivity” and “Walkability.” The first affects “how the life of cities is distributed

and moderated, so that some places remain quiet while others become local focal points or centers for the city as a whole.” The second implies “connections and continuity. We walk more and are happier if we are excited about the successive spaces we pass through and are not just interested in reaching some particular destination at the end.”

The analytical software developed at Georgia Tech by his team to evaluate different urban fabrics from the point of view of connectivity is based on two key measures of connectivity:

- Reach, a measure of density and potential, “tells us how much street length is accessible within a given walking distance from a starting point . . . the more the street length that [one] can access. . . the more the destinations that are potentially accessible.”
- Directional distance, the second measure, “tells us how many direction changes are needed to get to all the destinations that are within reach . . . the greater the directional distances, the less spatially integrated the area.”

The comparative analysis of different areas and neighborhoods in Atlanta carried out by his research team confirms what we intuitively know. “As we move from older to more recently developed areas, reach falls and directional distance increases, indicating that the street fabric is sparser and cognitively fragmented.” This continuum maps cleanly on the BeltLine as well; city neighborhoods within the BeltLine have high reach values and low directional distance values. These values are reversed for areas outside the BeltLine. And the values for neighborhoods within the BeltLine Tax Allocation District fall in between the two.

Because these measures allow one to model the spatial distribution of movement densities within a particular area, the software can also be used to help fine-tune proposed street layouts and block configurations. Peponis ended his presentation with an account of his collaboration with the urban design studios that Professor Green has led on the layout of new neighborhoods along the BeltLine. In some cases the research confirmed that a local neighborhood focus could develop around the BeltLine while creating better local links and without changing the larger structure of the surroundings. In others it identified alternative connections that would contribute not only to successful new development, but also improve conditions over a wider area.

Obstacle to Success:

“If there is no agreement on a coherent physical framework of streets, public spaces, and rights-of-way within which real estate or neighborhood interests work out to enhance rather than override our shared interest in making Atlanta a richer and more humane environment.”

Measure of Success:

“If it is a catalyst toward a more welcoming city, bringing new and existing distinct communities within easy reach of each other and of vital urban hubs.”

John Peponis



Liz Coyle



Michael Meyer



Barbara Faga

BeltLine Symposium Panel Discussion

Moderator: Mark Johnson, FASLA (M.J.); Honorable Mary Norwood (M.N.); Mtamanika Youngblood (M.Y.); Ryan Gravel (R.G.); Tina Arbes (T.A.); and Jay Tibi (J.T.)

M.J.: [With the BeltLine] you have the core proposition of making something from nothing...this is at least a 100-year proposition. One of the issues is getting public groups to come together and actually vote to accomplish something that establishes investment and risks and all sorts of uncertainties. Sabir [Khan] started out with some good questions. His three questions were, "Can an infrastructure of disconnection be turned into an infrastructure of connection?," "Who will speak for the interest of those who are not here?," and "Who will define the polity that Atlanta will become?" Three very good questions that I will come back to with all of you. [First,] I would like to pose a question for each of the panel to consider: For Jay [Tibi], "How can this project make "one Atlanta?," which is what Liz [Coyle] put forward. For Mary [Norwood], "How will you take the reality of what you are able to deliver over your term in office and beyond so that people come to realize that the idea of perfect equity will never come true, but the notion of the BeltLine is that somehow it's going to create a redistribution that will improve equity within the community." For Tina [Arbes], "How are you going to get that concurrency?" For Mtamanika [Youngblood], "How can we keep the human energy going?" I think that is the most difficult of all the questions. And for Ryan, "What on earth were you thinking?"

M.Y.: I think you've asked what we are going to have to do or what will have to happen to keep people interested, engaged, and caring about this for the long term. It is a minimal 25- to 100-year project. I think we have to do with this what we have to do with everything where we want human beings to be involved and engaged. That is we have to allow them to see themselves in it. People have to feel like something is in it for their children. And in this case, [people will] have to see themselves as part of the larger whole, which many of the neighborhoods that dot around the BeltLine don't see themselves as. So, there must be tangible projects, whether it is the quarry that becomes a fabulous park or a station that is along the BeltLine that the community has felt very strongly about.

M.J.: (To Mary Norwood) Liz said, "The neighborhoods will all respond to the BeltLine differently, because the neighborhoods are different." The city isn't about the BeltLine. The BeltLine is about those neighborhoods. So how do you deal with the built-in inequities?

M.N.: You asked how would we face the reality? Historically people in one part of our city do not go to another part of our city. What the BeltLine did was to let people know what the fabric of the city is. What the BeltLine has done is to highlight these neighborhoods in a way that had never happened and wouldn't have happened [before]. The Trust for Public Land did tours from the Botanical Garden and put people on a little tram and took them around [the BeltLine]. People were stunned. They had no idea. The developers in many cases also were stunned. People [now] know Capital View; people now know Adair Park, in ways that they never did before. So number one, we have taken the perception [of the city] and completely changed it in ways that it will never go back. Second, EDAW did a fabulous job of bringing each of the four quadrants with town hall meetings in charrettes and reviews, and really listening to people. The third is the BeltLine Partnership and Mtamanika and Ray Weeks. Everyone said, "We want something significant on the west



Left to right: Mark Johnson, FASLA; Tina Arbes; Ryan Gravel; Mtamanika Youngblood; Honorable Mary Norwood; and Jay Tibi.

side. So when the BeltLine group wanted the quarry, we got it. It was very important to make a major statement on the west side. I'm very concerned about the "one Atlanta."

M.J.: To Jay Tibi: One Atlanta, Jay. How do you achieve that?

