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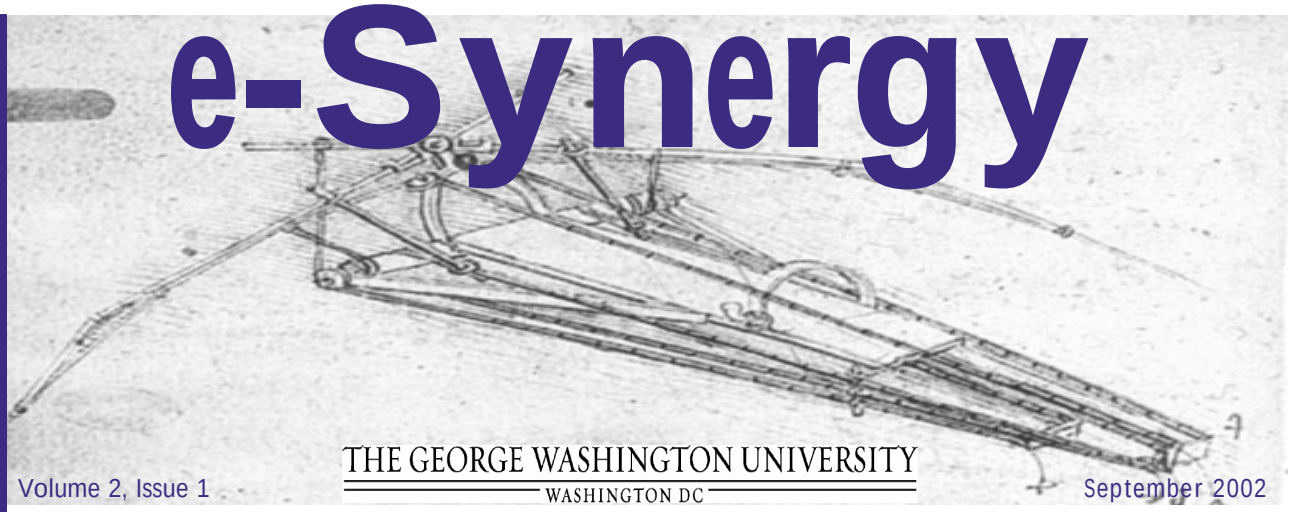
e-Synergy



THE GEORGE WASHINGTON UNIVERSITY
WASHINGTON DC

Volume 2, Issue 1 September 2002

GW and FAA Sign Partnership Agreement

The George Washington University and the Federal Aviation Administration (FAA) signed an agreement on June 27th to launch a partnership under the FAA's Collegiate Training Initiative (CTI). GW is the first four-year university to join the CTI program, although the FAA has established CTI partnerships with 44 other post-secondary education institutions. GW President Stephen Joel Trachtenberg and FAA Deputy Director for Aviation System Standards Terry Laydon signed the Letter of Understanding between GW and the FAA.

The partnership allows the FAA to recruit GW graduates and to provide cooperative education and internship opportunities at the FAA for GW undergraduate and graduate students in the fields of engineering, computer science, and geography/cartography. In turn, the agreement allows GW to provide cohort courses for FAA employees and open enrollment courses for individual FAA employees.

(continued on page 3)

GW Hosts Int'l Summit on Aviation Safety and Security

From July 7-12, the GW Aviation Institute hosted the first of several international summits on aviation safety and security. Senior level government officials from Vietnam, Indonesia, the Philippines, and Malaysia participated in the first summit and had the opportunity to listen to the U.S. Secretary of Transportation Norman Y. Mineta, Federal Aviation Administrator (FAA) Jane F. Garvey, U.S. Department of Transportation Associate Deputy Secretary Jeffrey Shane, and other guest speakers from the FAA, the Transportation Security Administration, and other government and non-government institutions.

SEAS professor Vahid Motevalli (left) with Secretary of Transportation Norman Y. Mineta (center) and Program Administrator George Novak (right).

The second summit was successfully held September 9th -13th and attended by ministers of transportation from El Salvador

(continued on back page)

SAIC Gives SEAS $8.7 Million in Patents

This summer, SEAS received its first technology transfer of intellectual property from long-time corporate supporter Science Applications International Corporation (SAIC). The intellectual property came in the form of four patents that were appraised and valued at more than $8.7 million. The transfer kicks off the School's efforts to commercialize intellectual property and presents new possibilities for student programs for entrepreneurial endeavors.

