

## High Tech Becomes Small Tech: The Emergence of a New Technological Frontier

The invention of the transistor and the integrated circuit marked the genesis of microelectronics and set the stage for the unprecedented technological advances of the 20th century. Indeed, it is said that no invention in the history of humanity has spread so quickly throughout the world, or so profoundly pervaded so many aspects of human existence as the microprocessor.

ECE and its associated research centers have been at the forefront of microelectronics research and have led the charge in this technological revolution. The establishment of the Microelectronics Research Center (MiRC) enabled Georgia Tech to recruit pre-eminent scholars, create national centers of excellence in semiconductor research, and facilitate interdisciplinary, multi-university and university/industry collaborations. Further, the establishment of the Packaging Research Center (PRC) by the National Science Foundation and its subsequent designation as a national Engineering Research Center marked the emergence of another crucial presence in microelectronics at Tech. Led by ECE Professor Rao Tummala, the PRC is the largest university-based research and education center in the nation, focusing on next-generation system-level microelectronic packaging, system integration, and packaging paradigms.

The tremendous advances in microelectronics thus far have been a story of miniaturization. Critical device dimensions that began at 25 micrometers in 1960 have been scaled down to the present value of 0.25 micrometers. These advances have enabled unprecedented, simultaneous, and exponential improvements in cost, speed, and energy of microelectronic devices.

According to James D. Meindl, director of the MiRC, the potential exists for continued, dramatic scaling down to device dimensions of 0.000,000,025 meters or 25 nanometers. With this milestone, microtechnology transitions to nanotechnology. The story from this point forward will no longer be simply one of continued, progressive miniaturization. The physical, electrical, and optical properties of materials with structural features in the range of 1 to 100 nanometers have already

shown to exhibit differences that are not explained by current theories. It is anticipated that nanoscale work will enable the development of materials and systems with dramatic new properties relevant to virtually every sector of the economy, such as medicine, telecommunications, and homeland security.

Later this year, the MiRC will add a new capability to their suite of research tools that promises to propel Tech to the absolute forefront of micro and nanotechnology research. This awesome capability is contained in a \$4 million 10 nanometer electron-beam nanolithography tool, which can produce sub-ten nanometer patterns that, according to Dr. Meindl, are a decade ahead of the state-of-the-art.

A parallel and related development is taking form. This year, the Board of Regents and the State of Georgia approved \$45 million to support an Advanced Clean Room Building at Georgia Tech. The vision is to create a National Center of Excellence for Micro and Nanoscale Fundamental Research and Fabrication, which will serve as a catalyst for interdisciplinary research encompassing all areas of physical and biological science and engineering.

The ability to fabricate at the molecular level and to assemble large structures and systems with fundamentally new properties is the promise of nanotechnology. At the 1999 National Science and Technology Council (NSTC) meeting, Shaping the World Atom by Atom, Neil Lane, former assistant to the President of the United States for Science and Technology stated, If I were asked for an area of science and engineering that would most likely produce the breakthroughs of tomorrow, I would point to nanoscale science and engineering. ¥



*Model drug encapsulated in biodegradable polymer microneedles (height 0.5mm) for controlled release into skin.*

## Chair's Corner



*Roger P. Webb,  
Steve W. Chaddick  
School Chair*

**T**he major challenge in the education business, like most businesses, is to remain relevant. The electrical engineering profession, with its penchant for continuous redefinition, puts electrical engineering education high on the relevancy challenge scale, and as in any business, investment is required.

This issue of *ECE Connection* portrays examples of investments in our core business. The lead article relates to investments to ensure our ability to contribute to education and research at the nanoscale—a new lithography tool to enhance the capabilities of the existing microelectronics research (MiRC) facility and a planned new clean-room research facility. This article is possible only because of the strategic investment made 15 years ago to create the MiRC. With an investment of some \$15 million, a facility was created that supports research funding in excess of \$15 million annually. More importantly, the facility made possible the attraction of outstanding faculty, performing research and producing large numbers of graduates. Return on the new investments will be consistent.

