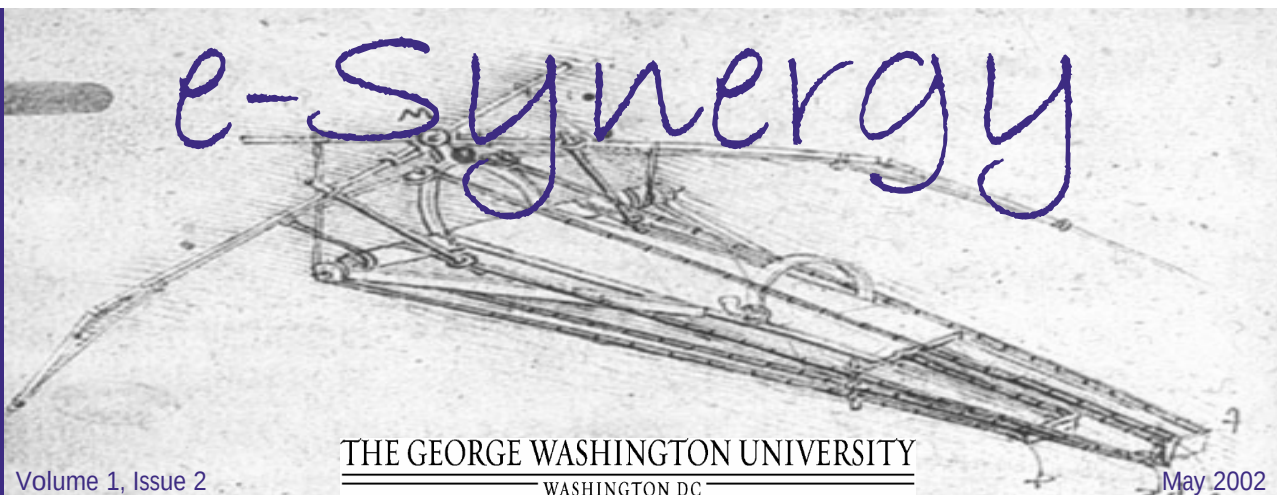




SEAS Celebrates 2002 Commencement

Over the May 17th -19th weekend, SEAS hosted several celebrations and events leading up to the university-wide Commencement ceremony on Sunday, May 19th.

SEAS kicked off its commencement activities with a luncheon on Friday, May 17th to honor Dr. Ya-Qin Zhang, a graduate of SEAS who earned his doctorate of science in 1989. SEAS Dean Timothy Tong, SEAS faculty, and several members of the GW Chinese Students Association gathered to congratulate Dr. Zhang, who was to be awarded the GW Distinguished Alumni Achievement award at the University Commencement exercises on May 19th. GW bestowed the award on Dr. Zhang for his career achievements, which include, among many other accomplishments, his current position as managing director of Microsoft Research Asia.

Later Friday afternoon, 47 SEAS doctoral candidates took part in the University's Hooding Ceremony at Lisner Auditorium. Each candidate was officially recognized at the ceremony as a new doctor of science through the centuries old practice of



FAA Administrator Jane Garvey delivers the SEAS Commencement address.

"hooding", or placing over the doctor's shoulders a drape whose cut and colors signify his/her attainment of the doctor of science degree in the field of engineering and applied science.

On Friday evening, the School held the SEAS Celebration ceremony, at which 536 SEAS undergraduates and masters and doctoral students were graduated from the School's engineering and applied science programs. SEAS faculty and staff, diplomats, and the families and friends of graduating students gathered at GW's Smith Center to honor and congratulate the students on their individual and collective accomplishments. To recognize individual student achievements and contributions, the School presented awards to 27 SEAS graduates during the program. Dean Timothy Tong also recognized

SEAS alumnus Allyn Kilsheimer, a 1963 graduate whose attitude toward his work serves as an example for young graduates. Mr. Kilsheimer owns the construction firm that is responsible for rebuilding the portion of the Pentagon damaged in the September 11th terrorist attack.

The guest speaker at the SEAS Celebration was Ms. Jane Garvey, the Administrator of the U.S. Department of Transportation's

Federal Aviation Administration (FAA). Ms. Garvey spoke to the graduates of the challenges and opportunities facing them, and of the choices they will make in both their professional and personal lives. She told them that "... while history is often written or described in grand terms – that is, inventions, revolutions, and revolutionary ideas – it is always essentially about people. In a sense your flight begins today." Reminding the graduates of the importance of character, she said, "... there is one question more important than 'What are you going to do with your life?' And it is 'How are you going to live your life?' Because the fact is, you are all about to enter a world where you will no longer be judged by your grades, but by your character."