J.T.: You have a lot of people in the community who become experts by nature of the neighborhood planning unit system that exists in this city. People are very knowledgeable about how the laws work and how zoning works at a deep level in discrete portions of the city. The challenge, I think, for any vision of a "one Atlanta" is how you get this incredible local expertise, which for decades now has become very knowledgeable about little tracts of land in small portions of the city, and get them to raise...that knowledge to something beyond their own back yard.

M.J.: I want to ask Ryan a question now. It really is: What were you thinking? What was it that you saw that was missing?

R.G.: Originally, I was very interested in how the design of infrastructure systems influences urban development. So, in the same way the old streetcars extended out of downtown and built neighborhoods like Virginia Highland and West End and Grant Park, the same way the interstate highway systems created a different kind of urban grid pattern, the question for me (was) how do you design an infrastructure system that accomplishes the revitalization of these inner city neighborhoods. The BeltLine in Atlanta is a unique opportunity with this loop of railroads, taking that as the space of that intervention. What I have learned since then is that it is not just the public investment in infrastructure that changes the market that makes development come. There also has to be market demand . . . What was missing? When I met Cathy Woolard [former president of the Atlanta City Council], we started going around the neighborhoods. We were in a basement, meeting in the Virginia Highlands Baptist Church. Some people from MARTA were there, (talking about) some proposals. Then, when we showed the BeltLine, people loved it from the very beginning. Some neighborhoods, like Virginia Highland, see it as a way to accommodate growth that is already coming and as a way to maintain some quality of life in the process. On the south side of town where I live and on the west side, people see it as a way to encourage new investment in communities that have had little or none in the last thirty to forty years.

M.J.: I understand the three things that (have been touted) are economic development, transportation, and green space. It is clear that the transportation piece is going to take a long

time to develop. How are you going to make Phase One work on the BeltLine when you can't have transit in Phase One?

M.Y.: It is a chicken or the egg [question]. We are going to start with what we have. To some extent that question is really answered for us. We can't start with the transit. There is no capacity to do that.

M.J.: Right. So how do people know what makes it a success? Phase One has to succeed.

M.Y.: We understand that. In the answer in my first question, I talked about how people must see themselves in it, and they must see tangible things. A good deal of the issue with the BeltLine for neighborhoods on the south and west sides has been lack of development, and lack of equity in terms of feeling a part of the city that everybody thinks is so great. If there are twelve places along the BeltLine that we need to do, we are going to do them in some order that we think makes the most sense; that give us the most bang for our buck.

M.J.: That's right. And so the secret, I think, to making cities change is first understanding what they are and where they've been and where they logically want to go. How are you going to make sure that the governing structures you have in place put enough consistent focus on the BeltLine?

T.A.: Mtamanika just said, we've put the Tax Allocation District (TAD) in place. And we have...

M.J.: Yeah, sure. But what about the actual governing structure? Because the ADA is a citywide organization and they are going to get pulled this way and pulled that way.

T.A.: The Atlanta Development Authority has purview over Tax Allocation Districts. The City Council is the governing structure [and] the ultimate responsible entity to make certain that in fact according to redevelopment law, the TAD redevelopment plan is implemented in an appropriate manner. Who is going to build it? An organization [will be] created called the BeltLine Inc. that will implement and build the BeltLine. The BeltLine Partnership will retain its role of ensuring community engagement [and] fundraising because the TAD is not enough money, and we all know that even if we don't count the transit. [This is] the reason you have organizations and institutions, so that they live beyond people. Specific to those institutions, we have responsibilities through the life of the TAD and through the life of the BeltLine.

PhD Program News

COA Forms AEC Integration Lab

The AEC Integration Lab is a College of Architecture Initiative to address strategic issues regarding adopting Building Information Modeling (BIM) technology and improving interoperability within the AEC industries.

BIM is an evolving and potentially transforming change within the design and construction industries, an approach based on digitally readable 3D models of buildings (rather than drawings) that portend major changes for the future of the design and building industry nationally and internationally.

"BIM is a new technology already having significant impact on the construction industry," said Chuck Eastman, director of the Lab and the PhD Program. "The fundamental issue of BIM is that it provides a machine-readable model of the building before it is built; before, there were only drawings that were interpreted by people. Having machine-readable models opens the opportunity for many performance and production benefits including the ability to integrate analysis and simulation into the design as well as allowing for automation of cost estimation both by designers and contractors."

Many firms are already involved in the assessment and early application of BIM.

"Since the College is one of the leading research institutions developing advanced information technologies in the AEC industry, partnering with the early adopters is critical to the success of the Lab," said Dean Thomas Galloway. "Our partners will help in developing new ideas, solving problems, and ensuring that the AEC firms are on the cutting edge of new developments in design and technology."

Current AEC Integration Lab Partners are: Cooper Carry Architects; The Facility Group; Thompson, Ventulett, Stainback & Associates; Perkins + Will; and SOM.

The AEC Integration Lab will undertake studies of different BIM software regarding its capabilities and limitations; assess workflows between different software packages and determine how best to accomplish smooth workflows between members of the design/construction team; develop custom parametric objects for special use and show firms how to develop their own custom parametric objects; demonstrate capabilities in design fabrication; advise firms on development of specific software and fabrication technologies; and advise firms on evolving practices, standards, capabilities, and available technologies in the AEC industry.

