

*The Annual Scholarship Awards
Luncheon
2003*

Presenting Sponsor



Raymond R. Christman
President and
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ARCS



FOUNDATION INC

Atlanta Chapter

Program

Welcome

Janie Wilson, President, ARCS Atlanta Chapter

Guest Recognition

ARCS Mission and History

*Presentation of
2003 ARCS Atlanta Scholars*

Lunch

Introduction of Keynote Speaker

Bill Liss, Business, Financial & Consumer Editor, WXIA-TV

Ralph C. Merkle, Ph.D.

Distinguished Professor and

Director, Georgia Tech Information Security Center

Georgia Institute of Technology

Closing Remarks

Janie Wilson

MONARCHS

We are proud to recognize these leading donors who have contributed to the Atlanta Chapter of Achievement Rewards for College Scientists throughout our young history. Each donor has given a cumulative gift of \$25,000 or more.

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Georgia-Pacific Foundation



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Special Gifts: President Michael Adams & The University of Georgia Foundation
Ted Maloof

From the President

The Atlanta Chapter of ARCS Foundation, Inc. welcomes you to our 12th annual Scholars Luncheon, where we are honoring 42 academically outstanding science and engineering students from Emory University, the Georgia Institute of Technology, Morehouse College and the University of Georgia.

And to all of our Donors we'd like to say, "Thanks a Million!"

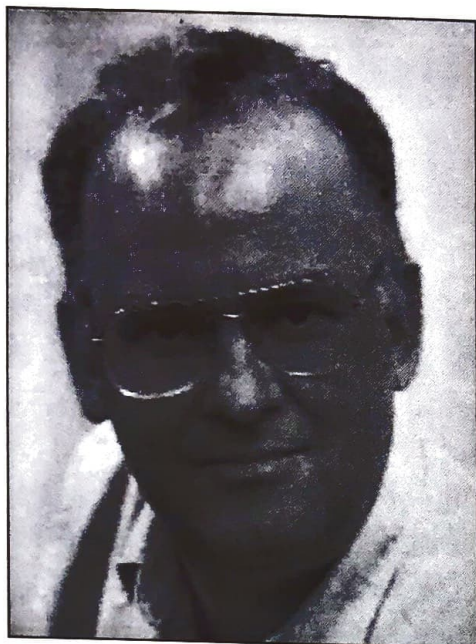
This year ARCS Atlanta will have awarded a cumulative total of \$1,096,000 to some of America's brightest and finest young people as they pursue studies which will help the United States maintain its standing as the world leader in scientific and technological innovation. In our founding year of 1992 we made inaugural awards of \$15,000 to three deserving students. Today, \$200,000 will be distributed to 42 scholars, who will be recognized and presented with \$5,000 awards to help complete their higher education. All have been selected by their respective departments to receive this honor by meeting and maintaining ARCS Foundation's high standards of academic excellence.

A million thanks to our 128 ARCS members whose dues provide numerous scholarships, to the many members who also provide additional funding for \$5,000 and Century Scholarships and to Donors like you! We have welcomed corporations, foundations and families from our community into the ARCS Scholarship fold. We hope some of you today who hear our message and meet our phenomenal scholars will be inspired to become our newest ARCS Scholarship Donors. It is important that you know **one hundred percent of every dollar donated goes directly to scholarships.**

In closing, I would like to recognize our Presenting Sponsor, Federal Home Loan Bank of Atlanta, and to extend my sincere thanks to them, to Sharon Flores, Leslie McLeod and their entire Luncheon Committee, all of whom have worked for an entire year to make this a memorable day for our scholars, members and guests.



President, ARCS, Atlanta Chapter



Ralph C. Merkle, Ph.D.
Director
Georgia Tech Information
Security Center
Georgia Institute of Technology

In September 2003, Dr. Ralph C. Merkle was appointed Distinguished Professor and Director of the Georgia Tech Information Security Center. Dr. Merkle is widely recognized for his award-winning work in the field of cryptography as one of the co-founders of public-key cryptography. The New York Times said, "Dr. Ralph C. Merkle is celebrated as an inventor of the encryption technology that allows secure transactions over the internet." More recently, he has focused in the emerging area of nanotechnology or molecular manufacturing, gaining a reputation for achievement in that field as well.

Dr. Merkle comes to Georgia Tech from Zyvex LLC where as principal fellow, he led the company's nanotechnology research efforts since 1999. From 1988-1999, Dr. Merkle pursued research in both computer security and computational nanotechnology as a research scientist at the Xerox Palo Alto Research Center. He has published and spoken extensively and holds eleven patents. Notable are his patents with Martin Hellman and Whitfield Diffie on public key distribution and public key cryptosystems.

For his security work, Dr. Merkle received the Association for Computing Machinery's Kanellakis Award for Theory and Practice, the 2000 RSA Award in Mathematics and the Kobayashi Award of the Institute of Electrical and Electronics Engineers.

Dr. Merkle received his B.A. and M.S. degrees in Computer Science from the University of California, Berkeley and a Ph.D. in Electrical Engineering from Stanford University.

ARCS At A Glance

Chapters

Atlanta, Georgia
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Denver, Colorado
Honolulu, Hawaii
Los Angeles, California
Lubbock, Texas
Metropolitan Washington
Northern California
Orange County, California
Phoenix, Arizona
Pittsburgh, Pennsylvania
San Diego, California
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Mission

The ARCS Foundation provides scholarships to academically outstanding United States citizens studying to complete their degrees in science, medicine and engineering thereby contributing to the worldwide advancement of science and technology.

