

ACHIEVEMENT REWARDS
for
COLLEGE SCIENTISTS
Atlanta Chapter

Seventh Annual
SCHOLARS AWARDS
LUNCHEON

OCTOBER 20, 1998

Presenting Sponsor

FIRST UNION
Capital Management Group

ARCS MISSION

The ARCS Foundation is dedicated to helping meet our country's needs for scientists and engineers by providing scholarships to academically outstanding students who are United States citizens in need of financial assistance to complete their higher education, thereby contributing not only to the advancement of science, but also to the material and intellectual welfare of all people.

The Atlanta Chapter of ARCS is grateful to Members and Donors for helping realize our mission.

ARCS FACTS

The ARCS Foundation, Inc., founded in Los Angeles in 1958, recognizes that America's future rests with the young men and women who will invent answers to the scientific and technological challenges we face today. Since its inception, ARCS has given **\$27,693,994** to **7,350** of the brightest students in natural science, medicine and engineering in over 40 schools. **All members are volunteers and 100% of all donations go directly to scholarships.**

Chartered in 1992, the Atlanta Chapter has **110 members** and presents scholarships to students from Emory University, Georgia Institute of Technology and Morehouse College. Since its inception, it has **awarded \$306,000** including **\$70,000** for 1998-99. In addition to its fundraising efforts, the Atlanta Chapter conducts a program of education in scientific issues for its members.

All scholarship recipients must be U.S. citizens, have high scholastic standing, demonstrate real financial need, and express the goal of making a contribution to their community and society in general. The scholars are selected by the recipient schools without regard for race, gender or religious preference. Former scholars head major corporations, contribute significant research in a variety of fields, and help keep America competitive in the world of science and technology.

WELCOME

As president of Achievement Rewards for College Scientists, Atlanta Chapter, let me welcome you to our seventh annual Scholars Awards Luncheon.

Today fourteen science and technology students from Emory University, Georgia Institute of Technology and Morehouse College will be recognized and presented scholarships. All have been selected for this honor by meeting and maintaining ARCS Foundation's high standards of academic excellence.

The largest portion of our scholarship funds are provided by our members; however, we are delighted to have two corporations join us, BellSouth Telecommunications, Inc., and Nortel Networks, and four foundations, Georgia Power Foundation, Graves Foundation, Zeist Foundation, and Imlay Foundation. We also are very pleased to welcome our first corporate sponsor, First Union Capital Management Group.

Lee M. Thomas, Executive Vice President of Georgia-Pacific Corporation and nationally known environmentalist, will speak on "Science and Public Policy."

We hope you are challenged and excited by our time together, and we thank you for supporting these talented young scholars as they prepare for demanding careers in science and technology.



Betsy G. Hansen
President, Atlanta Chapter
Achievement Rewards for College Scientists

Distinguished Guests

Dr. Donald G. Stein, Emory University
Vice Provost and Dean

Dr. John H. Hopps, Morehouse College
Provost and Senior Vice President of Academic Affairs

Zack S. Parrish, Jr., First Union National Bank
Director, Capital Management Group

Beth Kernan, First Union National Bank
Director, Charitable Trust Services

Linda Celesia, ARCS Foundation, Inc.
Vice President, Eastern Region

Special Thanks

Ernst & Young, LLP - J.T. Sanderson III
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and the following sponsors

BellSouth Telecommunications, Inc.

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Nortel Networks

Zeist Foundation

*Special Appreciation to
Ada Lee Correll and Susie DeGo
for their time and talent organizing this event*

KUDOS FOR ARCS

"Congratulations to the Atlanta Chapter in your seventh year for awarding \$70,000 to 14 scholars for the 1998-99 academic year... a remarkable 27% increase in giving over the previous year. All ARCS members across the United States salute your success in supporting 2 corporate scholarships, 4 foundations scholarships and 8 chapter scholarships."

Ginny Thomas, National President of ARCS

"I have had the good fortune to be associated with ARCS for a number of years in three different cities - Chicago, San Francisco and now Atlanta.....As a former director of the National Science Foundation, I have always appreciated the fact that ARCS acts on a local basis and contributes support to students in addition to whatever other support they may have. ARCS is a niche player in the truest sense and performs an extremely important role."

Walter E. Massey, President Morehouse College

"The dedication of the ARCS leadership in raising fellowship funds from a broad based and pro-active group of concerned citizens is unmatched in science support. Emory is proud of its students who have been honored by ARCS. WE hope that we can continue to attract and educate these outstanding young scientists, and we are grateful to ARCS for helping us achieve these goals."