Alexandre Gauthier, the student speaker chosen to represent his class
(continued on back page)

SEAS Student Awarded Goldwater Scholarship

SEAS junior Alison Alvarez recently learned that she has been awarded a Goldwater Scholarship. These prestigious scholarships were established by the Barry M. Goldwater Scholarship and Excellence in Education Foundation to provide the United States with a continuing source of highly qualified scientists, mathematicians, and engineers.

Alvarez and the other Goldwater Scholars were selected on the basis of academic merit from a field of 1,155 mathematics, science, and engineering students who were nominated by the faculties of colleges and universities nationwide. The Board of Trustees of the Goldwater Foundation awarded 309 scholarships for the 2002-2003 academic year to undergraduate

sophomores and juniors from the fifty states and Puerto Rico. The one- and two-year scholarships cover the cost of tuition, fees, books, and room and board up to a maximum of \$7,500 per year.

Alvarez, a computer science and Japanese language double major, will use the Goldwater Scholarship toward her continued studies at GW and then plans to pursue a doctoral degree in computer science. Alvarez intends to become a professor at a major university, teaching artificial intelligence courses and conducting research in linguistics for computer-human interaction.

SEAS Dean Timothy Tong saluted Alvarez' accomplishment, saying, "I am thrilled for Alison and very proud of her accomplishment. I am very familiar with the Goldwater Foundation and with the high standards by which it judges candidates for its scholarships. That Alison was selected from a field of over eleven hundred students speaks so well of her and of her potential. SEAS is proud to be able to foster the development of such a scholar."

GW Steel Bridge Team Takes 1st Place in Regional Competition

GW's Steel Bridge Team placed 1st at the Regional Steel Bridge Competition hosted by Howard University on April 6th. The event was sponsored by the American Society of Civil Engineers (ASCE) and the American Institute for Steel Construction. In addition to taking first place in the overall competition, GW also placed first in every category of competition, including bridge weight, total deflection during the 2,500 pound loading, construction time, and aesthetics. GW has won this event for three consecutive years and will compete nationally June 21st – 24th in Madison, Wisconsin, at ASCE's 150th anniversary conference. Professor Muhammad Haque is the steel bridge team's faculty advisor, and Johann Aakre, a SEAS junior, is the captain. GW is a chapter member of ASCE, and the following SEAS stu-

dents are members of the winning ASCE team: Onur Bilgen (freshman), Russell Bush (sophomore), Bryan Cahill (sophomore), Tyler Wean (graduate student), Christian Salmon (graduate student), and Nathan Campeau (graduate student). Great job Team GW and best wishes at Nationals!



SEAS Steel Bridge Team members working on their bridge. From left to right: Bryan Cahill, Johann Aakre, and Russell Bush.

Inside this Issue

SEAS Hosts Vietnamese Ambassador	3
DOD Research Grant	3
SEAS Proudly Presents	4-5
Prof. Simha - NSF Grant	6
GW Hosts PSP Workshop	6
Prof. Badie - ASCE Award	7
Prof. Garris - Pressure Exchange Ejectors	7
JIAFS Students Win AIAA Conference Awards	8
CEE Students Honored	8
CS Students - Gamov Research Fellowship	8
SEAS Student Wins SHPE Design Contest	9
Tech Expo '02	10
CS Department Day	10
Community News	10

SEAS Hosts Vietnamese Ambassador

On April 8th, Dean Timothy Tong and the SEAS International Programs Office jointly hosted a visit by Dr. Nguyen Tam Chien, the Ambassador of Vietnam; Dr. Tran Qyu Thang, First Secretary, Consular Affairs; and Dr. Nguyen Dan Thuyen. The purpose of the meeting was to discuss establishing a 2+2 undergraduate feeder program with Vietnam National University of Ho Chi Minh City (VNUHCM). A 2+2 program allows international students to pursue the first two years of their undergraduate studies at their home university and the final two years at SEAS. Students then receive their degrees from The George Washington University.

Dr. Nguyen Tan Dung, Deputy Prime Minister of Vietnam, initiated the idea



Ambassador Nguyen Tam Chien (left) meets with SEAS Dean Timothy Tong.

of establishing this program when he visited Washington, D.C. in December 2001. VNUHCM and SEAS worked on the arrangements in the interim, and the agreement between

SEAS and VNUHCM is now being drafted. SEAS hopes to commence its agreement with VNUHCM no later than the Fall 2003 semester.