Achievements

For the 2002-2003 academic year, ARCS chapters have awarded \$3,780,861 to 468 scholars at 43 schools.
During the 45-year history of ARCS, a total of \$45,443,649 has been awarded to financially assist students of high achievement.

Scholarship Donors and Fundraising

The 1,412 members of ARCS are women volunteers who willingly and enthusiastically donate their time, efforts and financial support. Because all scholarship fund solicitation and administration expenses are underwritten or donated by ARCS members, **100 %** of all contributions go directly to scholarships.

ARCS Foundation, Inc. provides a way for corporations, civic organizations and individuals in the community to combine resources and efforts to support American scholars, helping to ensure a better future for all. ARCS awards for basic scientific education are the largest of any private membership organization in the United States.

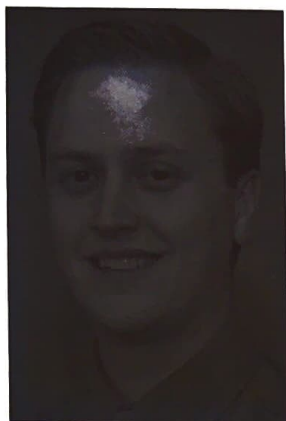
Web Site: ARCSFOUNDATION.ORG

Emory University

Anthony M. Byers

First Year ARCS Scholar

Ph.D. Candidate, Immunology ARCS Membership Fellowship



Tony graduated from Duke University in 1999 with a B.S. in Biochemistry. He received honors distinction for his senior research thesis. After working as a lab technician for one year, he decided to pursue a Ph.D. degree in Immunology. Tony is currently in his third year of doctoral research in the lab of Dr. Aron Lukacher where he studies the immune response to persistent viral infections. He has twice presented his research at conferences and has contributed articles to three publications. Tony's writings include a first author review and a first author original research article published in the Journal of Immunology.

Michael P. Cassidy

First Year ARCS Scholar

Ph.D. Candidate, Chemistry ARCS Membership Fellowship



Mike attended The College of New Jersey in Ewing Township, New Jersey where he received his B.S. degree in Chemistry. While at TCNJ, he performed chemical research with Dr. Georgia Arvanitis. He is currently finishing his Ph.D. at Emory University where he is undertaking the total syntheses of cassine and selaginoidine with Dr. Albert Padwa as his advisor. Upon completion of his Ph.D., he will be a postdoctoral fellow with Dr. K. Barry Sharpless at Scripps Research Institute in La Jolla, California. Outside chemistry, Mike is an accomplished bowler and bowls competitively in tournaments. He was also a volunteer EMT in his hometown of Maywood, New Jersey for six years and responded to over 1000 calls. In addition to being honored by receiving the ARCS Fellowship, Mike also received a Boehringer-Ingelheim scholarship in 2002.

Emory University

William W. Cutchins, Jr.

**Third Year ARCS Scholar
Ph.D. Candidate, Chemistry
Teed Poe ARCS Light Fellowship**



Will attended Hamilton College in upstate New York where he began his chemistry career by searching for drugs with unique medicinal activities from marine organisms. After graduation, he began graduate studies at Emory University seeking to prepare biologically interesting molecules using newly discovered reactions. Will has been active in Emory's undergraduate department, having taught several semesters of organic chemistry. This spring, while completing his doctorate, he will again teach classes in organic chemistry as well as forensics. When not in the lab, Will enjoys playing classical guitar and spending time with his wife and Oscar, their one year old Golden Retriever.

Kimberly J. Dougherty

**First Year ARCS Scholar
Ph.D. Candidate, Neuroscience
James R. Kuse Foundation ARCS Fellowship**



Kim received her B.S. degree in Biochemistry and Psychology from Boston College in 2000. She is currently a fourth year student in the Neuroscience program at Emory University working on her thesis project in Shawn Hochman's laboratory. Kim's current research is focused on spinal inhibitory neurons involved in pain circuitry and how the physiological and molecular properties of these neurons are altered by neurochemicals. She has had the opportunity to present her work at the Federation of European Neuroscience meeting in Paris and at three Society for Neuroscience meetings in the U.S. She also spent three months working on a research project in Sweden. Kim has served on her program's admissions committee, the Graduate Student Council and the Graduate Senate.

Emory University

Jenny M. Henderson

Third Year ARCS Scholar

Ph.D. Candidate, Nutrition & Health Sciences Teem Family ARCS Fellowship



Jenny's interest in science developed while growing up on a farm in rural Iowa. She first pursued agricultural research as an intern in Plant Pathology at Iowa State University, testing treatments for the soybean cyst nematode, a pathogen affecting growth and yield of soybeans in 75% of all Iowa fields. During her time at Drake University, she became interested in how nutrition and fitness impact health and disease. Jenny's focus is on the inherited metabolic disorder, galactosemia, where patients have an error in the pathway breaking down the carbohydrate, galactose. She enjoys playing tennis and running. Jenny participated in her first half-marathon last Thanksgiving Day in Atlanta.