William M. Chace, President of Emory University

"First Union recognizes the importance of connecting corporate resources with education. On behalf of First Union, we are pleased to support Achievement Rewards for College Scientists. This organization strengthens and enhances the ability to nurture today's outstanding students and help them contribute to our future."

Zack Parrish, Director, First Union's Capital Management Group for Georgia and Tennessee

"We are grateful to ARCS for their assistance in helping us bring students like these (scholars) to our campus. They challenge us, make Georgia Tech a better institution by their presence. We look forward to many more years of our exemplary partnership with ARCS."

D. Wayne Clough, President Georgia Institute of Technology

"The Atlanta Chapter established in 1992 has made astounding progress in establishing itself as a vital force in the academic community of Atlanta. Associated with a steady growth in membership is the increased number of scholarships awarded to outstanding scholars in the sciences and engineering fields. Atlanta stands as an example of leadership and growth amongst the chapters in the ARCS family"

Georgia, ARCS National Vice President of Eastern Region

Atlanta Chapter Membership 1998 - 99 Officers

Betsy Hansen, President
Deborah Liss, President Elect
Patricia S. Leake*, Past President
Teed Lowance, Vice President, University Relations
JoAnne Padgett, Vice President, Membership
Anne M. Boyd, Vice President, Education
Beverly Stacy, Recording Secretary
Alexandra Mitch, Corresponding Secretary
Sally N. Hinkle, Treasurer
Tricia F. Byers, Assistant Treasurer

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** Founding President

* Denotes Past President

PROGRAM

WELCOME

Betsy G. Hansen President, ARCS, Atlanta

LUNCH

INTRODUCTION OF LEE THOMAS

Ada Lee Correll
Chairman, Scholars Awards Luncheon

SPEAKER

"Science and Public Policy"

Lee Thomas, Vice President
Georgia-Pacific Corporation

PRESENTATION OF SCHOLARSHIPS

Atlanta Chapter Scholarships

Presented by Dr. Ward O. Winer
*Chair of Woodruff School of Mechanical Engineering
Georgia Institute of Technology*

Michael A. Brodney, Daniel R. Marshall, Kevin M. William
Emory University

Ashley J. James, Staci A. Davis, Serge William Tchikanda
Georgia Institute of Technology

Leander Cannick, Barrett L. Robinson
Morehouse College

Corporate Scholarships

BellSouth Telecommunications, Inc.
Presented by David A. Kettler, *Executive Director /Network Vice President*

Timothy J. Harris
Morehouse College

Corporate Scholarships

Nortel Networks

Presented by Diane Napier-Wilson, *Major Accounts Vice President*

John Jeff AcAtee

Emory University

Foundation Scholarships

Georgia Power Foundation

Presented by Judy M. Anderson, *Vice President/Corporate Secretary*

Eva D. Regnier

Georgia Institute of Technology

Graves Foundation

Presented by Frances B. Graves

Jill R. Harden

Georgia Institute of Technology

Zeist Foundation

Presented by Frances B. Graves

Kristina Danek Burgess

Emory University

Imlay Foundation

Presented by Mary O'Connor

Stacey Angela Dixon

Georgia Institute of Technology

SCHOLAR RESPONSE

John Jeff McAtee

CONCLUDING REMARKS

Betsy G. Hansen President, ARCS, Atlanta

Following Today's Luncheon, the scholarship recipients will be available to review their Research Project Boards.

Keynote Speaker
Lee M. Thomas



Lee Thomas is a Renaissance man. He has had careers in state government, federal government and Fortune 500 business. Born and educated in South Carolina, he earned B.S. and M.S. degrees from the University of South Carolina.

Entering South Carolina State government in the criminal corrections area, Lee soared to the position of Director, Division of Public Safety. In 1981, he was enticed to expand his horizons and move to Washington to join the Federal Emergency Management Agency where he became Executive Deputy Director.

When the Environmental Protection Agency was in chaos, Bill Ruckelshaus appointed Lee as Assistant Administrator of that agency. Thomas rose to the position of Administrator of EPA and held that post from 1985-1989 under President Reagan. During Thomas' watch, the Clean Water Act and Superfund Law were re-authorized.

Having peaked again in his career, Lee entered the private sector and became CEO of Law Environmental. In 1993, he joined Georgia-Pacific Corporation as Senior Vice President of Environmental and Governmental Affairs where his goal was to establish Georgia-Pacific as a leader in this area. Accomplishing this, Thomas moved into the business arena where he remains today as Executive Vice President-Paper Chemicals. Lee is responsible for the largest operation unit of the company, proving again that he is a man who can excel wherever he chooses to compete.