The initial meeting of the AEC Integration Lab partners was held on the Georgia Tech campus in August. At the inaugural meeting of the partners, the group reviewed with Georgia Tech new initiatives and the status of BIM and discussed strategic issues, especially for architectural firms and their IT directors within the overall structure of the AEC industry. Samir Emdanat from Ghafari and Associates, an A&E firm in Detroit, presented several case studies showing reduction of 20 percent to 30 percent in construction time and significant savings in cost using BIM. The partners meeting discussed several initiatives that will be developed over the next year. The partners will meet regularly to collaborate with the Lab on these initiatives.

The AEC Integration Lab involves the Architecture, PhD, Building Construction, and various other master's programs of the College. Eastman initiated the Lab through a grant from Tectonic Network with support from Arol Wolford and Jane Wolford (MS 1998, PhD 2004).

For more information on the AEC Integration Lab, visit <http://bim.arch.gatech.edu/>.

Lewcock Participates in UN Historic Preservation Initiatives



Conserving architectural heritages for their intrinsic aesthetic value is important. However, noted Professor Ron Lewcock, "They are also an essential part of cultural identity and memory, and even more so at a time when the dialogue between civilizations is so important."

In 2004 a general resolution of UNESCO called for an ongoing committee to be set up to consult with and advise the director-general on appropriate measures to be taken to safeguard the cultural heritage of Jerusalem. As a member of the committee since 2004, Lewcock was one of twelve international experts who met in September in Paris to advise the director-general of UNESCO on appropriate measures to be taken. Advice was sought on priorities, on strategies of conservation, on training of future conservators, on the selection of personnel, as well as detailed advice on individual projects.

"The twelve experts, including representatives of the government of Israel and Palestinians from NGOs, have worked harmoniously and positively together," said Lewcock. "The recent meeting proposed pilot projects, especially those involving street and public space improvements, training schemes, and micro-financing to improve the living conditions of ordinary citizens. But during the meeting, we were continually reminded that political and ownership problems are omnipresent and block almost every effort at conservation and revival."

Lewcock is also advisor to the government of Yemen on the conservation of its architectural heritage, and during the past year has paid three visits there.

Among the most important of the ongoing projects in Yemen is the conservation of the Great Mosque of San'a'. The Great Mosque at San'a' is organized around a central courtyard. To the north and south are its prayer areas, and to the east and west of the courtyard are halls of three aisles each. Inside the courtyard stands a domed square structure that dates to the early sixteenth century, when the courtyard itself was paved.

"The core of the Great Mosque of San'a' is believed to be the oldest surviving mosque in Islam, having been laid out to his specifications on the direct instructions of the Prophet, and not substantially modified since," said Lewcock.

On the advice of Lewcock, the services of Isam Awad, the conservation architect of the Dome of the Rock and the Aqsar Mosque in Jerusalem, were

obtained for the direction of the conservation work, which is expected to last at least ten years. Professor Chris Edens of the University of Pennsylvania at Philadelphia was appointed director of the archaeological excavations of the mosque.

Kufic inscriptions have recently been found around the edge of the whole mosque under the ceiling, meaning that it had already reached its present size by 758 AD. This and the gilded wooden ceiling decoration are being cleaned by the Instituto Veneto per I Beni Culturali under the direction of Renzo Ravagnan.

In December, Lewcock will be one of the instructors in a training program in Venice on conservation in the Middle East, before returning to Yemen to continue advising on the work on the San'a' Great Mosque.

Building Performance Toolkit Receives REALCOMM "Digie" Award for Best Use of Automation in Real Estate

Organizations lack vital information about the performance of their buildings. Building deficiencies, maintenance backlogs, lack of comfort, lighting complaints, and poor energy performance fail to get an adequate and timely response. With these issues in mind, the College's Building Technology group developed a Building Performance Toolkit for owners to take regular, cost effective "X-rays" of their buildings in order to check whether a safe, energy conscious, healthy, and productive environment is maintained over the life span of the building.

The Building Performance Toolkit received the "Digie" award in the academic category for "Best Use of Automation in Real Estate" at the 2005 REALCOMM (Commercial Real Estate Automated Business Solutions and Intelligent Buildings) Conference. The Georgia Tech developer team, consisting of Professor Godfried Augenbroe, Cheol-Soo Park (postdoctoral fellow), Jason Brown, and Shariar Makarechi (PhD students) received the award for "an ongoing dedication to energy efficiency in commercial real estate."

The current version of the toolkit contains performance indicators for energy, lighting, thermal comfort, and maintenance. It exists as a spreadsheet (developer version) and a Web-hosted, forms-based application (end user version). It can be used in continuous commissioning strategies, cost effective self-deployed energy audits, and prioritizing budget allocations toward new energy-saving technologies.

Originally the toolkit was developed for use by the General Services Administration (GSA). However, the toolkit is also being used by industrial partners and by the University of Pennsylvania for the introduction of a campus-wide energy cost model.

For more information on the toolkit, send inquires to fried.augenbroe@coa.gatech.edu.

Cheryl Contant Named ACE Fellow



Cheryl Contant

David Ward, president of the American Council on Education (ACE), recently announced that Cheryl Contant, director of Georgia Tech's City and Regional Planning Program, has been named an ACE Fellow for academic year 2006-07.

Contant has accepted a placement at Macalester

College in St. Paul, Minnesota, that began in September 2006.

"I couldn't be more pleased that Cheryl was selected as an ACE Fellow," said Dean Thomas Galloway. "The ACE is a premier program in leadership training for higher education. Cheryl will gain valuable leadership experience working alongside a president and provost at Macalester on issues that are crucial to the future of higher education and seeing how that institution is addressing those issues."

The ACE Fellows Program, established in 1965, is designed to strengthen institutions and leadership in American higher education by identifying and preparing promising senior faculty and administrators for responsible positions in college and university administration. Thirty-six (36) fellows, nominated by the presidents or chancellors of their institutions, were selected this year in a national competition.