A second article speaks to the creation of the Arbutus Center for Distributed Engineering Education. This unique center, enabled by the generosity of alumnus Jim Carreker and his wife, Helen, is an investment in improving educational delivery both in the classroom and via the Internet. The Center will conduct research on the use of technology enhanced procedures and processes for education. The return on this investment will be in pedagogical materials developed and efficiency of delivery.

The last example of investment indicated in this issue is about faculty, our most important investment. In particular, please note the accomplishments of Professors Adibi, Egerstedt, and Tentzeris in the Faculty News section. These outstanding young faculty joined us within the past five years as a direct result of a State of Georgia investment in economic development, the Yamacraw Project. The early accomplishments of these three, and 21 ECE faculty hired under Yamacraw, bodes well for a very substantial return on the Yamacraw investment. ¥



**Georgia Institute  
of Technology**

*ECE Connection* is published by the School of Electrical and Computer Engineering. Copyright 2003.

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## ACDEE: Leading the Worldwide Revolution in Education

**L**ast fall, ECE received a \$2.25 million endowment from James R. Carreker and his wife, Helen, to support ECE's distributed education programs. With the receipt of this endowment, which was matched by a grant from the Georgia Research Alliance, the Arbutus Center for Distributed Engineering Education was officially established in November 2002. Thomas P. Barnwell, newly named Arbutus Distinguished Chair in Digital System Design and Georgia Research Alliance Eminent Scholar for Education, leads the Center.

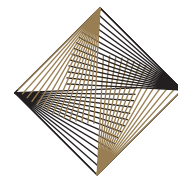
The mission of the Arbutus Center, formerly known as the Center for Distributed Education, is to empower and engage faculty in all aspects of the educational development process, including research for education, research for pedagogy, content creation, and the distributed delivery of education. The principal thrust of the Center since its establishment in the late 1990s has been to develop state-of-the-art distributed education programs.

Under the leadership of Dr. Barnwell, ECE has pioneered efforts in Internet course delivery that have revolutionized the way courses are taught and the way that they are delivered to local and remote student audiences. State-of-the-art programs, which incorporated the latest advances in multimedia and computer and telecommunications technology, became the hallmark of ECE's distributed education program.

The new Arbutus Center gives focus, visibility, and added impetus to the early achievements of Tom Barnwell, said Roger P. Webb, ECE school chair. We expect Georgia Tech to become the world leader in the advancement of enhanced methods for delivering technical education to future generations of engineers.

Commenting on his motivation for endowing the Center, Mr. Carreker said, Helen and I are pleased to help foster the advancement of engineering education through the establishment of the Arbutus Center, and to leverage the existing capabilities of an in-place team of top-notch engineering educators to expand the field of classroom education into a world without boundaries, where students will be empowered to study from the leading professors at a place and time that is best optimized for the student...it is an exciting endeavor, and one that advances the reputation and impact of Georgia Tech.

Mr. Carreker is a 1969 electrical engineering graduate who has long been active in entrepreneurial philanthropy. He has served on the ECE Advisory Board and is now a member of the Georgia Tech Advisory Board. ¥



## Portrait of A Mentor: John P. Uyemura, 1952-2003

The ECE community of students, faculty, and staff was forever diminished when Professor John P. Uyemura passed away suddenly from cardiac arrest on February 3, 2003 at the age of 50. The collective tributes of all who worked with or studied under Dr. Uyemura, paint a portrait of the quintessential mentor a man of enormous intellect and compassion.

Dr. Uyemura joined ECE in 1978, after completing his doctorate at the University of California at Berkeley, where he also earned his master's and bachelor's degrees in electrical engineering. During his nearly 25 years with Tech, Dr. Uyemura made his indelible mark on a personal as well as intellectual level. He helped develop ECE's academic programs in integrated circuits, fiber optics, and VLSI design, and played a key role along with the late Carl Verber in developing ECE's Fiber Optics Instructional Laboratory. A prolific writer, Dr. Uyemura authored six textbooks in the areas of digital integrated circuits, VLSI circuits and systems, and CMOS integrated circuits. Widely recognized as standards in these fields, his textbooks have been translated into several languages and have been adopted by the world's top academic institutions. Just prior to his death, he completed his seventh textbook, *Basics of VLSI Chip Layout and Simulation*, which will be published later this year.