Also present at the meeting in April were Mr. Nghi Nguyen, son of Dr. Nguyen Tan Dung and a doctoral candidate in the SEAS Civil and Environmental Engineering Department; Associate Dean Rachele Heller; Professor Richard Soland; and Carol Makhoul, the coordinator of international programs at SEAS.

DOD/Lucite Awards SEAS a \$2.9 Million Research Grant

In April, the U.S. Department of Defense Lucite program awarded SEAS Professor Tarek El-Ghazawi and his team a \$2.95 million grant for research associated with reconfigurable supercomputing systems. Professor El-Ghazawi is the research program's project leader, and SEAS Professor Nikitas Alexandridis is also involved in the program as a co-principle investigator. The research team is led by GW and has three academic partners – George Mason University, the University of South Carolina, and the Naval Postgraduate School – and two commercial collaborators – Starbridge Systems and SRC Computers. As a part of this program, SEAS will house a state-of-the-art, high-performance reconfigurable computing facility for use by GW researchers and some outside members of the team.

This research project is a major component of an overall research direction

taken by Professor El-Ghazawi's group. The aim of the research program is eventually to build and make available to scientists and engineers supercomputers that have reconfigurable hardware and are user-friendly. While conventional hardware is rigid and cannot change once it has been built, reconfigurable hardware allows the structure and functionality of the underlying circuitry to change under the control of software and without having to re-wire or rebuild its components.

The research program encompasses two different elements. The team will work on the first element – making the machines adaptive – by investigating special system software and algorithms to provide the ability for such machines to understand the requirements of the current applications and change their hardware configurations accordingly. The second

element focuses on programmability, or making the machines look to users like general-purpose computers.

The result of this research is that a scientist using such a reconfigurable supercomputer to build an application for his/her own purposes would not need knowledge of hardware and computer engineering to adapt the hardware to his/her needs, and would use only the conventional programming languages to create applications. This will require the team to develop libraries of small hardware architectures that can target building blocks of different applications, thereby giving users the ability to create applications based on the building blocks. It will also require the team to investigate and develop a middleware layer that can actually hide the engineering details and support adaptability of the hardware to applications.

SEAS Proudly Presents . . .

As SEAS says good-bye to its graduating class of 2002, we thought it fitting to ask some of our students to share their memories and aspirations with us. We selected five graduating seniors – one from each SEAS department – whom we feel represent the future of engineering, and we asked them to do just that. Here's what they told us.

Rodolfo Guerra-Sa spoke freely of his time at SEAS and GW and of what he will take with him. Guerra-Sa, who is from Rio de Janeiro, Brazil, came to GW to study engineering. In addition to his classroom work, Guerra-Sa, a civil and environmental engineering major, participated in research at GW's National Crash Analysis Center (NCAC) for two years. SEAS Professor Cing-Dao Kan invited him to join the NCAC during the first semester of Guerra-Sa's junior year, giving him the chance to help build computer models of cars and simulate collisions. Says Guerra-Sa, "I am really grateful to Professor Kan, not only because I was offered this incredible opportunity, but this research allowed me to look into other fields of engineering that really interest me."

Guerra-Sa also completed a summer internship at a construction firm in Brazil and was a member of GW's winning Steel Bridge Team for two years. When asked about honors or awards that he has received at GW, Guerra-Sa seemed to keep his eyes focused on the big picture. While he said he was honored to have received the 2002 Outstanding Senior award from the American Society of Civil Engineers – GW Chapter, as well as a couple of other awards, Guerra-Sa stated, "However, there is one that I worked really hard for and will get on the 17th: my diploma!"

We asked Guerra-Sa what he learned at GW that he anticipates will be most useful to him in the future. He responded, "First, I learned how to work in a group, share ideas, and come up with an outcome to a problem. The



SEAS graduates from left: Jodi Michaels, Breanna Templeton, Rodolfo Guerra-Sa, Howard Sherman, and Dan Boucher.

beauty of engineering is that everyone sees a different solution for the same problem, and it is pretty interesting to realize how different people come up with different ways to solve them. Second, and most important, I learned to trust myself and my peers."

As he looks back, Guerra-Sa says of the memories he will take with him, "As I came to the U.S., I was not expecting to create so many good friends. After working night after night, day after day, with the same people in the same room, you have to wonder what is going to happen next . . . all the times that we studied until late at night to meet a deadline I will keep with me, not because they left me exhausted, but because they proved extremely rewarding."

As for his future plans, Guerra-Sa expects to "go back home and pass out on Copacabana beach" and then return to GW in the fall to begin a master's degree program in transportation safety.