Beven P. Livingston

Third Year ARCS Scholar

Ph.D. Candidate, Neuroscience Jean S. Brumley Memorial ARCS Fellowship



Beven earned a B.A. degree in Biology from Transylvania University, a B.H.S. degree in Physical Therapy and a M.S. in Biomechanics from the University of Kentucky. Her interest is in the field of physical rehabilitation. She spent twelve years working as a physical therapist and athletic trainer before embarking on graduate studies in Neuroscience. Her focus as a research and teaching professional is to aid students in understanding the importance of basic science as it evolves rapidly, and how to integrate this information into a successful clinical treatment plan. Beven's career goal is to continue research and education that contribute to the knowledge base of how the central nervous system controls the musculoskeletal system. Beven enjoys tennis and taking care of her new son, Aiden.

Emory University

Melinda D. Mackereth

First Year ARCS Scholar

Ph.D. Candidate, Genetics

Marcia and John Donnell ARCS Fellowship



Mindy first became interested in scientific research as a child, experimenting with dirt and seeds in her backyard garden. Since then, she has designed molecular diagnostic tests for nosocomially-acquired pathogens as an intern at the Genetics & IVF Institute in Falls Church, Virginia. She investigated aberrancies in subcellular tracking patterns of signal transduction pathway

components in a cancer model system as an undergraduate at the College of William and Mary. Currently, Mindy is pursuing a doctorate degree in Genetics where her research focuses on the genes critical for the initial steps of vertebrate ear development. She is an accomplished dancer and continues to pursue her training at Callanwolde Fine Arts Center in Atlanta. In her spare time, Mindy enjoys playing with her dog, Macs.

Mitchell P. Maddox III

First Year ARCS Scholar

Ph.D. Candidate, Chemistry

ARCS Membership Fellowship



Trey is a native of Panama City, Florida. Following two years at Gulf Coast Community College, he received his B.S. degree in Biochemistry from the University of West Florida in Pensacola. As a graduate student at Emory University, his research interests include organic, organometallic and biological research. Trey's current project is investigating the use photolitically active

organometallic complexes as carbon radical precursors for the modification of biomolecules. While at Emory, he received the GAAN Fellowship in 1999 as well as the Boehringer-Ingelheim Fellowship in 2001. Trey hopes to seek a position in academia upon completion of his academic degree.

Emory University

Erin L. Murray

First Year ARCS Scholar

Ph.D. Candidate, Epidemiology

Georgia Gulf Corporation ARCS Fellowship



Erin graduated magna cum laude in 1999 with a B.S. degree in Mathematics from Westminster College in New Wilmington, Pennsylvania. She was also awarded College Honors in Mathematics through her research model of Byler Disease, a fatal genetic disorder in the local Amish community. In 2001, she graduated with an M.S.P.H. degree in Epidemiology from Emory

University's Rollins School of Public Health. Erin's current research interests are influenza and other respiratory infections, particularly in developing countries. Her dissertation topic will assess the effects of crowding and indoor air pollution on acute lower respiratory infections in Bangladeshi children in conjunction with the effects of temperature, humidity, and rainfall on the transmission of respiratory infections. In her free time, Erin enjoys training for and competing in triathlons.

Wade A. Neiwert

Second Year ARCS Scholar

Ph.D. Candidate, Chemistry

Zeist Foundation ARCS Fellowship



Wade is from Eugene, Oregon and received his B.S. degree from George Fox University in Newberg, Oregon in 1999. His research interests center around inorganic chemistry, the development of new functional materials, and nanotechnology. Two of his multiple projects include the design of a new inorganic/organic gel-like catalyst for the decontamination of chemical

warfare agents and the preparation of a new class of inorganic metal-oxygen clusters for use as nanoscale building blocks in functional materials. Wade plans to pursue a position within academia upon completion of his doctoral degree and was recently honored with a Howard Hughes Medical Institute Teaching Fellowship, introducing freshman to scientific research.

Emory University

Chanley M. Small

First Year ARCS Scholar

Ph.D. Candidate, Epidemiology **ARCS Membership Fellowship**



Chanley earned her B.A. degree in Environmental Studies at Brown University in 1991. She continued studying Conservation Biology earning a M.S. degree in Biology at Stanford University in 1995. Her research at Emory University is focused on the relationship between environmental exposures and reproductive health. Chanley also studies how genetic variants both independently and in combination with environmental exposures affect reproductive health. She is currently Project Director for a National Institute of Health study examining how polybrominated biphenyl exposure affects reproductive outcomes. Chanley plans to continue research and teaching. She enjoys changing diapers, reading Dr. Seuss and singing Elmo's song to her three children, ages nine months to five.

Renata M. Zappala

First Year ARCS Scholar

Ph.D. Candidate, Biology **Frances & Parks Hicks ARCS Fellowship**



Renata attended the University of Pennsylvania where she majored in Biology and lettered on the women's basketball team. She came to Emory University as a student in the MD/Ph.D. program. She has spent the last three years in the Population Biology Ecology and Evolution program in the lab of Bruce Levin. Renata's thesis research focuses on understanding the population dynamics of bacterial infections and applying this knowledge to understanding how antibiotic treatment selects for antibiotic resistance. One research goal is to be able to design antibiotic treatment protocols that are effective in clearing the infection while also decreasing the prevalence of antibiotic resistance. Renata enjoys cycling, dividing her time between road cycling and mountain biking in the north Georgia mountains.