Known with great affection and respect as the Samurai Professor, Dr. Uyemura was legendary for his dynamic and demanding teaching style and for his enormous dedication to his students. He never arrived for the first day of class without donuts, and never ended the course without offering his students a meal of sandwiches, chips, and soft drinks. John A. Buck, a colleague and

friend said, He worked magic on his students, made them learn, made them better professionals and better people. The reach of his influence is immeasurable, as were the depths of his passion and love. Roger P. Webb, ECE school chair said of Dr. Uyemura, a past recipient of the Georgia Tech Outstanding Teacher Award, I consider John the Ted Williams of the classroom. Nobody will ever top his batting average.

His greatest legacy, thus, is embodied in what mattered most to him as a professor to help his students learn and to encourage them to grow. His wife, Melba Uyemura said, John never wanted to hold on to and own knowledge. He wanted to give it away and to make it grow. He wanted to send his students out in the world to surpass him. The comments of his students speak for themselves: He could extract the best out of anybody John was the most committed and talented teacher that I ever had anywhere He set high expectations but he backed that up with great instruction He was not interested in the grades of his students, but whether they learned the topic . . . He is and always will be the greatest role model in my life.

Whether it was teaching, gourmet cooking, playing the guitar, or stargazing, Dr. Uyemura approached every aspect of his life with unsurpassed passion, heart, and spirit. He had an abiding confidence in the goodness of people, Dr. Webb said. He approached life with enthusiasm, candor, and good will. The discontinuity of John's premature passing will render poorer all who knew him. Dr. Uyemura is survived by his wife, Melba, and his two daughters, Christine and Valerie. ¥



The John P. Uyemura Memorial Fund has been established for the future education of his daughters, Christine and Valerie. Donations to this fund can be made to any branch of Wachovia Bank, or they may be mailed to Wachovia Bank, 31 Pharr Road, 2nd Floor, Atlanta, Ga. 30305, Attn: Christine Parks. Please refer to account #15112189.

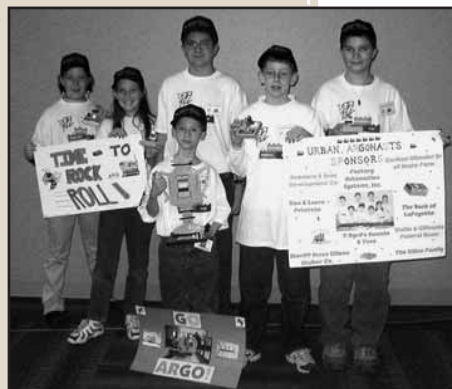
## ECE Sponsors FIRST LEGO League Competition

Under the leadership of Professor Jeff Davis and a corps of undergraduate ECE student volunteers, Georgia Tech sponsored the state's inaugural FIRST LEGO League robotics competition in November 2002 at Atlanta's SciTrek museum. FIRST, the acronym representing For Inspiration and Recognition of Science and Technology, is an innovative international program sponsored by the LEGO Company aimed at inspiring and celebrating science and technology for children ages 8-14.

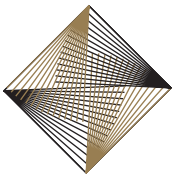
ECE's involvement in this program began two years ago, with an ECE Student-Faculty Committee decision to adopt the FIRST LEGO League program as a venue for

reaching out to Georgia's elementary and middle school age students. From the first year pilot project, to the second year mock competition, the groundwork was set for the official beginning of Georgia's participation in this worldwide competition last fall, which drew 16 teams statewide.

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First Place winners, NW Georgia Urban Argonauts. (l-r back) Jennifer Martucci, Katherine Martucci, David Roberts, Tad Foutz, and Tony Roberts; (front) J. D. Fincher.



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\*Chair

## CmpE/CS Career Fair Attracts Corporate, Student Interest

**D**espite a down economy, 40 companies attended the 10th annual Computer Engineering/Computer Science (CmpE/CS) Career Fair, held on February 5, 2003. The companies saw 1,006 students majoring in computer science, computer engineering, and electrical engineering during the one day fair, jointly hosted by ECE and the College of Computing.