Among Lee's honors are Honorary Degree from Clemson University, Conservation Achievement Award, and René Dubos Environmental Award.

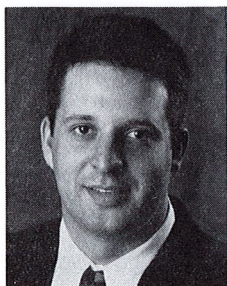
ATLANTA CHAPTER SCHOLARSHIPS

EMORY UNIVERSITY

Michael A. Brodney

Ph..D. Candidate, Chemistry

Second Year ARCS Scholar



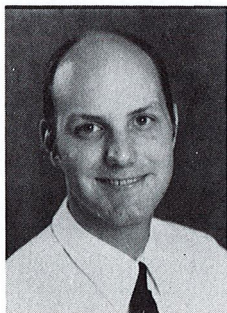
Michael received his B.S. degree in Biology/Chemistry from Skimmer College where he received many honors including Scholar Athlete of the Year, GTE Academic All American, and the Fahey Award for Outstanding Chemistry Research. He is entering his fifth year of graduate study in organic chemistry under the supervision of Professor Albert Padwa. His research focus is in the development of new chemical methodology for the synthesis of heterocyclic compounds and alkaloids. The ability to effectively synthesize these types of compounds is a key step in the preparation of new medicines and in discovering new pharmaceuticals. Michael is published in several top level academic journals and has also presented papers at American Chemical Society meetings. He plans to attend Stanford University for a post-doctoral internship under the supervision of Professor Paul Wender. At Stanford he plans to pursue the total synthesis of biologically important natural products.

EMORY UNIVERSITY

Daniel R. Marshall

Ph.D. Candidate, Chemistry

Second Year ARCS Scholar



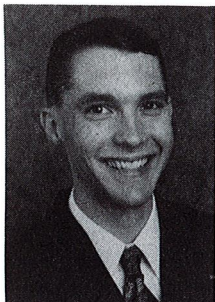
Prior to Emory, Daniel completed three summers of undergraduate research at Colorado State University where he received his B.S. degree in Chemistry. He spent two years as an Assistant Research Scientist at Bristol-Myers Squibb. While at Emory his research has focused on the development of novel synthetic methodologies and their applications to various synthetic targets. He has elucidated unique reactivity patterns of specifically substituted cyclobutenediones, and devised approaches toward the total synthesis of Cervinomycin A₁ based on these patterns. Work toward the total synthesis is currently underway. Daniel plans to obtain his Ph.D. in organic chemistry and then conduct research into the application of synthetic organic chemistry to biologically relevant systems.

EMORY UNIVERSITY

Kevin M. Williams

Ph.D. Candidate, Chemistry

Second Year ARCS Scholar



Kevin entered Emory's Ph.D. program after graduating *summa cum laude* in Chemistry and Mathematics from Clinch Valley College in 1994. His work focuses on the important platinum anti-cancer drugs. His studies involve investigations by NMR methods and computations to analyze chemical structures. Kevin has pioneered methods to assess the crucial role of solvent in explaining the structure conformations observed in solution. These important studies have been published. Kevin has also helped in the development and testing of a collaborative

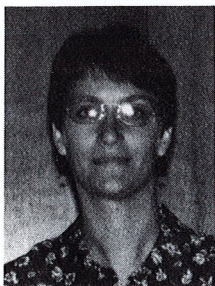
software project involving the Math/Computer Science Department. He has helped both new and advanced students in mastering software and computational methods. Kevin is focusing on obtaining his Ph.D. in Chemistry.

GEORGIA INSTITUTE OF TECHNOLOGY

Ashley J. James

Ph.D. Candidate, Mechanical Engineering

Fourth Year ARCS Scholar



Ashley graduated with honors from the University of Florida in 1990 with a B.S. degree in Mechanical Engineering. While at Florida she was a member of the honor societies Tau Beta Pi and Pi Tau Sigma. Upon graduation Ashley worked for Westinghouse Electric Corporation as a power plant performance analyst. Her area of expertise is interfacial fluid dynamics. Her thesis research is an analysis of the breakup of a vibrating liquid droplet, which has applications in heat exchanger design.