Georgia Institute of Technology

Anne-Marie Albanese

First Year ARCS Scholar

**Ph.D. Candidate, Mechanical Engineering
ARCS Membership Fellowship**



Anne-Marie received her baccalaureate degree from Washington University in St. Louis. She began her graduate work at Georgia Tech in 2000 developing and controlling a semi-active vibration absorber using smart materials for broadband control problems. Her research interests include vibration control, semi-active control algorithms, noise control and smart materials. She has received several fellowships including the Langsdorf at Washington University, National Science Foundation and Presidential. Anne-Marie is currently a STEP Fellow through Georgia Tech, which involves teaching and mentoring high school freshmen in the area of scientific research. In her free time, she co-organizes the MEGA-SME football block, trains her dog and plays the cello.

Matthew S. Allen

First Year ARCS Scholar

**Ph.D. Candidate, Mechanical Engineering
Patsy & Jere Drummond ARCS Fellowship**



Matt completed his B.S. degree in Mechanical Engineering at Brigham Young University. His research interests have been varied, including materials science, thermodynamics and vibration. As an undergraduate, he worked in research at Patterned Fiber Composites and experienced success designing highly damped carbon fiber composites for the Air Force. This research resulted in a number of publications and a small spin-off company that used the technology to create highly damped golf club shafts. Matt's current research is focused on determining a structure's vibration properties from experimentally measured vibrations. He is the father of two young children and loves spending most of his free time with his family. He especially enjoys building robots out of Legos with his son.

Georgia Institute of Technology

Erika A. Ooten Biediger

Second Year ARCS Scholar

**Ph.D. Candidate, Mechanical Engineering
Robbins/Century ARCS Fellowship**

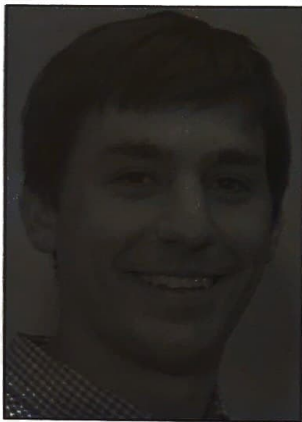


Erika graduated magna cum laude with a B.S. degree in Mechanical Engineering from Texas A&M University in 1998. In December 2000, she received her Masters of Science degree in Mechanical Engineering from the Georgia Institute of Technology. During her undergraduate and graduate years, she completed six summer terms as an engineering intern for ExxonMobil. During her last internship, Erika helped develop liquid lift technology for deep water drilling. She is pursuing a Ph.D. in Mechanical Engineering in the area of Automation and Controls. Her research interests are currently focused on controlling the motion of multiple satellites used in formation flying. Erika is the recipient of numerous fellowships including a NASA Goddard Space Flight Center Graduate Student Researchers Program award.

James P. Brooks

Third Year ARCS Scholar

**Ph.D. Candidate, Industrial & Systems Engineering
Imlay Foundation ARCS Fellowship**



Paul graduated from the University of Virginia in 1999 with B.A. degrees in Mathematics and Physics. That summer, he entered the Operations Research Ph.D. program in the School of Industrial and Systems Engineering at Georgia Tech. His field of concentration is optimization and his doctoral research is focused on biomedical applications of integer programming. Specifically, Paul is developing a discriminant analysis tool with the intention of applying it to biomedical data. He is conducting his research with Professor Eva Lee. Paul worked for Norfolk Southern Corporation this past summer and learned how Operations Research techniques are applied in an industrial setting. Beyond school, Paul participates in a men's baseball league.

Georgia Institute of Technology

Andrea Forte

First Year ARCS Scholar

Ph.D. Candidate, College of Computing Cooley Family Foundation ARCS Fellowship

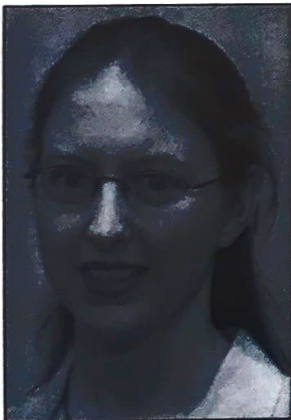


Andrea received a B.A. degree in Foreign Languages and Literature from Western Michigan University in 1996. She received multiple merit-based awards, including a scholarship to attend the University of Passau in Germany. After earning a master's degree in Library and Information Science from the University of Texas, an interest in human-computer interaction led her to a professional position as an interface designer. In 2002, Andrea returned to school to explore the design of effective computer-based environments for human learning and communication. She is working with Mark Guzdial to investigate media manipulation and creation as a context for engaging students of the humanities and other disciplines in computer science. Andrea is also working with Amy Bruckman to explore the design of online environments and digital libraries to support communities of history learners.

Charlotte W. Kotas

First Year ARCS Scholar

Ph.D. Candidate, Mechanical Engineering James M. Cox Foundation ARCS Fellowship



As a recipient of a NSF graduate fellowship, Charlotte is enjoying the opportunity to continue her studies at the George W. Woodruff School of Mechanical Engineering at Tech. Currently, her doctoral research is leading her to explore the interface between biology, fluid mechanics, and acoustics, where she is looking into the role of fluid flows in hearing. Charlotte's undergraduate degree in Mechanical Engineering was completed at the University of Tennessee where she was active in the University Honors Program and Tau Beta Pi, an engineering honor society. Through UT's cooperative education program, she spent a year working in various branches of NASA's Langley Research Center in Hampton, Virginia.