The fair was anchored by several of the strongest supporters of the two units, notably Harris, Hewlett-Packard, IBM, Lockheed Martin, and Microsoft. Additionally, the public sector and defense-related industries were strongly represented at the fair, reflecting the current demand in these sectors of the economy.

The CmpE/CS Career Fair was started in the early 1990s to provide additional exposure and opportunities for students from Georgia Tech studying for computer science and ECE degrees and is held during the first month of the spring semester. During the late 1990s, the event grew to two days with over 100 companies participating in consecutive years. While attendance has diminished over the past few years, the companies attending say that this fair is one of the key recruiting events on their calendar. ¥

## Second Annual ECE Awards Program a Huge Success

**O**n April 23, 2003, ECE held its second annual awards program at the Student Center Ballroom. The Honorable Daniel A. Webster (BEE 71), Florida State Senator representing the 9th District, and C. Dean Alford (BEE 76), ECE Advisory Board chair and president/CEO of Allied Utility Network, hosted the program.

These awards were supported in part by the following alumni and friends: Senator Webster, Mr. Warren Batts, Mr. and Mrs. Joel Spira, and Mr. and Mrs. Tom Quigley.

### STUDENT AWARDS

Outstanding ECE Sophomore Award  
Ryan Jesse PirkI

ECE Junior Scholar Award  
Lucas Milner

Most Outstanding ECE Senior Co-op Award  
Brian Patrick Boyd

ECE Undergraduate Research Award  
Ning Wu

Outstanding Service to Georgia's Community Award  
Tim Cooper

Faculty Award, School of ECE  
Chris Wiecek

Outstanding ECE Senior Award  
David Richard Reid

ECE Senior Scholar Award  
Brian Patrick Boyd

Shahriar Rohinton Khushrushahi

Colonel Oscar P. Cleaver Awards  
Ismail Baskaya

Gavin Ho

Ramanan Bairavasubramanian

ECE Teaching Assistant Excellence Award  
Adam Wathen

ECE Graduate Research Assistant Excellence Award  
Aziz Umit Batur

Alaa Amin Kharbouch

Wing Sze Mona Wong

Zesheng Chen

Guanglei Liu

### STAFF AWARDS

Hats Off Performance Award  
Diana Fouts

GTEAM Performance Award  
Charlotte Doughty

Christy Ellis

Cordai Farrar

Kayron Gilstrap

Debra Kelley

Carla Zachery

Research Spotlight Award  
Didier Contis

Academic Spotlight Award  
Leyla Conrad

### FACULTY AWARDS

Outstanding Junior Faculty Member Award  
Yucel Altunbasak

Jeffrey A. Davis

Outstanding Graduate Research Advisor Award  
John A. Copeland

Richard M. Bass/Eta Kappa Nu Outstanding Teacher Awards  
W. Alan Doolittle

James H. McClellan

Distinguished Professor Award  
George J. Vachtsevanos

Lifetime Achievement Award  
William E. Sayle

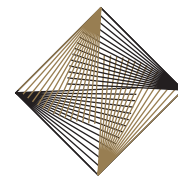
## Haynes Joins ECE Advisory Board

ECE has added Leonard J. Haynes, BEE 72, as its newest member to the School's Advisory Board. Mr. Haynes joined the board in Spring 2003. He is currently the executive vice president and chief marketing officer for the Southern Company, headquartered in Atlanta, Ga. Mr. Haynes joined the Southern Company in 1977 and has previously held executive and management positions in marketing and power delivery at both Georgia Power and the Southern Company.

### In Memoriam

In March 2003, the School of ECE lost a longtime board member. John W. Pope, BEE 69 MSEE 70, passed away after a two-and-a-half-year battle with multiple myeloma. He was the director of bulk power services for the Southern Company based out of Birmingham, Ala. Prior to that, he held other management positions at the Southern Company and Georgia Power. Mr. Pope served as a member of the Board since 1991 and was active in strengthening the relationship between the School of ECE, Georgia Tech, and the Southern Company.