Breanna Templeton came to GW from Ocean City, on Maryland's Eastern Shore. She selected mechanical and aerospace engineering as her major during her sophomore year, and became engaged in student activities from the start. Among her extensive list of student activities are:

freshman class president at GW's Mount Vernon campus; treasurer of the American Society of Mechanical Engineers – GW Chapter; and a member of the 2001 Colonial Cabinet, the GW sailing club, and the Residence Hall Council Association. Templeton also volunteered to help with the annual breast cancer walk and was a member of the SEAS mentoring program, SEASpan.

A member of Phi Sigma Pi national honor fraternity, Templeton did well academically at GW. She received a 2002 GW Alumni Association

Outstanding Student award, as well as two scholarships – the Presidential Academic Scholarship and the Alumni Scholarship – during each of her four years at GW.

Small class sizes and the freshman orientation to engineering (SEAS 1) are what came to mind for Templeton when asked about unique experiences at SEAS. Choosing a favorite class was not easy, but Templeton narrowed the choice to two: materials science lab and Walk on the Moon. Said Templeton, "I liked materials science lab because it was the first time I got to use the equipment in the basement of Tompkins Hall. I got to break stuff." She added, "Freshman year I took a Walk on the Moon as the only underclassman. I got to work with a senior to design something to put on the moon. Using the resources from the Air and Space Center, as well as the Internet and literature, we designed an oxygen-producing plant on the moon. It was my first design experience."

Templeton seems to have an engineer's natural instinct for looking to the practical application of knowledge to solve existing problems. We asked her to cite her favorite memory of GW, and she said this: "Sitting at the National Advisory Council dinner in March listening to the speaker – Allyn Kilsheimer, a SEAS alum – discuss his work in the rebuilding of the Pentagon.

To come together to experience the revival and rebuilding of the structure was a once-in-a-lifetime experience. He showed slides of the interior of the building, support structures, and the massive destruction as he discussed the experience. It put the field of engineering into perspective for me in rebuilding the world."

Templeton already has begun the transition to her career and is working as a computer support specialist for the Optical Society of America in Washington, D.C.

Dan Boucher immersed himself in engineering-related projects and activities during his time at GW. Boucher came to GW and Washington, D.C. from Wilbraham, Massachusetts and decided to study electrical and computer engineering during his sophomore year.

The project that left the greatest impression on Boucher was the FutureTruck project. Boucher was the leader of the FutureTruck 2001 team, a project that challenged him and the other team members to convert a Chevrolet Suburban to a hybrid electric vehicle. The team was comprised of both graduate and undergraduate students from all disciplines of engineering. Boucher recalled, "I worked on the project from February 2000 until June 2001 and became team leader in September of 2000. The vehicle improved mileage and reduced greenhouse gases by utilizing two electric motors and a small advanced diesel engine. Our unique approach allowed the vehicle to run with both the engine and the electric motors or just the electric motors. These modifications to the vehicle did not reduce the overall consumer functionality." Boucher cited the FutureTruck project as the most unique feature of his education at GW. Calling it "an amazing experience," he said, "I learned a lot about the engineering design and production process and the importance of teamwork."

Boucher also participated in the GW Co-op program, which gives students work experience in their chosen field. Boucher worked at the U.S. Department of Transportation's National

Highway Traffic Safety Administration (NHTSA). One of his duties at NHTSA was to review data from crash tests to ensure that the tested vehicles passed national safety standards. While at NHTSA, Boucher also worked with U.S. Customs Service officers to keep illegal vehicles from entering the country. In addition, he created a website at NHTSA for trailer manufacturers. The website is being used to help manufacturers develop valid vehicle identification numbers.

At GW, Boucher received the 2000 Co-op Student of the Year award, as well as the Benjamin C. Cruickshanks award for the graduating senior with the highest grade point average in computer engineering.

Boucher clearly took advantage of GW's location in Washington, D.C. during his studies. In fact, GW's location is the feature Boucher selected when asked what he liked most about the University. "GW is minutes from defense contractors and governmental research areas such as NASA, NRL, and NIST, as well as software companies such as AOL. This allows engineering students great experiences and job opportunities."

Boucher will begin a master's degree program in the fall and hopes to study embedded systems. As for where Boucher will study, he said that he is "considering several good offers."

As he looked back at his college career, Howard Sherman seemed to think a lot about the good times he had at GW and SEAS. He spoke of his friends, of SEAS faculty, of learning his way around a new city, and of the antics that occurred in New Hall 606 with his roommates.

Sherman, who is from Bensalem, Pennsylvania, decided to major in computer science during his sophomore year. SEAS Computer Science 131, Data Structures and Algorithms, was key to Sherman's decision to study computer science. Said Sherman, "That was what made me

want to be a computer science major. It was really challenging, but you really had a feeling of accomplishment when you finished those projects."