Georgia Institute of Technology

Peter A. Kottke

Third Year ARCS Scholar

**Ph.D. Candidate, Mechanical Engineering
Siemens, Inc. ARCS Fellowship**



Peter attended Duke University on a U.S. Navy ROTC scholarship and earned a degree in Mechanical Engineering in 1995. After graduation, he served in the Navy as a nuclear submarine officer. During his service, Peter developed a strong interest in the thermal sciences and decided to return to school in pursuit of a Ph.D. His research is focused in the area of rheology, the study of the flow and deformation of material. He is specifically looking at the role of tension in liquids and is developing a new criterion for cavitation based on his results. Peter is the recipient of a National Defense Science and Engineering Graduate Fellowship as well as a Georgia Tech President's Fellowship. Peter enjoys spending time away from his studies with his wife, Maggie, an Emory medical doctor in her internship year at Emory, and their two-year-old son, Jackson.

Brian M. Lewis

Second Year ARCS Scholar

**Ph.D. Candidate, Industrial & Systems Engineering
Goldman Sachs & Company ARCS Fellowship**



Brian earned a B.S. degree in Industrial Engineering and Operations Research from the University of California, Berkeley in 1999. Continuing on to graduate school as a Dean's Fellow, he earned a M.S.E. degree in the same area from the University of Michigan in 2001. At Georgia Tech, Brian is pursuing a Ph.D. in Industrial and Systems Engineering with a focus on transportation and logistics systems. His research investigates the effects of security on efficiency in supply chain systems, specifically in international shipping. Brian was awarded a Dwight D. Eisenhower Fellowship for Graduate Study in Transportation and was recently selected to attend the 2003 INFORMS Doctoral Colloquium.

Georgia Institute of Technology

James R. Luedtke

Second Year ARCS Scholar

Ph.D. Candidate, Industrial & Systems Engineering
Hansen Family ARCS Fellowship



Jim graduated from the University of Wisconsin-Madison in 2001 with a degree in Industrial Engineering. He then came to Georgia Tech to pursue a Ph.D. in the same field and expects to earn a Master's degree in Operations Research this fall. Jim's general field of interest is Operations Research, and he is currently applying these techniques on a project with Professor Chip

White comparing the impact on costs of having security inspections at different points in the supply chain. He has held internship positions with W.L. Gore, Agilent Technologies and ExxonMobil. After graduation, Jim plans to pursue a career in academia.

Jerome W. O'Neal

First Year ARCS Scholar

Ph.D. Candidate, Industrial & Systems Engineering
Mauldin/Miller ARCS Fellowship



Jerry is a Ph.D. student in the School of Industrial and Systems Engineering. His research work is in continuous optimization, with a focus on interior-point (IP) algorithms for Conic Programming. Currently, he and his advisor, Professor Renato D.C. Monteiro, are investigating the use of iterative solvers in linear programming IP algorithms. Jerry received a B.S. degree from the United States

Military Academy in 1993, then served for almost eight years in the U.S. Army Corps of Engineers before leaving the military in 2001. He is a National Science Foundation Fellow and an American Society of Engineering Education Fellow. Jerry's outside interests include family and church activities. He and his wife, Amy, have two children, Mary Grace, age five and Andrew, age two.

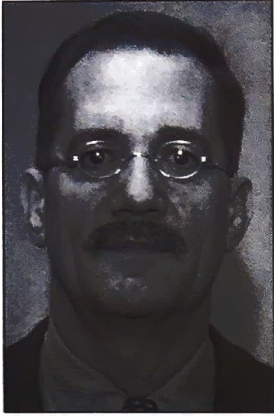
Georgia Institute of Technology

Ray Popovic

First Year ARCS Scholar

Ph.D. Candidate, Industrial & Systems Engineering

ARCS Century Fellowship



Born in Belgrade, Serbia, Ray settled with his parents in Atlanta, Georgia after living in France and Canada. He is the recipient of two degrees from the Georgia Institute of Technology – a M.S. with concentration in Operations Research and a M.S. with concentration in Quantitative and Computational Finance. The acquisition of the latter degree provided the inspiration for Ray to

continue advanced studies in the area of quantitative finance. The topic that consumes most of Ray's time deals with pricing and hedging portfolios that are subject to interest rate risk. He is developing a calibrated interest rate model that large financial institutions can use to access their exposure to LIBOR rate based risk.

Joshua E. Reed

First Year ARCS Scholar

Ph.D.Candidate, Industrial & Systems Engineering

ARCS Membership Fellowship



Josh holds a B.S. degree in Industrial Engineering from the University of Illinois, Urbana-Champaign. He is currently a Ph.D. candidate in the school of Industrial and Systems Engineering at the Georgia Institute of Technology. His interests lie in the application of stochastic process theory to queuing systems and financial engineering. Josh's past work developed the steady-state properties of a

multi-dimensional diffusion process that approximates certain queuing networks with customer abandonments. As an undergraduate, Josh also had the opportunity to intern at several large U.S. companies including Intel and Caterpillar.