## Institute Award Winners from ECE

### ECE Employees Recognized at the April 9 Georgia Tech Faculty/Staff Honors Luncheon

Vice Provost for Research Special Recognition Award

Roger P. Webb

Class of 1934 Distinguished Professor Award

Kevin F. Brennan

Class of 1940 W. Howard Ector Outstanding Teacher Award

Ali Adibi

Outstanding Continuing Education Award

Monson H. Hayes

Class of 1934 Outstanding Interdisciplinary Activities Award

William D. Hunt

Class of 1934 Outstanding Innovative Use of Education Technology

James H. McClellan

Ronald W. Schafer

Outstanding Doctoral Thesis Advisor Award

Martin A. Brooke

Outstanding Faculty Leadership for the Development of Graduate Research Assistants Award

Madhavan Swaminathan

Outstanding Staff Performance Award

Jackie Nemeth

### ECE Students Recognized at the April 16 Georgia Tech Student Honors Day

Georgia Engineering Foundation Senior Design Award

Nathan Greer

Olivier Guerreau

Kay Hill

Jean-Marc Merolla

Jeremy Silver

Catherine Thorn

International Engineering Consortium William L. Everitt Student Awards of Excellence

Brian Patrick Boyd

Wing Sze Mona Wong

Henry Ford II Scholar Awards

Justin Kloos

Vikram Raj

Steven Sanders

Georgia Tech Society of Black Engineers Faculty Advisor Excellence Award

Darryl Julian Ward

AESO Systems Graduate Minority Engineering Award

Eric J. Orrington

Briaerean Scholarship Cup

Brian Patrick Boyd

James G. and Mary G. Wohlford Scholarships

James Robert Massey Jonathan Scott Cudnik

Hoyt Coffee Memorial Award for Writing

John Parsons

Dorothy Cowser Yancy Incentive Award

Olufeyijimi Awofadeju

### Recognition of Outstanding ECE Graduate Teaching Assistant Awards, Presented at the Annual ECE Spring Picnic

Tariq Bakir

Aliakbar Jafarpour

Koon Yin Kong

Elliot Moore

Mary Nsunwara

Somboon Nuchprayoon

Branislav Radibratovic

Matthew Rehberg

Rawin Rojvanit

Gail Rosen

Bruce Sheplan

Rick Tarbell

Nadine Taylor

Keith Voss

Rajbabu Velmurugan

## Thirteen ECE Alumni Receive College of Engineering Awards

The College of Engineering held its annual alumni awards ceremony in November 2002. Thirteen alumni from ECE were inducted.

### HALL OF FAME

Clayton H. Griffin, BEE 45, MSEE 50

Shirley C. Mewborn, BEE 56

Claude A. Petty, Jr., BEE 50

### ACADEMY OF DISTINGUISHED ENGINEERING ALUMNI

Michael J. Buckler, BEE 71, MSEE 71

Joseph R. Bynum, BEE 69, MSNE 71

John H. Davis, BEE 62

Lynn C. Maddox, BEE 64

Michael R. McQuade, PhDEE 80

Joey L. Trantham, BEE 72, MSEE 73

### COUNCIL OF YOUNG ENGINEERING ALUMNI

Bill Blackstock, BEE 86

Kelvin C. Hawkins, MSEE 92

H. Alan Mantooth, PhDEE 90

W. Scott Potter, BEE 84

(l-r) H. Alan Mantooth, Clayton H. Griffin, Kelvin C. Hawkins, Claude A. Petty Jr., Shirley Mewborn, Roger P. Webb, Lynn C. Maddox, Michael J. Buckler, William D. Blackstock, Joe L. Trantham, M.D., and Michael R. McQuade



### LEGO, from page 3

Using LEGO Mindstorms Robotics Invention, teams of students from each school work over a three-month period to solve problems that are issued by the sponsoring organization. Last year's problem was entitled City Sights, and challenged the teams to construct robotic inventions that would address urban needs such as promoting clean air and transporting construction materials. The November competition was supported by grants from the National Science Foundation and the Netherlands American Trust. ¥

### COLLEGE OF ENGINEERING AWARDS

The College of Engineering has established three awards to honor outstanding alumni.

#### Engineering Hall of Fame

Membership for the highest honor that can be bestowed on College of Engineering alumni is reserved for individuals who have made sustained and meritorious engineering and/or managerial contributions during their careers.

#### Academy of Distinguished Engineering Alumni

Membership is reserved for individuals whose contributions to Georgia Tech, the engineering profession and field, and/or society have brought distinction to themselves and the Institute.