"This is an amazing opportunity to get to observe first-hand how colleges and universities are run," said Contant. "This fellowship offers me the opportunity of going from being discipline focused to being mentored into a position of leadership that requires a different set of abilities and skills and a much broader institutional perspective."

Contant has been at Georgia Tech for seven years as director of the City and Regional Planning Program. She has also served as chair of the Student Honor Committee at Tech and organized changes in the hearing process and disposition of cases of suspected academic misconduct. Prior to coming to Georgia Tech, Contant was associate professor and chair of the Urban and Regional Planning Program at the University of Iowa, where she also chaired the Board in Control of Athletics, the faculty oversight body over men's and women's intercollegiate athletics.

Each ACE Fellow will focus on an issue of concern to the nominating institution while spending the next academic year working with a college or university president and other senior officers at a host institution.

During her fellowship at Macalester, Contant will concentrate on issues regarding international undergraduate programs: how they work, how much they cost, what do they accomplish, and how they can be expanded. Contant will return to Georgia Tech in the summer of 2007. To contact her this academic year, e-mail contant@macalester.edu.

French and Keating Honored as AICP Fellows

Professors Steve French and Larry Keating recently joined the ranks of other distinguished planners as fellows of the American Institute of Certified Planners.

Last April, French and Keating were officially inducted into the College of Fellows at the APA National Planning Conference in San Antonio.

"The election of fellow by the American Institute of Certified Planners is the highest recognition given to a city planner," said Dean Thomas Galloway. "It is a testament to the quality of work produced by Professors French and Keating. I am very proud of this most deserved recognition."

The American Institute of Certified Planners (AICP) bestows this honor in recognition of the achievements of the planner as an individual, elevating the fellow before the public and profession as a model planner with significant contributions to planning and society.

French's work primarily focuses on the areas of land use, GIS applications in city and regional planning, and the impacts of urban development. He is a member of the American Planning Association, the American Institute of Certified Planners, the Earthquake Engineering Research Institute, and the Urban and Regional Information Systems Association. "I am truly honored to join this august group of professional planners," said French.

Keating's work focuses on housing economics and policy, open housing, real estate and urban land economics, neighborhood and community development, and planning in developing countries. "As an academic, I am particularly honored to be recognized by the professional society," said Keating.

Keating Retires after Three Decades



Larry Keating

Larry Keating, professor in City and Regional Planning, retired last May after devoting the last thirty-three years to teaching, leading studios, and conducting his research.

Keating received a bachelor's degree in architecture in 1967 and a master's in architecture-urban design in 1968, both from Virginia

Polytechnic Institute and State University. He received a PhD from the University of Wisconsin-Madison in 1978.

Keating began his career at Georgia Tech in 1973 as an assistant professor. He was promoted to associate professor and tenured in 1979, and was promoted to full professor in 2002.

Keating's work focused on planning, design, teaching, and learning in impoverished communities. His research is best characterized as "scholarship of engagement." He built his career around the involvement of institutions of higher education in community outreach and the ability of that involvement to derive knowledge.

Over the years, Keating has taught history and theory of planning and led many planning studios. His students, in studios and in their option papers, have won several state, regional, and national awards. He helped found the Community Design Center of Atlanta, a private non-profit organization that provides urban planning and architectural technical assistance to low-income neighborhoods and community-based non-profits. Through this Center, Keating has been a strong advocate for policies and programs in Atlanta to assist low-income or historically disadvantaged groups.

The quality of his scholarship has been recognized with two national awards, but the crowning touch to his research efforts to date is the publication of his book in 2001, *Atlanta: Race, Class, and Urban Expansion*. He has also brought in almost \$2 million in funded research and provided funding for many students as they worked their way through school.

"Larry has touched the lives of many students and he has left behind a legacy already with Georgia Tech," said Cheryl Contant, director of the City and Regional Planning Program. "It was his brain-child that led the Georgia Planning Association to fund an endowment, that he seeded with his own money, that will grow into a fund for a fellowship for one of our students."

Keating has been an inspiration and touched the lives of many students over the last thirty-three years.

"I have known Larry since the fall of 1973, when I had the good fortune to attend his first lecture at Georgia Tech," recalled Fernando Costa (BCE 1974, MSCE 1976, MCP 1976), AICP, planning director for the City of Fort Worth. "I have subsequently dealt closely with him on a variety of fronts: as his student in Tech's Graduate City Planning Program (1974-76); as his colleague on the boards of the Georgia Planning Association (1985-89) and the Atlanta Community Design Center (1989-98); and as his client when I served as planning director for the City of Atlanta (1987-98). Through all of those experiences, I came to admire Larry's intellect, his unwavering idealism, and his dedication to teaching and mentoring.

"Along the way, Larry's gentle manner, his sense of humor, and his healthy irreverence have provided a kind of moral compass for many of his clients, colleagues, and students," Costa continued. "In the end, his work has appreciably improved the quality of life in dozens of disadvantaged communities while inspiring hundreds of planning students to pursue meaningful and productive careers."

"Professor Keating instilled in me the idea that it is the obligation of planners to be advocates for those that can't or don't speak for themselves," said Ellen Heath, MCP 1982.

"Professionally, he has of course made me aware of issues surrounding housing equity, particularly for those folks who oftentimes do not have adequate representation," said Matt Williamson, MCP 2006. "His classes and studio have opened my eyes to how organizations and individuals have and do, either accidentally or otherwise, sometimes exclude the considerations of disadvantaged groups when making community decisions. Personally, I believe that he emphasizes the importance of planners to consider the impacts of both vocal stakeholders and those who may not have a voice in order to contribute to the greater well-being of our communities."