Georgia Institute of Technology

Susan W. Stewart

Third Year ARCS Scholar

**Ph.D. Candidate, Mechanical Engineering
Patsy and Jere Drummond ARCS Fellowship**



Susan received a Bachelor of Science degree from Penn State University in 1999, graduating with distinction. She then began her graduate studies at Georgia Tech where she was awarded a National Science Foundation Fellowship in 2000 and earned her Masters Degree in 2001. Her current research is in the field of energy systems.

Susan is working on a computer program that optimizes the design of residential air-conditioners using a new environmentally friendly refrigerant. Per EPA regulations, the current standard refrigerant will be phased out beginning in 2010 due to its high ozone depletion potential. Using a new refrigerant requires a new A/C design to help reduce the amount of energy required to cool homes. Susan's goal is to make these new designs as energy efficient as possible.

Shannon L. Stott

Fourth Year ARCS Scholar

**Ph.D. Candidate, Mechanical Engineering
Graves Foundation ARCS Fellowship**



Shannon earned a B.S. degree in Mechanical Engineering from the University of New Hampshire in 1997, followed by a Masters Degree in 1999 from the University of Illinois. Her thesis research at Georgia Tech is in the field of bioengineering with a focus on cryopreservation. Under the advisement of Dr. Jens Karlsson, she is utilizing theoretical and experimental methods to elucidate

the mechanisms of damage during the preservation of cells and tissues. This year, Shannon is excited to be the co-chairman of the Education and Outreach Committee of GTEC, a committee designed to introduce local area K-12 students to the fields of bioengineering and biosciences. After graduation, she plans to pursue a career in academia.

Georgia Institute of Technology

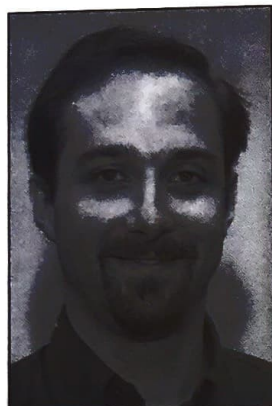
Patrick W. Yaner

First Year ARCS Scholar

Ph.D. Candidate, College of Computing

Scientific-Atlanta Foundation

ARCS Fellowship



Patrick graduated from North Carolina State University cum laude with a B.S. degree in Applied Mathematics and a B.S. degree in Computer Science. He is currently studying artificial intelligence and cognitive science in his pursuit of his Ph.D. Patrick has worked at the Naval Surface Warfare Center in Dahlgren, Virginia as a student trainee in mathematics. Recently he has studied techniques for content-based image retrieval in the context of medical imagery at the National Library of Medicine in the Lister Hill National Center for Biomedical Communications. Patrick's research at Tech has focused on visual reasoning and specifically associative visual retrieval. He is also interested in visual analogical problem solving, multi-modal analogy and addressing the issues of retrieval and mapping as they relate to the problem solving task with respect to analogy and visual analogy, in particular.

Morehouse College

Adewole S. Adamson

First Year ARCS Scholar

Junior, Biology Major

ARCS Membership Scholarship



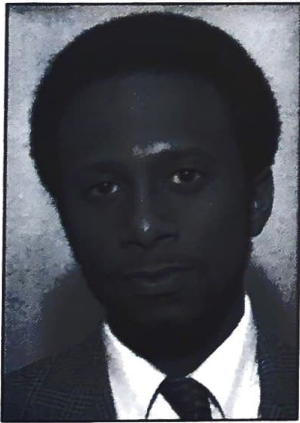
Ade is a Biology and French double major pursuing a career in academic medicine. He is on the Dean's List, recognized by the National French Honor Society, Pi Delta Phi, a member of the National Society of Collegiate Scholars and in the U*STAR/MARC program. Summer experiences have included diabetes research at the Jackson Laboratory in Maine and sickle cell disease research at Rockefeller University in New York. During the academic year, Ade conducts cardiovascular disease research at the Morehouse School of Medicine. When away from science, he is an active delegate in the International Affairs Society and plays on a competitive Atlanta-area travel ice hockey team.

Adolph W. Flowers

First Year ARCS Scholar

Junior, Biology Major

Georgia-Pacific Foundation ARCS Scholarship



Adolph Flowers was born in Maryland and grew up in Chesapeake, Virginia. He is a third year student at Morehouse College where he is majoring in Biology with a minor in Public Health and Mathematics. He is currently pursuing a career in Public Health in the field of Epidemiology. Adolph's most recent research involves studying disease in the Eastern Oyster. He is a member of the National Society of Collegiate Scholars, where he serves as the Vice President of Communications. He is also a member of the Public Health Association and the Honor Society.

Morehouse College

Ahmad R. Garrett-Price

Second Year ARCS Scholar

Senior, Biology Major

Synovus ARCS Scholarship



Ahmad is on the Dean's List, and he is a member of the National Society of Collegiate Scholars, the National Dean's List, and the Golden Key International Honor Society. In addition, he is a member of the Beta Kappa Chi scientific honor society and the Alpha Epsilon Delta national premedical honor society. During the summer of 2001, he was selected to attend the Honors

Premedical Academy at Baylor College of Medicine, where he successfully completed a course in anatomy and physiology and a preceptorship in Internal Medicine. The following summer he performed research at the University of Texas Southwestern Graduate School, studying the role of anti-oxidant Co-enzyme Q 10 on hypertrophy in HSF-1 deficient mice. After graduation, Ahmad plans to pursue a M.D. degree to become either a cardiologist or radiologist.