Sherman kept a busy schedule of research and activities at GW. During his junior year he worked as a technical assistant to the Computer Science Department's director of laboratories and then spent his summer serving as an intern at the U.S. Patent and Trademark Office and as a research assistant at GW's Cyberspace Policy Institute (CPI). He continued as a research assistant at CPI during his senior year and was a teaching assistant for one semester for Computer Science 041, Introduction to Computer Science.

In addition, Sherman was active in Engineers Council and his fraternity, Lambda Chi Alpha. He served one year as the freshman representative to the Council and two years as its recording secretary. He was both the secretary and the scholarship chair at Lambda Chi Alpha. A National Merit Scholar, Sherman also continued to do well academically. He was named a Presidential Academic Scholar at GW and is a member of Tau Beta Pi, the engineering honors fraternity.

When we asked Sherman what he liked most about GW, he focused on his department, saying, "The thing I like most about my department is the community. If you have a problem, most anyone, student or professor, will take time out of their day to help you out. The sense of community comes from the top, as the chair is very accessible and will always take the time to hear your concerns."

Sherman's next step is law school. He says that he is "very much looking forward to starting Duke Law School in the fall."

Jodi Michaels knew the career she wanted when she started college, and she was thrilled to find a program that met her needs at GW. Michaels, who is from Dix Hill, New York, entered GW in 1988 and began the eight-year Integrated Engineering and Medicine (IEMP) program. Michaels says, "Being in the IEMP program is something that

Professor Rahul Simha Receives NSF Grant

SEAS computer science professor Rahul Simha learned in April that the National Science Foundation (NSF) will provide a three-year major research instrumentation (MRI) award for a future-home research project that he and his team are developing. Members of his team include SEAS professors Robert Lindeman, Bhagi Narahari, Zhenyu Guo, and Can Korman, as well as GW psychology professor John Philbeck, and Barbara Myklebust, the director of the physical therapy program at GW's School of Medicine and Health Sciences.

Each year the NSF provides a relatively small number of these awards – in 2001, the NSF gave only 39 such awards to U.S. academic institutions – to increase the scientific and engineering equipment for research at Ameri-

can universities and to enable new lines of research in science and engineering. The MRI for the future-home research comes under a cost-sharing arrangement whereby the NSF provides approximately \$103,000, and GW, SEAS, and the Computer Science Department provide approximately \$44,000 in funds.

This future-home project distinguishes itself from other future-home type projects by its focus on developing an infrastructure for applications that can exploit a network of sensors and actuators in the home environment. These applications fall into three classes: those that involve sensors distributed around the home (e.g., detecting intrusion); those that involve sensors on an occupant (e.g., helping monitor infirm or disabled

occupants); and those that involve sensors on a service provider (e.g., helping a fireman navigate a burning house). Although the theme centers on the home of the future, the infrastructure and applications apply to other living environments including, for example, hotels, dormitories, offices, ships and assisted-living facilities.

A key element of the project is its focus on undergraduate research and training. GW computer science and engineering students are required to complete a year-long senior design project, and the infrastructure will serve as an ideal test-bed for senior design students, helping them place their projects in an appealing application environment.

GW Hosts Pressure Sensitive Paint Workshop

In early April, 70 engineers, chemists, and physicists from around the world gathered on GW's Foggy Bottom campus for the 9th annual Pressure Sensitive Paint Workshop. The Pressure Sensitive Paint Workshop is the premier technical conference for scientists and engineers engaged in developing pressure sensitive paint technology and

related advanced optical instrumentation systems.

This year's workshop participants came from organizations such as NASA, ONERA (France), NRC (Canada), the U.S. Air Force, and the U.S. Navy; from various universities such as Purdue University, the University of Maryland, the University of Florida, Heriot-Watt University (United Kingdom), Dublin City University (Ireland), and the University of Washington; and from a number of small and large businesses, including Boeing, Lockheed-Martin and Ford Motor Company.

Pressure sensitive paint (PSP) is currently used in the design and development of new aircraft, automobiles, and related components, and the market for PSP is rapidly expanding to include other types of vehicles such as ships and submarines. PSP is used to acquire "global," quantitative surface pressure data, which is then used to determine the performance of these vehicles and the aerodynamic loads they carry. PSP and other advanced optical measurement systems are required to design and develop these new products, and participants in this year's workshop enjoyed the chance to meet and discuss the interesting and challenging aspects of developing the tools and methods required to create the products.

The SEAS Engineering Management and Systems Engineering Department provided support to bring the conference to GW.