Even though Keating has formally retired, he will not be going far. He will continue to teach one course in the fall and one in the spring as well as continue some research through Tech. He will also continue advising thesis option students. "The big change for me at Tech will be no more meetings, and I'm going to spend a little more time in Ireland and travel a bit more," Keating said.

CRP Interim Co-directors Named

Professors Bill Drummond and Michael Elliott have been appointed interim co-directors for one year to accommodate Cheryl Contant's leave of absence to fulfill her obligations as an ACE Fellow.

Drummond is responsible for the master's and undergraduate curricula, scheduling, and student affairs, while Elliott is responsible for PhD and faculty issues, as well as management of the day-to-day operations and budget. Drummond and Elliott share outreach responsibilities.

"Professors Drummond and Elliott and I will be working closely together to ensure that the momentum of the program will be maintained and extended during Cheryl's absence," said Dean Thomas Galloway.

Wu Chosen One of Nation's Top Five



Students in Georgia Tech's Industrial Design Program gain additional professional development skills from their active, local student chapter of the Industrial Designers Society of America (IDSA). Through the involvement of this local chapter, students have the

opportunity of entering IDSA's annual Student Merit Awards program where one outstanding senior from each of the five district conferences is selected to represent his or her district at an upcoming national conference.

For the third year in a row, a Georgia Tech student has been selected to represent the Southeast in the IDSA merit award contest. Through a juried selection, Arthur Wu (ID 2006) won the number one spot in the Southeast. Wu competed with students from Georgia Tech, Savannah College of Art and Design, Auburn University, University of Louisiana at Lafayette, North Carolina State University, and the Art Institute of Fort Lauderdale. The jury for the award was made up of practicing designers throughout the Southeast.

"As a student, Arthur has the innate ability to edit, change, and constantly improve on his original idea or concept to communicate the essence of what is important and of value," said Professor Wayne Chung. "That requires him to be constantly learning and listening. He is what I would call under-ground creative and over-ground effective. Many of his designs are clean and beautiful without much adornment or forced stylization; with more investigation, the overall concept, form, and details have real substance and thought that shows care and process. Arthur makes us proud to note that he is the third Georgia Tech student in a row to accomplish this incredible task."

Wu decided to take part in the competition two years ago while attending the IDSA conference and saw "the awesome work" that his fellow students were presenting.

"From that day on, I made up my mind to put everything I had into being able to get on that stage and show off my work," said Wu. "With every project I've done, my main motivation was to have something good enough to present in front of a national audience at the IDSA district conference. And now I've accomplished something that I've set my mind on over the past three years and worked incredibly hard to achieve."

Juniors Get Their Feet Wet Designing Shower/Spas

Junior design students gained real-world experience by helping to Americanize a product currently being made in China for Aqualair, a Georgia company located in Dahlonega, last year. Three junior Industrial Design studios under the direction of Professors Kevin Reeder, Florian Vollmer, and Randy Bernard worked with Aqualair to redesign a shower/spa.

"One of the main purposes of the Aqualair student design project is to Americanize the designs so they can be manufactured by Americans and sold here," said Abir Mullick, director of the Industrial Design Program. "The potential for Aqualair to manufacture in Georgia and create new jobs excites us tremendously. The job creation aspect of this project empowers students by letting them know that design can create economic development and regional growth."

Aqualair's shower/spa features steam, hydrotherapy, aromatherapy, soothing music, therapeutic lighting, and multiple shower jets. Alex Suslaev, director of product development at Aqualair, and his team challenged the Georgia Tech students to add new features to Aqualair's current product line, develop a new market using the existing hardware, and envision new markets for new technologies to meet future needs.

"We decided to work with Georgia Tech because of its reputation and because of Abir Mullick's expertise in the industry," said Suslaev.

Most students don't get the opportunity to design for a larger real-world audience. As students the only clients they are typically trying to please are their professors and themselves.

"This is a very special project for the ID Program," said Mullick. "It offers the opportunity to work closely with a client and brings in real-life design experience that is so important to industrial design education. While the design studio experience allows students to focus on the academic aspects of industrial design, the Aqualair project overlays important design challenges (production, branding, and marketing) that students are forced to consider in the design."

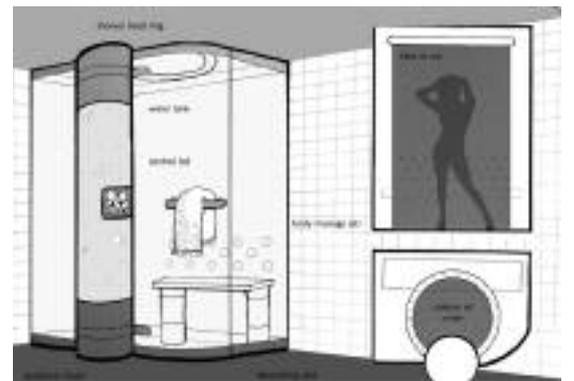
While the students were not required to build a functional device, they were asked to create their design based on real-world applications and associated limitations of the object.

"As junior students they did a terrific job of understanding the problem and providing a design response. Even though their work showed great maturity in handling many complex issues, the extent to which these designs will stand up to real-life challenges will be determined once some of these ideas get implemented. It is highly gratifying that the work of our students has helped a local business as well as provided economic development in the region," said Mullick.

For more information on Georgia Tech's Industrial Design Program, visit <http://www.coa.gatech.edu/id/>.