David Mitchell III

Second Year ARCS Scholar

Senior, Biology Major

Coca-Cola Foundation ARCS Scholarship



David is a member of the honor roll and Dean's List, the National Society of Collegiate Scholars, the Golden Key International Honor Society and a participant in the U*STAR/MARC research program. He spent two summers at Indiana University Perdue University Indianapolis (IUPUI), researching combined chemotherapeutic and genetic treatments for prostate cancer and the

locations of AP-1 sites in PSMA. During his freshman year, he trained with Dr. Duane Johnson in prostate cancer research. His ongoing research at the Morehouse School of Medicine involves gene regulation of heart smooth muscle in hypertensive and normal states. David's extracurricular interests include drawing and writing.

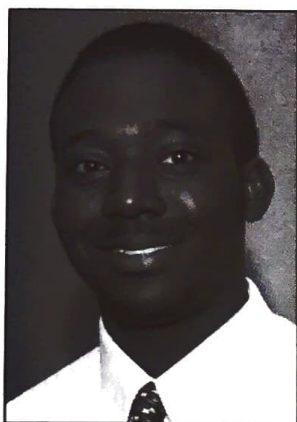
Morehouse College

Omoruyi O. Osula

Second Year ARCS Scholar

Senior, Biology Major

David M. Dixon ARCS Scholarship



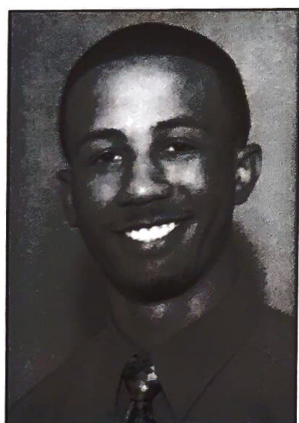
Omoruyi is a senior Biology major from Anniston, Alabama. This past summer, he conducted research in the lab of Dr. Norman Letvin in the department of Virology at Harvard Medical School. Omoruyi's project focused on measuring the effects of pre-existing immunity to the adenovirus vector in mice immunized with the vector, which contained the HIV-envelope. He also investigated the role that interferon gamma plays in eliciting efficient CD8+ T cell responses in these mice. In addition, Omoruyi is a member of the Morehouse College Health Careers Society, Alpha Epsilon Delta Pre-medical Honor Society and Beta Kappa Chi Scientific Honor Society. His hobbies include playing basketball and playing the piano.

James C. Pendleton

First Year ARCS Scholar

Junior, Biology Major

ARCS Membership Scholarship



James is a member of the Dean's List and honor roll, National Society for Collegiate Scholars, Health Careers Society and the Honors Program. During the summer of 2002, his research projects focused on investigating the effects of nucleoporin knockdown on nucleocytoplasmic trafficking at Rockefeller University. This past summer, James participated in research at the National Institute of Neurological Disorder and Stroke with a focus on characterizing proteins involved in Troyer Syndrome. At Morehouse, he serves as the College Campus News Editor, Student Senator and program manager for the Impact Young Lives Foundation, a nonprofit organization which encourages South Africans to pursue graduate training in the United States. James plans to pursue a MD/Ph.D. degree specializing in neurosurgery and neuroscience research.

Morehouse College

Franklin D. West III

Second Year ARCS Scholar
Senior, Biology Major
ARCS Century Scholarship



Franklin is pursuing a career as a research scientist in the field of animal science. He is a David and Lucille Packard Scholar and U*STAR/MARC Scholar. As a Packard Scholar, Franklin has interned at both Cornell University and Princeton. Under the direction of Dr. Lawrence Blumer, Franklin is using *Nasonia vitripennis* and *Melittobia digitata* as a model system to better understand parasitoid host competition. His goal is to assess the effect of handicapping, host weight and foundress population density on offspring success and male/female sex outcome. In his free time, Franklin enjoys equestrian sports, aquatic husbandry and traveling.

The University of Georgia

Pamela J. Bonner

Second Year ARCS Scholar

Ph.D. Candidate, Microbiology

Jerry Cates Memorial ARCS Fellowship



Pam, a native of Portsmouth, Rhode Island, received her B.S. degree in Molecular and Cell Biology from the University of Connecticut in 2000. As a University Scholar, she completed the most prestigious undergraduate program at the University. Pam was awarded a Presidential Fellowship to pursue a doctorate in Microbiology. Under the direction of Dr. Lawrence Shimkets, she

is using *Myxococcus xanthus* as a model system to understand how zinc-metalloproteases modulate the extracellular matrix which surrounds the cells. In mammals, unchecked degradation of the extracellular matrix by similar proteases has been linked to arthritis and cancer. Pam's career goal is to be a professor at a research university. In her free time, she enjoys reading, watching sports and spending time with friends.

Kimberley T. Hill

First Year ARCS Scholar

Ph.D. Candidate, Pharmaceutics

Gilham Foundation/Stokes ARCS Fellowship



Kimberley graduated cum laude from the University of Georgia with a B.S. degree in Microbiology in 1997. Currently, she is pursuing a doctoral degree under the direction of Dr. Catherine A. White in the area of pharmacokinetics and drug delivery. While in graduate school, Kimberley has received the University of Georgia Graduate School Dissertation Completion Assistantship Award, the Sloan

Fellowship (in association with the Alfred P. Sloan Foundation) and the Medical University of South Carolina Alumni Association's Life Member Scholarship. She is a member of the American Association of Pharmaceutical Scientists and is treasurer of the UGA chapter.