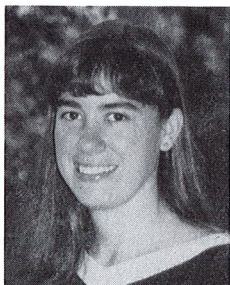
Honors at Georgia Tech include the high score on Ph.D. qualifying exams and Who's Who Among Students in American Colleges and Universities. Ashley is preparing for a career in academia.

GEORGIA INSTITUTE OF TECHNOLOGY

Staci A. Davis

Ph.D. Candidate, Mechanical Engineering

Second Year ARCS Scholar

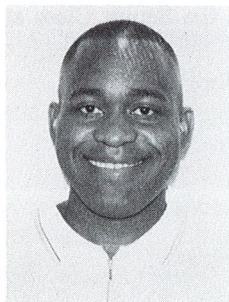


Staci received her Bachelor and Master of Science degrees in Mechanical Engineering from the University of California, Berkeley. While an undergraduate, she held a six-month internship at the New United Motors Manufacturing, Inc. automobile assembly plant in quality control engineering. Her current research is in the area of fluid dynamics. She uses nine small jets of air formed from a piezoelectric actuator operating at high frequencies to manipulate a larger jet of air. She is studying the interaction between these jets to enhance mixing of a fuel and oxidizer in the combustor of a gas turbine engine. She is the recipient of a National Science Foundation/GEE Fellowship. Staci's career goal is a research and teaching position in academia.

GEORGIA INSTITUTE OF TECHNOLOGY

Serge William Tchikanda

Ph.D. Candidate, Mechanical Engineering



Serge received his bachelor degree in Engineering Science and another in Mathematics, both from the College of Staten Island in New York. The focus of his doctoral research is modeling and optimal control of high speed, high strength fiber optics under the supervision of Dr. Kok-Meng Lee. His career objective is to obtain an engineering position in academia or industry.

MOREHOUSE COLLEGE

Leander Cannick

Senior, Biology Major

Second Year ARCS Scholar



Leander has demonstrated a commitment to both academics and to the community by maintaining a high GPA while at the same time volunteering with Hands on Atlanta, Habitat for Humanity and Grady Memorial Hospital. In more than three years of volunteer work at Grady, he has assisted in the Hughes Spaulding Children Center, the Surgery and Intensive Care Unit, and the Sickle Cell Center. He participated in summer research programs at Dartmouth Medical School and at the Sloan-Kettering Cancer Institute. At Dartmouth he studied the

efficiency of pulsatile vs. continuous release of interferon on the expression of fc receptors, and at Sloan-Kettering he examined the structure of the gene that codes for the HuR tumor antigen. Last summer he worked in the Pharmacology Department at the Federal University of Rio de Janeiro in Brazil. Leander plans to obtain a MD/Ph.D. degree and pursue a career as a Physician/Researcher.

MOREHOUSE COLLEGE

Barrett K. Robinson

Senior, Biology Major



Barrett is the top ranking student in the Senior Class at Morehouse. He has served as a missionary with Campus Crusade for Christ in Nigeria, participated in the Sea Study abroad program, and has been involved in research on hypertensive cardiology at the Rabin Medical Center in Israel. Barrett has also done research in vascular genetics on Hereditary Hemorrhagic Telangiectasia at Duke University Medical Center. He has been inducted into Beta Kappa Chi and Phi Beta Kappa Honor Societies and has received a Golden Key Most Outstanding Junior Scholarship.

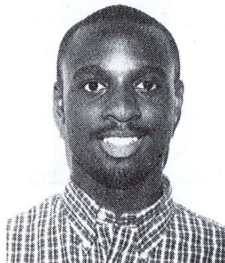
Barrett plans to attend medical school in addition to pursuing a graduate degree in Epidemiology.

BELLSOUTH TELECOMMUNICATIONS, INC. SCHOLAR

MOREHOUSE COLLEGE

Timothy J. Harris

Junior, Biology Major



Timothy is the top ranking Biology major in his class. His research interests have resulted in research experiences at Yale, Harvard and the Morehouse School of Medicine. At Yale, he did research to characterize the Sodium Bicarbonate Cotransporter in mammalian kidney cells and at Harvard he studied mechanisms involved in the function of the C3A receptor. Timothy has been involved for over a year in a research project at the Morehouse School of Medicine which aims at characterizing virulence factors from *H. Pylori*, the bacterium which causes ulcers. Consistent with his obvious interest in research, he was recently admitted to the UMARC Program in the Atlanta University Center, a program which provides training experiences for students planning careers in research. Timothy plans to obtain a MD/Ph.D. degree.