Standing left to right: Patricia Coleman of Ford Motor Company (the chair of the session), and Tim Bencic of NASA Glenn Research Center.

Professor Sameh Badie Receives ASCE Award

On April 27th, Professor Sameh Badie of the SEAS Civil and Environmental Engineering Department, was recognized as a finalist for the Constructing an Efficient and Renewable Future/International Institute for Energy Conservation (CERF/IIEC) Charles J. Pankow 2002 Award for Innovation. Professor Badie received this recognition at the American Society of Civil Engineers' Outstanding Projects and Leaders (OPAL) awards gala in Los Angeles, California. The ACSE granted the award to a team led by the Nebraska Department of Roads for an innovative bridge deck system called the "NUDECK." Professor Badie developed the NUDECK system in 1997 under the National Cooperative Highway Research Program 12-41 project. Since then, he has been working closely with the Nebraska Department of Roads to implement the system on bridges in Nebraska.

The NUDECK is a pre-cast concrete, transversely pre-tensioned, longitudinally post-tensioned deck panel system. The system is expected to be crack-free in service. It would require no field forming and save 50 percent in construction time. The system is cost competitive with cast-in-place concrete

decks, can be much more rapidly built, and is more durable and easier to maintain.

The CERF Charles J. Pankow Award for Innovation was created in 1996 to celebrate innovative collaboration in the design and construction industry and to complement existing industry awards. Applications for the award this year were received from industry, academia, and government agencies located in countries in North America, Europe, and Asia.

CERF/IIEC is a global non-profit organization created by ASCE and focused on constructing an efficient and renewable future. In collaboration with the construction, engineering, and environmental industries,



SEAS Professor Sameh Badie (left) and William Roper, the Civil and Environmental Engineering Department chairman.

CERF/IIEC promotes and facilitates the advancement of innovation for a sustainable infrastructure. CERF/IIEC is headquartered in Washington, D.C., with offices in Europe, Africa, Asia, and the Americas.

Professor Charles Garris Integrates Research and Undergraduate Education

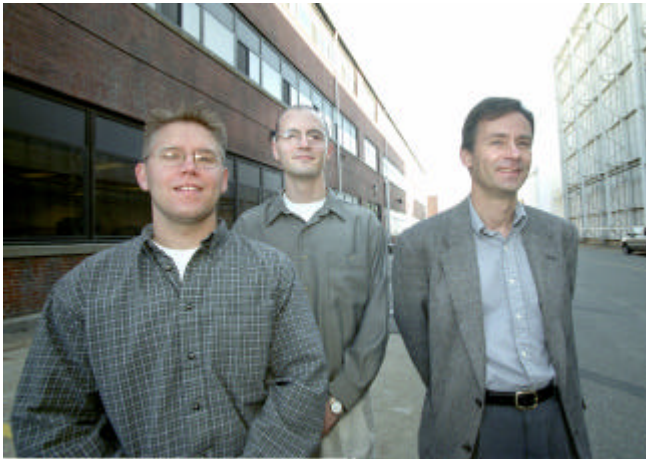
SEAS Professor Charles Garris and his research group will host three undergraduate mechanical engineering interns this summer to work on pressure exchange ejectors and their application to refrigeration. GW juniors Kathryn Erklauer and David Johnson will be supported under the National Science Foundation's Research Experiences for Undergraduates Program. Carole Dayma, a junior in mechanical engineering from the Ecole Supérieure de Ingenieurs in Poitiers, France, will also participate in the research under the support of Renault Corporation, an

industrial collaborator of Professor Garris.

The concept of utilizing a pressure-exchange ejector to domestic pumping applications is new and requires much research. An ejector is a pumping device that allows an energetic fluid (primary fluid) to engage directly with a less energetic fluid (secondary fluid) to exchange energy and momentum. Conventional ejectors produce this exchange of energy and momentum through turbulent mixing, but the process is not effi-

cient in transmitting mechanical energy and, therefore, leads to poor system performance. The pressure-exchange ejector is used in a similar manner as the conventional ejector, but it achieves the transfer of energy and momentum through the efficient work of interface pressure forces that are present only in non-steady flows.

SEAS Students Place at JIAFS-hosted AIAA Student Conference



Left to right: Paul Zomkowski, Zachary Chavis, and Professor Andrew Cutler. (Photo courtesy of Jeff Caplan, NASA)

SEAS graduate students Zachary Chavis and Paul Zomkowski placed first and third, respectively, in the graduate paper competition at the 2002 American Institute of Aeronautics and Astronautics (AIAA) Mid-Atlantic Region I Student Conference held on April 12th and

schools in addition to GW included Drexel, Howard, Old Dominion, Pennsylvania State, and West Virginia universities; the universities of Maryland and Virginia; and Virginia Polytechnic Institute and State University.