One group designed a shower/spa with a central body spray, rain shower, and hand-held sprayer for those individuals who need to sit while showering.



Another group designed a shower/spa for the future. The emphasis of this design is a central water tower that can increase the water pressure as well as give the shower an interesting focal point.



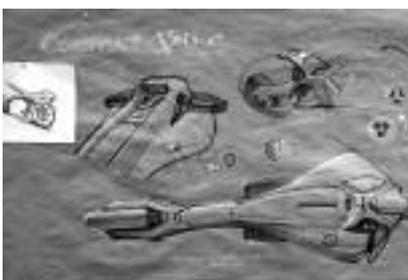
Though this shower/spa seems to be more traditional looking, the user is oriented facing the door during use to increase the feeling of space. The shower includes a recessed seat with body massage jets and hand-held shower handle.



3D rendering of a wine glass carrier called the Wine Bouquet. Designed for use by waiters, this product will aid in the safe and efficient delivery of used wine glasses from the table to the back of the restaurant where they are washed. It can be folded to save space.



Sustainable transportation project completed in Lund, Sweden. The goal of this project was to design a closed energy system for the urban transportation needs of the near future.



Part of the Mercury Restaurant Line design family. This is a restaurant table system where the elements that are usually placed on top of the table (i.e. salt/pepper shakers, napkins, light/candles, sauces) are integrated into the surface, creating a flush tabletop. This allows for more table space and also for easy clean-up.



A redesign of a low-end Philips toaster.



Building Construction News

Thomas-Mobley Joins Federal Research Team to Study Immune Buildings



Professor Linda Thomas-Mobley has been appointed by the National Academies to serve on a national research committee to study immune buildings. The committee will assist the National Academies' Board on Chemical Sciences and Technology

(BCST) to undertake a study on immune buildings. The Department of Defense's Defense Threat Reduction Agency (DTRA) is sponsoring this study.

The committee will provide advice to DTRA to assist it in its capacity to plan, design, construct, and operate future chemical and biological resistant facilities for the Department of Defense. The review will analyze existing studies, both military and civilian, on preventing and mitigating the effects of a chemical or biological release or infiltration into a built structure, providing general principles that can be derived from these studies and existing testbeds, and discussing the cost/benefit and risk of various possible protection schemes.

Thomas-Mobley was selected for this honor because of her expertise in building systems.

The National Academies is a private, nonprofit institution that provides science, technology, and health policy advice under a congressional charter.

BCST serves as the nation's gateway to unbiased scientific advice and guidance on matters involving the chemical sciences. BCST's goal is to ensure authoritative and accurate evaluation of important national issues that hinge on chemistry and chemical engineering. To meet this goal, BCST identifies and accesses the very best expertise in chemical science and technology for its study committees.

DTRA's mission is to safeguard America and its allies from weapons of mass destruction (chemical, biological, radiological, nuclear, and high yield explosives) by providing capabilities to reduce, eliminate, and counter the threat and mitigate its effects.

BC Program Gets Thumbs-up on Reaccreditation

The Building Construction (BC) Program recently received reaccreditation from the American Council for Construction Education (ACCE). The reaccreditation, announced at the ACCE Executive Board meeting in San Diego in February, is for a maximum duration of six years.

"As one of the oldest and highly regarded accrediting bodies, ACCE only accredits the nation's best construction programs," said Roozbeh Kangari, director of the Building Construction Program. "Accreditation from ACCE ensures that we meet the highest standards in construction education. It's also a reflection on the quality of our students, faculty, and staff and helps the BC Program

maintain its reputation as producing top-notch graduates and offering an extremely innovative curriculum."

The Bachelor of Science in Building Construction at Georgia Tech focuses on the integration of construction, management, real estate development, design, and engineering principles. Undergraduates can choose to specialize in construction management, construction real estate development, or construction science. Students are taught to manage the functions and processes of every aspect of the construction industry, and the curriculum is made up of a variety of construction management, law, structures, management, accounting, physics, and other courses designed to prepare students for real-world construction management challenges. The BC Program currently has approximately 270 students.

The accreditation process included a site visit to Georgia Tech's campus in fall 2005. The board admired the BC Program for being very organized and timely during the team visit and named the BC Program's high-quality students, faculty, staff, and education program as some of its greatest strengths.

ACCE was established in 1974 to be a leading global advocate of quality construction education and to promote, support, and accredit quality construction education programs around the world. ACCE is recognized by the Council for Higher Education Accreditation as the accrediting agency for four-year baccalaureate degree programs in construction, construction science, construction management, and construction technology, and the accrediting agency for two-year associate degree programs of a similar nature.

Music News

College of Architecture Offers New Master's Degree in Music Technology

Georgia Tech's Music Department within the College of Architecture now offers a Master of Science degree in Music Technology.

"After working several years to expand the music program and to provide an academic center to what has been for years a co-curricular program, I believe this new master's degree in Music Technology represents a huge step in the development of music at Georgia Tech," said Dean Thomas Galloway. "I am so appreciative of the many students and faculty across campus who have helped us create a fully interdisciplinary program centered in art and technology."

Students interested in the program will need to complete forty-eight credit hours to graduate and will be heavily involved in research.

"We would like students to take part in our effort to innovate and develop future technologies for music performance, composition, and education," said Gil Weinberg, director of Music Technology.

The new program will offer students two different concentrations to complete the degree. However, the degree program will start with one concentration in Computer Music Research and Engineering. The other concentration will be geared toward music production, and the plan is to offer that concentration within the next few years.