#### Council of Outstanding Young Engineering Alumni

Membership is reserved for alumni under 40 years of age who have demonstrated outstanding professional achievements.

# New Faculty



**Chin-Hui Lee**, Professor  
BSEE '73, National Taiwan University  
MS Engineering and Applied Science '77, Yale University  
PhD '81, University of Washington  
Area: Digital signal processing and computer engineering  
Previously, Dr. Lee was a visiting professor in the School of Computing at the National University of Singapore (NUS). In his new position with ECE, he will continue to work with NUS by serving as the primary contact for developing the Georgia Tech/Singapore Telecommunication Institute partnership.

Prior to entering academia, Dr. Lee had over 20 years of industry experience, most recently at Bell Labs, Lucent Technologies as director of Dialogue Systems Research and at Bell Labs, AT&T as a distinguished member of the technical staff. A significant contributor to almost every area of speech processing, he is an IEEE Fellow and an IEEE Distinguished Lecturer.



**Oliver Brand**, Associate Professor  
Diploma in Physics '90, Technical University Karlsruhe (Germany)  
Doctor of Natural Sciences '94, ETH Zurich (Switzerland)  
Area: Microsystems  
Before coming to ECE, Dr. Brand was deputy chief of the Physical Electronics Laboratory at ETH Zurich. He was a lecturer, led a research group of seven PhD students, and was responsible for projects in CMOS-based microsystems, MEMS fabrication technologies, and microsystem packaging.

After receiving his PhD at ETH Zurich, Dr. Brand worked at Tech as a postdoctoral fellow in the Microelectronics Research Center under the direction of Mark G. Allen and Sue Ann Bidstrup Allen.

The co-author of more than 90 journal and conference publications, Dr. Brand is a technical program committee member for the 2003 IEEE International Micro Electro Mechanical Systems Conference.

## Faculty News

**Ali Adibi** became the first ECE faculty member to receive a Lucile Packard Fellowship in Science and Technology in October 2002. Awarded annually by the David and Lucile Packard Foundation, the Packard Fellowship is one of the most prestigious awards for young, U.S.-based faculty in science and engineering. Dr. Adibi will use his fellowship to study controllable photonic crystals that can be adapted into ultra-small biosensors. He is collaborating with Duke University researchers to develop biosensors that measure properties such as blood alcohol and glucose or that could be made into implantation devices that deliver prescribed drugs.

**Ali Adibi** and **Magnus Egerstedt** both received National Science Foundation CAREER Awards in early 2003. Dr. Adibi is using his award for the project, Integrated Chip-Scale Wavelength Division Multiplexing Devices Using Photonic Crystals, that could lead to the use of photonic circuits in a variety of applications. Dr. Egerstedt is using his award for the project, Linguistic Control of Mobile Robots, that could lead toward producing robots that follow easy, language-oriented instructions rather than very

detailed, precise, and communication-intensive instructions currently used when controlling robots. ECE now has 11 faculty members holding active NSF CAREER Awards and has 24 current and past recipients of this honor.

**Thomas P. Barnwell** was named Arbutus Distinguished Chair in Digital System Design and as ECE's newest Georgia Research Alliance Eminent Scholar, effective October 2002. In addition to these new appointments, Dr. Barnwell was named director of the Arbutus Center for Distributed Engineering Education (see related article on page 2). The Arbutus Center is blazing new trails into computer-enhanced education and instruction to students on the Atlanta campus, the Georgia Tech Regional Engineering Program (Savannah, Ga.), and Georgia Tech Lorraine (Metz, France).

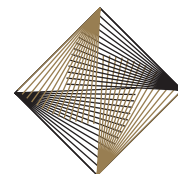
**Nan Marie Jokerst** was named IEEE Fellow for contributions to the integration and packaging of optoelectronic devices for the realization of optical interconnections and interfaces. She was also named the recipient of the 2002 Harriett B. Rigas Award of the IEEE Education Society. The award, which is sponsored by the Hewlett-Packard Company, is administered by the IEEE Education Society as an annual recognition of the outstanding engineering faculty woman who has made a significant contribution to undergraduate education within an IEEE/ABET-accredited program. Dr. Jokerst received both honors during fall 2002.