The University of Georgia

Martin L. Moore



Third Year ARCS Scholar
Ph.D. Candidate, Genetics
Moseley/Napier ARCS Fellowship

Marty is a Ph.D. candidate in the Department of Genetics at the University of Georgia. He obtained a B.S. degree in Biology from the University of Georgia in 1995, worked three years in a diagnostic laboratory, and started graduate school in 1998. Marty is currently studying how host genes play a role in mouse adenovirus type 1 infection. His research interests include viral pathogenesis and immunology. Marty's dissertation work has involved analyzing the host immune response to mouse adenovirus. Supported by ARCS, he identified key genes required for protection against the virus and successfully treated adenovirus disease in a mouse model. Marty and his wife live in Ann Arbor, Michigan.

Lowell Y.M. Rayburn



Second Year ARCS Scholar
Ph.D. Candidate, Genetics
Weiss Family ARCS Fellowship

Lowell graduated from Davidson College with High Honors in Biology, magna cum laude in 1999. At UGA, Lowell has been working under the direction of Michael Bender and investigating the function of the prohormone processing protease, *amontillado*. This protein is also present in humans and has been linked to various biomedical disorders such as diabetes, obesity and some types of cancer. During Lowell's first year as an ARCS recipient, she received the University of Georgia/Medical College of Georgia Student Exchange Award for Excellence in Biomedical Research. She also spoke to the ARCS members about her dissertation project at the spring luncheon in May. Lowell was recently awarded an American Association of University Women Education Foundation Dissertation Fellowship for her final year of graduate school. Her career goal focuses on educating legislators and the general public about science.

The University of Georgia

Andrew B. Reams

Second Year ARCS Scholar

Ph.D. Candidate, Microbiology Moseley/Napier ARCS Fellowship



Drew, from Mission Viejo, California, earned his B.S. degree from California State University, Chico in 1995. He worked for two years in a biotechnology laboratory before starting his graduate studies at UGA. During his Ph.D. research under the supervision of Dr. Ellen Neidle, he discovered gene amplification in *Acinetobacter*.

Drew's goal is to develop a bacterial model system to elucidate the mechanisms behind cancer. He is the recipient of several awards including the Audrey Nance Best Memorial Award, the Excellence in Research by Graduate Students Award and the UGA/MCG Student Exchange Award. After graduation, Drew would like to expand his research to pursue the role of gene amplification in oncogenesis and cancer progression.

Robert H. Waldo III

Third Year ARCS Scholar

Ph.D. Candidate, Microbiology Burtchaell Foundation ARCS Fellowship



Rob, a native of Virginia, received his undergraduate degree in Biology from Virginia Tech in 1997. His research interests involve the study of pathogenic bacteria. He is studying how specialized proteins of the unusual bacterium *Mycoplasma pneumoniae*, which causes "walking pneumonia" among other diseases, function in allowing the organism to be virulent. Rob has

received awards for teaching as well as for research. He is active in his church in Athens and volunteers for the Georgia chapter of Recording for the Blind and Dyslexic where he reads textbooks onto audio tape for disabled students.

The University of Georgia

Sarah E. Whitehead

First Year ARCS Scholar
Ph.D. Candidate, Genetics
ARCS Membership Fellowship



Sarah, who is from Dayton, Ohio, graduated from Miami University of Ohio with a major in Microbiology and a minor in Medical Sociology. At Georgia, her Ph.D. dissertation research focuses on the investigation of the involvement of the SMN (survival of motor neurons) protein in small nucleolar ribonucleoprotein (snoRNP) complex assembly. The deletion or mutation of the SMN1 gene causes spinal muscular atrophy, which is the leading genetic cause of death in children. Sarah is the recipient of the NIH Genetics Training Grant and the Miami University Undergraduate Research Award. After graduation, she hopes to begin her career in biotechnology and then teach at the college level. In her free time, Sarah enjoys reading and traveling.

Michael J. Yabsley

First Year ARCS Scholar
Ph.D. Candidate, Veterinary Parasitology
Sartain Lanier Family Foundation ARCS Fellowship



Michael, a native of Winnsboro, South Carolina, earned both his B.S. and M.S. degrees from Clemson University. He is a Ph.D. candidate studying the epizootiology of *Ehrlichia chaffeensis*, an emerging zoonotic tick-borne bacterium. He works at the Southeastern Cooperative Wildlife Disease Study in the College of Veterinary Medicine under the direction of William "Randy" Davidson. Michael's research is to utilize white-tailed deer, the major reservoir host of *E. chaffeensis*, as sentinels to delineate the distribution and molecular variation of this pathogen. These data will be analyzed using GIS to predict areas of risk for human infection. After the completion of his doctorate, Michael plans to continue research on the mechanisms by which zoonotic parasites are maintained in reservoir hosts.

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The Board of Directors of the Atlanta Chapter of *Achievement Rewards for College Scientists* extends special appreciation to the following individuals whose time and talents contributed to the success of the 12th annual celebration.

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Department Heads, Advisors and Faculty
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and

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