13th. GW's Joint Institute for the Advancement of Flight Sciences (JIAFS) co-hosted the conference in Hampton, Virginia with Old Dominion University.

The conference was a great success, drawing 119 registered students and faculty from nine of the Region I schools. Participating

The annual conference provides an opportunity for AIAA student members to present their research in a public venue. Participants submit technical papers in advance and give formal presentations to the conference attendees. Zachary Chavis (MS/ME in Aerospace Engineering/Astronautics, Summer 2002), won first place for his paper, "Modeling Plume Effects on Mars Odyssey Aerodynamics," while Paul Zomkowski (MS/ME in Aerospace Engineering/Astronautics, Summer 2002) won third place for his paper, "Development of a Spacecraft Simulation for Instrument Pointing Performance Analysis."

As the top winner in the graduate category, Chavis will advance to the national competition in Reno, Nevada in January 2003. Congratulations to Zachary and Paul!

Three Civil Engineering Students Honored

Three SEAS civil engineering students received awards at the American Society of Civil Engineers-National Capital Section (ASCE-NCS) annual banquet on April 17th. Representatives from engineering schools in the Washington, D.C. metropolitan area and ASCE leaders attended the banquet, which was held at the Officers' Club at Fort McNair. The ASCE was well repre-

sented by four current and past presidents of ASCE National and 12 former presidents of ASCE-NCS.

The ASCE donated scholarships to the top students in the region. Johann Aakre, a junior and president of GW ASCE, received the top prize, a \$5,000 scholarship sponsored by Clark Construction. Junior Rachel

Miller, who is studying abroad in London this semester, was awarded a \$1,000 scholarship, and Rodolfo Guerra-Sa, a senior who will be doing his graduate work here at GW next year, received the Outstanding Senior award for his accomplishments and contributions to ASCE over the years.

SEAS Students Win Gamow Research Fellowship

Blythe Debenport and Robert Frederickson, both sophomores in the SEAS Department of Computer Science, recently received the George Gamow Undergraduate Research Fellowship. The fellowship was launched this year by GW's Office of Research and Graduate Studies and the University Honors Program.

The fellowship provides an opportunity for a current freshman or sophomore with research potential to pair with a faculty mentor, propose a research project to be done in 2002-2003, and win a research stipend.

The goal of the fellowship is both to enrich the educational experience of

talented undergraduates and advance faculty research. Blythe Debenport's research will focus on authoring technologies for distance education, while Robert Frederickson's project is entitled Pricing Strategies for Networked Goods: A Simulation Approach. SEAS Professor Rahul Simha is the faculty mentor for both projects.

Graduating Seniors (continued from page 5)

I am very proud of. This program was essentially a gift from God. I always knew two things: foremost, that I wanted to be a doctor, and secondly that I had a fascination with engineering type projects. Little did I expect to find a structured education combining both into one."

Michaels, who majored in engineering management and systems engineering, spoke at length about an independent study research project that utilizes a software optimization language called GAMS, or General Algebraic Modeling System. The project is entitled "Flight Scheduling: Finding the Minimal Path Networks to Assure Optimal Routing." Michaels explained, "The program aims at finding the minimum path between networks – in this case, airports – while performing duty flights and minimizing the ferry arcs, empty flights that are necessary to complete aircraft positioning. Potential applications of this program are geared toward personnel

flight management and pro-sports team travel."

Like her peers, Michaels is a well-rounded student who took advantage of the many opportunities to become involved in student and community activities. Michaels volunteered throughout her undergraduate years for many community service events, such as the Foggy Bottom clean-up, Hands on DC, and programs at the Whitman-Walker clinic. In addition, Michaels was a member of INFORMS and of the Sigma Delta Tau sorority, where she served as both treasurer and scholarship chair.

Michaels' academic achievements include receiving the Benjamin C. Cruickshanks award for the highest grade point average in systems analysis engineering, and being named on both the Dean's List and the Dean's Commendation List. Her research with the Surface Transportation Pol-

icy project has been published, too. When asked what she learned at GW that she anticipates will be most useful to her in the future, Michaels responded, "How to think outside the box."

Given Michaels' success at GW, we asked her what she liked most about SEAS. Referring to the friendly environment and support system, she responded by saying, "There are not many other universities where the dean sees you from across the street and inquires about you and how you are performing."

As the reader might have guessed, Michaels will be going on to medical school. She plans to work for an engineering firm in New York City this summer and then enter the GW School of Medicine in the fall.