**Joy Laskar** was named the 2003 Outstanding Young Alumnus of the College of Engineering and Science at Clemson University in February 2003. Dr. Laskar, whose parents were both Clemson faculty, graduated with a BS degree in computer engineering in 1985, and then earned his MS and PhD degrees in electrical engineering from the University of Illinois at Urbana-Champaign in 1989 and 1991, respectively.

**Ajeet Rohatgi** received the 2003 William R. Cherry Award at the Third World Conference on Photovoltaics, held in May 2003. Named in honor of William R. Cherry, a founder of the photovoltaic (PV) community, this award is the highest honor in the area of PV presented by the IEEE Photovoltaic Specialists Conference and recognizes professionals who have made outstanding and sustained contributions to the advancement of PV science and technology.

**Gordon L. Stuber** received the 2003 IEEE Vehicular Technology Society (VTS) James R. Evans Avant Garde Award for his outstanding and sustained theoretical research in wireless communications. This award is given to the member of the IEEE/VTS who has demonstrated pioneering leadership and continuing contributions in promoting new technology in the field of vehicular communications and electronics.

**Emmanouil M. Tentzeris** received the 2003 IEEE Components, Packaging, and Manufacturing Technology Society Young Engineer of the Year Award. The first Georgia Tech faculty member to receive this award, Dr. Tentzeris was recognized for his technical contributions in patent invention, technology or product development, and his large number of innovative and groundbreaking publications. ¥



# Alumni News

**Prem Dhamija** (MSEE '71) is a senior electrical engineer with Noveon Hilton Davis in Cincinnati, Ohio.

**Terry Proctor** (BEE '74) is a staff electrical engineer with Shell Oil in Houston, Tex.

**Carl V. (Van) Mauney** (BEE '75), a career naval officer, was promoted to rear admiral. Captain Mauney is serving as the executive assistant for General Tommy Franks, U.S. Central Command.

**Carey Fisher** (BEE '76) is the chief technical officer and co-founder of New Communications Solutions, LLC (NCS). NCS, formed in 2002, is a Norcross, Ga.-based company that designs and manufactures specialized equipment for the amateur, commercial, and public safety radio communications markets. He and his family live in Duluth, Ga.

**Louis Alderman** (BEE '77) earned the designation of Project Management Professional by The Project Management Institute. He is currently a senior project manager in the Hewlett-Packard Company's Managed Services Project Management Office in Alpharetta, Ga.

**Wayt King** (BEE '81, MSEE '82) graduated from the University of Georgia Law School in 1996 and practiced technology law at Alston & Bird and King & Spalding until 2000, when he co-founded a software company, N2 Broadband, which now has 140 employees. He currently serves as vice president and general counsel.

**Jos F. Reyes-Santana** (BEE '82) is with Universal Container Corporation in Cayey, P.R.

**Charles R. Rugar** (BEE '84) became a registered principal with National Securities Corporation in Richmond, Va., where he is a financial advisor for wealth management.

**Terry Groom** (MSEE '87) is an engineering director with Arques Technology in Austin, Tex.

**Wallace B. McClure** (BSEE '90 MSEE '91), owner of Scalable Development, Inc. in Knoxville, Tenn., and **John Croft** (BSME '91)

## ECE Alumna Named Outstanding Achiever

**Lorna Graves Jackson** (BEE '82) was named Outstanding Achiever at the NASA Marshall Center in August 2002. This Director's Commendation Award was presented during a Women's Equality Day ceremony, where Ms. Jackson was recognized for her technical ability, creativity, and leadership in the Avionics Department at the Marshall Center in Huntsville, Ala.



Ms. Jackson has been with the Marshall Center since 1986, and currently serves as the Avionics Lead Subsystem Engineer for vehicle integrated performance analysis activities on NASA's Space Launch Initiative. Ms. Jackson has worked on many of the Marshall Center's top programs, providing power subsystem design, engineering development, and testing and documentation for the Hubble Space Telescope and the Chandra X-ray Observatory.