"Clearly, what is most important is to provide a world-class education for students who wish to pursue careers in music technology," said Frank Clark, director of the Music Department. "We also hope to positively impact our profession through innovative research, performance, and teaching. As we look forward, it will be imperative to build a new Center for Music, Art, and Technology. We desperately need new and innovative facilities."



Members of the Music Technology Group in the Music Department's MIDI instruction lab. From left to right: Mark Godfrey (Graduate Student), Jason Freeman (Assistant Professor), Travis Thatcher (Graduate Student), Parag Chordia (Assistant Professor), Frank Clark (Professor and Director of the Music Program), Scott Driscoll (Graduate Student), and Gil Weinberg (Assistant Professor and Director of Music Technology). Not pictured - Chris Moore (Assistant Professor).

The master's degree in Music Technology is the first degree in Tech's history combining performing art with technology. The degree is also interdisciplinary and will require collaboration across campus.

Students pursuing the new degree have a chance to take classes in industrial design, electrical and computer engineering, mechanical engineering, computer science, the College of Sciences, and literature, communication, and culture.

In conjunction with the approval of the Master of Science degree in Music Technology, the 2007 Dean's Symposium on the Changing Nature of Practice will explore how innovative research and technology broadens traditional academic and conservatory instruction and performance. This interdisciplinary program, scheduled for March 3, 2007, will feature scholars and demonstrations and promises to expand understanding of the art of music. For more information on the Symposium, contact Leslie Sharp at leslie.sharp@coa.gatech.edu or 404.894.1096.



Scott Driscoll (right), MSME 2005, currently a graduate student in architecture, and Professor Gil Weinberg create music with Haile (center), a robotic percussionist that can listen to live players, analyze their music in real time, and use the product of this analysis to play back in an improvisational manner.

Advanced Wood Products Laboratory

AWPL Studies Flow and Process at American Woodmark Manufacturing Plant

Increased competition and market globalization are forcing manufacturing plants to look at how their services can be streamlined to maintain competitive prices. A well-designed system has streamlined materials flow, which cuts down costs of moving raw materials to their destinations. With this in mind, American Woodmark's Toccoa manufacturing plant has asked the research team at the College's Advanced Wood Products Laboratory (AWPL) to simulate the flow of materials and the process their materials go through from the moment they are produced to the moment they are loaded into the truck to be shipped for plant improvements.

The Toccoa manufacturing plant is one of American Woodmark's parts manufacturing production plants for cabinets that ship their parts to one of the assembly plants to be put together and distributed to the market. The Toccoa plant has twelve different points where pallets of parts are produced and are ready to be wrapped, strapped, and shipped.

Because experimenting with the actual physical system is often difficult, costly, or impossible to do, Russell Gentry, AWPL associate director of research, and Alejandra Garcia-Castro, graduate research assistant, are using ARENA, a simulation software, to mimic the behavior of the real system currently used at the Toccoa manufacturing plant.

"American Woodmark's queuing space appears to be insufficient, forcing them to move pallets of finished parts away from the established flow path to a secondary waiting area, and then to be moved again into the flow path when there is space," said



Russell Gentry (left) and Alejandra Garcia-Castro review material flow documents before inputting the data into the modeling software.

Garcia-Castro. "All this moving material around costs them time and money. Is it really that they need more queuing space or is there another problem with their flow? Does the outcome change if one more station for strapping and wrapping is added or if the strapping and wrapping operation is automated? It is too costly to answer these questions and arrive at a solution by physically 'playing' with the system; therefore, the use of systems simulation is the best avenue to study this system."

The first step in this process was to demonstrate the capabilities of the ARENA modeling software to the American Woodmark group by creating a "silly simulation" of a typical worker and his morning routine.

After completing the silly simulation, a flow chart was created using the flow and logic of the morning routine system. The flow chart was used to

increase the understanding of the relationships of the activities performed as well as the decisions that were made. Then the results were analyzed.

"From the analysis of the simulation, we learned that it is necessary to build the simulation as detailed as possible in order to obtain the desired answers," said Garcia-Castro. "It is easy to make mistakes while creating the simulation that are later hard to find and correct. We also utilized this simulation as a warm-up run for the project's larger and more complex simulations. Starting with something basic, it is easier to understand the software better and move into more complicated logic to simulate with ARENA."

The next step in the process will be to model the flow of finished parts from a single saw through the wrapper, the strapper, and into the truck for shipping.

"Since the Toccoa plant has such a complicated operation, we are taking a single output of parts from the twelve that exist at the plant and modeling that before we try to tackle the entire thing," noted Garcia-Castro. "We are doing this in order to gain understanding of the entire process piece by piece."

Once the first output of finished parts is simulated, the team will replicate the logic and modify it in order to simulate the other eleven finished parts material flows that exist in the Toccoa plant.

"After we simulate the entire process, we should be able to see where bottlenecks of the process flow are," said Garcia-Castro. "Also, American Woodmark will have a simulation that they will be able to modify in order to 'see what would happen if' in order to reach solutions to any problems observed, without having to stop production or investing a lot of capital in a possible solution that may or may not work."

Center for Assistive Technology and Environmental Access

Skin Deep: CATEA Researches Imaging Technology

For people with impaired mobility and reduced ability to sense injury, the risk is high for pressure ulcers that can develop when they sit or recline in one position too long or wear a poorly fit prosthesis for an extended period. Healthcare professionals routinely check patients for early signs of erythema, or skin redness. But visual inspections sometimes fail to detect reddening of the skin and other indicators of tissue damage, especially in people with darkly pigmented skin. If undetected, these at-risk sites can develop pressure ulcers.