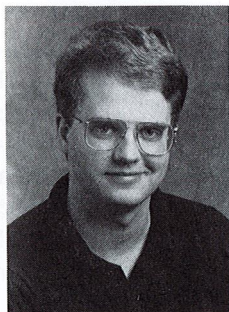
NORTEL NETWORKS SCHOLAR

EMORY UNIVERSITY

John Jeff McAtee

Ph.D. Candidate, Chemistry

Second Year ARCS Scholar



Jeff is in his fifth year of graduate study. For the past year he has concentrated on the study of selective fluorination of organic molecules, specifically biomolecules. He is particularly interested in the fluorination of nucleoside compounds for use in HIV and cancer therapies. It has been found that fluorine can increase biological activity and decrease oxidative metabolism of drug molecules. This can lead to drugs that may be given in lower doses due to their increased potency and longer duration in the body. Lower dosage usually translates into lower costs and reduced side effects for drug patients. His work has been presented at international conferences. Jeff would like to conduct cancer research after obtaining his graduate degree.

GEORGIA POWER FOUNDATION SCHOLAR

GEORGIA INSTITUTE OF TECHNOLOGY

Eva D. Regnier

Ph.D. Candidate, Industrial and Systems Engineering



Eva received her B.S. degree in Environmental Engineering from Massachusetts Institute of Technology in 1992, and spent the following year studying and working in France. From 1993 to 1996 she worked in environmental assessment and remediation for two environmental consulting firms. At Georgia Tech she is studying Economic Decision Analysis, with applications to decisions with environmental consequences. Eva spent two summers as an intern at Motorola. Her research topics include decisions with irreversible consequences and uncertainty measurement in environmental performance scoring. She is currently funded by a predoctoral fellowship from the Department of Energy and Georgia Tech's President's Fellowship. She was awarded a National Science Foundation Graduate Research Fellowship. Upon completion of her Ph.D., Eva intends to seek a research position in academia or industry.

GRAVES SCHOLAR

GEORGIA INSTITUTE OF TECHNOLOGY

Jill R. Harden

Ph. D. Candidate, Industrial and Systems Engineering



Jill did her undergraduate work at the University of Kentucky, graduating *summa cum laude* with a Bachelor of Science in Mathematics in May of 1996. Jill is pursuing a Ph.D. in Georgia Tech's program in Algorithms, Combinatorics, and Optimization. She is the recipient of a President's Fellowship and an NSF/GEE Fellowship. She spent the Summer of 1997 as an intern in Research and Development at United Airlines World Headquarters. Her research interests lie in combinatorial optimization, specifically in the use of linear programming in the development and analysis of approximation algorithms for scheduling and production planning problems. Upon completion of her Ph.D., Jill plans to enter academia.

ZEIST SCHOLAR

EMORY UNIVERSITY

Krisztina Danek Burgess

Ph.D. Candidate, Analytical Chemistry



Krisztina Danek Burgess graduated with honors from the University of North Carolina at Chapel Hill in 1994 with a Bachelor of Science in Chemistry. Later that year, she enrolled in the Ph.D. program in Analytical Chemistry at Emory University. Her research advisor is Dr. Joseph B. Justice, Jr. and her research deals with investigating the kinetics and mechanism of wild-type and mutant human norepinephrine transporters. While in the graduate program, in addition to research, Krisztina has worked as a teaching assistant for the general

and bioanalytical chemistry undergraduate laboratories and has worked part-time at the Center for Disease Control under advisor Dr. Tom Bernert. Upon graduation, she plans to pursue a profession as a chemistry professor and soccer coach at a small undergraduate institution.

IMLAY FOUNDATION SCHOLAR

GEORGIA INSTITUTE OF TECHNOLOGY

Stacey Angela Dixon

Ph.D. Candidate, Bioengineering

Second Year ARCS Scholar



Stacy received her B.S. degree in Mechanical Engineering from Stanford University in 1993 and her M.S. degree in Mechanical Engineering in 1995 from Georgia Tech. Her dissertation will quantify the mechanical properties of coronary arteries using statistically valid comparisons. Her research involves performing biaxial tests on healthy arteries and describing the relationship between force, pressure and strain. She has received the National Science Foundation Engineering Fellowship, the Georgia Tech President's Fellowship,

the American Society of Mechanical Engineers Graduate Teaching Fellowship, and most recently the UNCF/Merck Science Initiative Fellowship. After obtaining her degree, Stacy will seek a position as a corporate research scientist followed by a career in academia.