Ms. Jackson said, Studying at Tech gave me what I needed to meet the challenges of the workforce. In making this statement, she was not only referring to the top notch engineering education that she received. While I was at Tech I learned to work with people and came to appreciate the importance of teamwork. This is something that I have carried with me throughout my career I know that I can't accomplish anything without the support and cooperation from those I work with. I learned the roots of this first hand at Tech.

recently completed a book on designing and building applications with the Microsoft .NET platform. The publisher is John Wiley and Sons, and the book is entitled *Building Highly Scalable Database Applications with .NET*.

**M. Brian Blake** (BEE '94) was recently awarded the National Black Engineer of the Year Award distinction of Most Promising Scientist. This award is issued by the *U.S. Black Engineer and Information Technology Magazine*, Lockheed Martin, Daimler-Chrysler, and the Council of Deans of the Historically Black Colleges and Universities. He is currently an assistant professor in the Department of Computer Science at Georgetown University in Washington, D.C.

**Pierre Vigneron** (MSECE '99) is with Gerling Konzern Allgemeine Versicherung-AG in Paris, France.

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Name \_\_\_\_\_ Degree/Year \_\_\_\_\_

Information for ECE News (recent awards, job changes, papers, patents, etc.) \_\_\_\_\_

Home Address \_\_\_\_\_

Work Address (including company name) \_\_\_\_\_

Daytime Phone \_\_\_\_\_ Email \_\_\_\_\_

Mail to Suzy Briggs at the School of Electrical and Computer Engineering, Georgia Institute of Technology, Atlanta, GA 30332-0250

## The Georgia Tech Alumni Association's European Branch Holds Its Inaugural Meeting

On December 3, 2002, over 80 Georgia Tech alumni residing in Europe gathered at the *Maison de la Lorraine* in Paris, to celebrate the initiation of the Georgia Tech Alumni Association-Europe. The meeting was hosted by Joseph Irwin, vice president and executive director of the Georgia Tech Alumni Association; Jean-Lou Chameau, Georgia Tech's provost; and Hans Püttgen, president of Georgia Tech Lorraine (GTL).

This new association was established to create a venue for expatriates to maintain a closer connection with the Institute and with the community of graduates living in Europe. George Griffin of the Alumni Association said, "The alumni association exists to foster lifelong relationships and lifelong participation with the Institute. We are very excited about the many possibilities this new association opens up to develop programs for our European alumni." Karl Dasher, who graduated in industrial engineering in 1993, shares this excitement and vision. "This new association is fantastic and something we really needed. I can see this organization promoting a greater global focus for the general Alumni Association, as we



*Georgia Tech alumni from Europe gather for the inaugural meeting of the European branch in Paris, France.*

can promote European co-op opportunities, and share our experiences with global businesses.

The members of the new European branch of the Alumni Association are part of a vast network of over 100,000 Georgia Tech graduates. In conjunction with the Georgia Tech Alumni Association, the activities of the new European branch will be coordinated by GTL. ¥

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**Anthony Carl** (BSCmpE 00), Lieutenant Junior Grade, is currently training to be an Engineering Officer of the Watch (EOOW) of a naval nuclear propulsion plant at a nuclear propulsion plant prototype in Balston Spa, N.Y. After completing his training in mid-May, he will transfer to a nuclear-powered aircraft carrier.

**Rangaraj Garudapuram** (MSECE 00) is working part-time as a project officer with TeNet Group. He is doing his PhD at IIT Madras, India. His first international paper was accepted for presentation in IEEE SPAWC 2003 to be held in Rome, Italy.

**Payam Torab** (PhD 00) is with Movaz Networks, Inc.

**Bruck Girma** (MSECE 01) is working in the area of audio digital signal processing with Cirrus Logic in Austin, Tex.

**LaKisha Pate** (MSECE 01) is engaged to marry **Steven Downs** (MSECE 01). She is currently an electrical engineer II with Harris Corporation in Palm Bay, Fla. and plans to attend the Wharton School of Business this fall to pursue an MBA degree in marketing and finance.

**Chris Stephens** (BEE 01) is a processor product specialist with ARM in Austin, Tex.

**Alantria Harris** (BEE 02) is a project manager for The Weather Channel in Atlanta, Ga.

**Harshit Shah** (MSECE 02) is a software engineer II with Applied Materials in Santa Clara, Calif. ¥