Beyond ulcers looms a more serious risk for these patients: pressure-induced, deep-tissue injury, which occurs below the skin and is often not diagnosed visually until it has reached a dangerous, advanced stage.

Healthcare practitioners may be able to reduce their patients' risk of these complications by supplementing their visual inspections with a low-cost, handheld imaging device that could detect both early-stage pressure ulcers and the more serious deep-tissue injuries. Such a device is the ultimate goal of a Center for Assistive Technology

& Environmental Access (CATEA) field trial study.

"There's a huge opportunity to intervene if we can see pressure ulcers at a very early stage," says lead researcher Stephen Sprigle, director of CATEA. "Detecting them then drives the treatment. If you take the visual indicator away, it adversely impacts care, and for folks with darkly pigmented skin, that's a problem."

The CATEA research team believes a handheld detection device that combines multi-spectral and acoustic-imaging technologies could lower these costs. The preliminary studies show promise.

A significant focus of the study is on detection of bruises and erythema in people with darkly pigmented skin. Determining when and how a bruise occurred is important to the National Institutes of Justice (NIJ) for forensic purposes.

"One of the markers of neglect in the elderly is pressure ulcers, and bruises are a marker of abuse," Sprigle explains. "So detecting these problems in the elderly shares some of the same technical challenges we have in detecting erythema in people with dark skin."

Currently, doctors examine bruises, and based on their experience and previous research, they guess the age of the bruises depending on their color.

"There's a need for this technology in every nursing unit in every hospital, group home, nursing home and rehabilitation facility," Sprigle says. "Also, if we can detect bruising and estimate age, it will be useful to social service agencies and forensics professionals."

This study is funded by a grant from the National Institutes of Health (NIH) in collaboration with the NIJ, which funded the NIH grant because of its interest in the development of a low-cost imaging device to help officials identify elder neglect and abuse.

The current phase of the project was funded through August 2006. Currently Sprigle is applying to NIJ and NIH for continuation funding. Ultimately, the research team plans to develop a prototype software program and/or hardware device. The researchers estimate the ultimate product—a handheld imaging device—will cost no more than \$5,000 per unit. They want to license the technology to an optics and/or acoustics firm.

Read more at:
gtrresearchnews.gatech.edu/reshor/rh-ss06/bruises.html

Center for Quality Growth and Regional Development

CQGRD Promotes Quality Growth throughout Georgia and Beyond

Three themes frame the Center for Quality Growth and Regional Development's (CQGRD) most recent efforts: regionalism and sustainability, merging theory and practice, and health and equity. Under the leadership of Catherine Ross, Harry West Professor for Quality Growth and Regional Development, CQGRD has spent much of the last year working on projects to promote quality growth in Georgia and beyond.

Regionalism and Sustainability: In January, mayors from throughout the Southeast, including Atlanta Mayor Shirley Franklin, state officials, and business leaders, attended a one-day symposium on the Piedmont Atlantic MegaRegion (PAM). CQGRD and Georgia Tech's City and Regional Planning Program are at the forefront of studying PAM, which includes all of Georgia, North Carolina, South Carolina, Tennessee, and Alabama, and portions of Florida. The January meeting provided an opportunity to hear from local and state leaders about avenues for large-scale regional efforts, including transportation, green space protection, and emergency preparedness. U.S. Senator Johnny Isakson gave the keynote address; attendees spent the morning hearing about experiences from other regions and the afternoon in brainstorming sessions. The symposium has since been featured in *Urban Land*, the magazine of the Urban Land Institute.

Theory and Practice: Two conferences, "Governments and Growth" in March and "Transportation Design for Communities," co-presented with the transportation-planning firm Glatting Jackson in May, also attracted planners and government officials who want to bridge the divide between theory and practice. In September CQGRD hosted a one-day conference on "Everyday Neighborhoods," focused on urban redevelopment that supports social equity and sustainability.

Officials throughout the state have also contracted with CQGRD to provide planning services, giving the Center a chance to put theories of quality growth and livability into practice. In 2005 CQGRD completed a quality-growth audit and infrastructure management plan for Camden County, Georgia, and its three cities. The Center recently completed population projections to 2030 for ten counties and thirty-five cities in coastal Georgia for the Coastal Georgia Regional Development Center. Along with Kimley-Horn and Associates and Sycamore Consulting, CQGRD is currently developing an Active Living Community Transportation Plan for the city of Decatur.

Health and Equity: CQGRD continues its work, sponsored by the Robert Wood Johnson Foundation, on a Health Impact Assessment (HIA) of the Atlanta BeltLine Redevelopment Plan, which includes parks, trails, transit, and redevelopment nodes around the city center. The HIA will answer the questions: How will this project affect health, health behaviors, and social resources necessary for



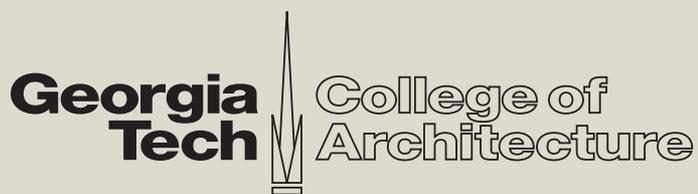
Atlanta Mayor Shirley Franklin at the January Symposium

health, and who will be affected?

CQGRD has also started the third year of the Healthy Places Research Group, a cooperative effort with Emory University, which each month brings together researchers, students, practitioners, and community advocates from a variety of interest areas to talk about health and the built environment.

Throughout these and other efforts, CQGRD sustains and expands a dialogue on how to improve quality of life and planning in Georgia and beyond. For more information about CQGRD, visit www.cqgrd.gatech.edu or call 404.385.5133.

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