SEAS Student Wins Top Prize at SHPE Design Contest – Again

Jose Hernandez and his wife, Raquel Mendez, have won first place – again – at the annual Society of Hispanic Professional Engineers Foundation National Design Contest. Hernandez is a doctoral candidate in the SEAS Electrical and Computer Engineering Department, and Mendez holds a bachelor's degree in electronics.

Last year, Hernandez and Mendez won first place for an innovative laser beam entry that used two beams to accurately measure height, a task commonly required in the construction industry. This year, the pair teamed up again to enter the contest, and they competed in February in the SHPE's 12th annual national design contest in Minneapolis, Minnesota. Twenty-two teams submitted designs for the contest, and Hernandez and Mendez were among the ten that were selected for the final round in Minneapolis.

The invention for which Hernandez and Mendez won first place is a new computer mouse-like device that

gives the user more freedom than a standard computer mouse. Their design, called the "Spider Pointer," performs all the functions of a traditional mouse but operates as a handheld pointer, similar to laser pointers used during PowerPoint presentations. The Spider Pointer's icon moves on a screen by simple inflections of the wrist or hand, and it performs other functions by using "right-click" and "left-click" operations. While the device works for browsing the Internet and on all MS Windows applications, it is particularly useful for large presentations in which the user needs the ability to move about the room and away from the laptop.



SEAS student Jose Hernandez and Raquel Mendez.

Hernandez is currently working with GW's Office of Technology Transfer to patent the Spider Pointer.

Tech Expo '02

GW's Virginia Campus played host to a large gathering of technology and business leaders and SEAS faculty and students at its tenth annual Technology and Business Expo on April 24th. This year's theme, *Fast Forward '02*, reflected the increased speed of technological advancements and changes in the marketplace.

The Technology and Business Expo – or simply Tech Expo – included a wide range of panel discussions and activities geared toward professionals in information technology, telecommunications, Internet technologies, computer security, e-business, and government. Mr. Robert Gerber, Chief of Analysis

and Warning at the FBI's National Infrastructure Protection Center, and Mr. Fred Briggs, President of Operations and Technology for WorldCom, gave the keynote addresses. Both speakers addressed U.S. efforts to secure the nation's cyber infrastructure.

Tech Expo's 13 panel discussions revolved around four themes: Info Tech; Tech Exec; Digital Strategy; and NetCom21, a telecommunications collaborative research workshop among industry, government, and academia. Tech Expo also hosted an exhibit center and provided several research demonstrations for partici-

pants. Participants had the opportunity to walk into the America Online Home of the 21st Century and see and hear firsthand the new home entertainment and security options being developed at the Virginia Campus. They also were able to sit on the shake table at the GW/National Science Foundation earthquake lab and experience simulations of actual earthquakes, or sit behind the wheel of a car at the driving simulator that is a part of the Center for Intelligent Systems Research. The Center's driving simulator models drivers' performance and behavior and provides collision warning and driver assistance systems.

Computer Science Department Day



Computer Science Department Day participants

The SEAS Computer Science Department hosted Department Day on May 3rd to showcase the computer animations and computer games that students produced in classes this semester. The department has hosted the event for the past ten years, and this

year approximately 80 students, staff, and others attended. The department gave prizes for the best computer animation in the introductory class and advanced classes. Winners of this year's prizes include undergraduate Rizwan Sattar and graduate students James Sibert and Aaron Kieldsing.

The department plans to host another event, the "GW Festival of Computer Animation" at the end of Fall 2002 semester. Information about the courses, as well as downloadable games, is available at www.seas.gwu.edu/~graphics

SEAS Graduation

(continued from front page)

at the ceremony, echoed Administrator Garvey's message, telling his classmates that personal and professional ethics will define their careers.

Following the ceremony, graduates and their families and friends joined SEAS faculty at GW's Marvin Center for a reception. Graduates and their guests also gathered again on Saturday morning for the SEAS Spirit of Washington boat cruise along the Potomac River, enjoying food, music, and dancing.

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Community News

- Lauren M. Deason, the daughter of Professor Jonathan Deason, recently received a full, six-year fellowship to pursue doctoral studies in mathematics at the University of California at Berkeley. Lauren graduated in May from the University of Virginia with a bachelor of science degree in applied mathematics.
- Professor Raymond Pickholtz is the proud grandparent of Benjamin Zachary, born on April 26, 2002, in Philadelphia, Pennsylvania. Professor Pickholtz' daughter Julie and her husband Michael are Benjamin's parents. Benjamin is the fourth grandchild of Professor and Mrs. Pickholtz.