The transfer of three SAIC patents to SEAS is pending and will be completed by the end of this calendar year. These patents relate to the fields of optical transmission, communication networks, and resource management. A fourth patent for Radioisotope Production Facility for Use with Positron Emission Tomography was received in June. This intellectual property will assist with faculty and

(continued on page 8)

Neil Helm Receives AIAA 2002 Aerospace Communications Award

On May 15, the American Institute of Aeronautics and Astronautics (AIAA) bestowed its Aerospace Communications Award on Mr. Neil Helm, a SEAS senior staff research scientist. The AIAA — the largest aerospace professional organization — selected Mr. Helm for his "leadership in the development of mobile and emergency satellite communications and their application to disaster management."

The communications award is considered to be the premier award in the field of satellite communications. Mr. Helm is only the 25th person to receive the award since its inception in 1967.

Helm entered the satellite communications field in its early stages and witnessed the beginnings of space applications. In 1957, while working in the U.S. Army Security Agency, he was a

member of the team that tracked Sputnik 1, the first Russian man-made satellite, during its initial orbits.

Helm joined Comsat Corporation in 1967 and moved to Comsat Laboratories in the early 1970s, working as a technology manager to move technology from the research and development phase into actual systems and services. While working with early-generation, 30-meter diameter ground terminals at Comsat, he began to think about redesigning the terminals so that they could be transported by truck. Helm and his team of engineers and technicians ultimately succeeded in designing, building, and testing five-meter, three-meter, and then one-meter terminals.

This was only the start, however. Helm also began thinking about applications for the newly transportable satellite communications terminals. After deciding that a non-commercial application made great sense, Helm took a terminal to the American Red Cross and to the Federal Emergency Management Agency and demonstrated to leaders there the tremendous potential of portable satellite communications to improve disaster response. He and his team later put the first portable terminal on the hospital ship Hope, and subsequently dispatched terminals to the Johnstown, Pennsylvania flood site and other U.S. natural disaster sites.

After demonstrating that the portable terminals could bring reliable communications to domestic disaster sites, Helm's next step was to convince officials at the International Federation of Red Cross and Red Crescent Societies in Geneva, the U.S. Department of State, and other international disaster response agencies. Partly as a result of his groundwork, portable satellite communications today are among the first items that government disaster assistance response teams take with them when they deploy to a disaster site. The terminals are used to feed critical, time-sensitive information back to decision makers as they chart how to meet the needs of vulnerable populations displaced by natural disasters or civil conflicts and wars.

In 1976, as the U.S. was celebrating its bicentennial, Helm and his team found another application for the portable satellite communications terminals. During news coverage of the bicentennial, the team took a terminal to Yellowstone Park and provided the first live, remote news broadcast using a satellite terminal. For this accomplishment, the team later won an engineering Emmy award for the first remote news gathering terminal.

Helm has continued to work in satellite communications research and development throughout his career, and he has seen the field grow from the early days of Sputnik to today's $50 billion industry. He has seen applications grow from defense to humanitarian, to maritime, news, and other commercial applications.

Helm remains active in the field, serving as the deputy director of GW's Space and Advanced Communications Research Institute, which he formed in 1991 with his friend, colleague, and mentor, the late Professor Burt Edelson.

SEAS congratulates Mr. Helm on receiving the 2002 Aerospace Communications Award.

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GW/FAA Partnership (continued from page 1)

SEAS will manage the CTI program for the University. Following the signing ceremony, which SEAS hosted in the lobby of Tompkins Hall, SEAS Dean Timothy Tong said, "GW and SEAS are glad to give our graduates and current students the opportunity to play a critical role in support of the FAA's National Airspace System, and we are confident that both we and the FAA will benefit from this partnership."

Left to right: Mary Golia and Terry Laydon of FAA, GW President Stephen Joel Trachtenberg, Vice President Donald Lehman, SEAS Dean Timothy Tong, and SEAS Associate Dean Rachelle Heller

CSPRI Leads Open Source Software Development

GW's Cyberspace Policy Institute, recently renamed Cyber Security Policy and Research Institute (CSPRI), is in the big leagues, thanks to the efforts of CSPRI Associate Director and Senior Policy Analyst Tony Stanco and CSPRI Research Director Sead Muftic.

In the past year, Mr. Stanco has made GW the center of the open source software development movement in the mid-Atlantic area. Under his leadership, CSPRI hosts a monthly open source developer's meeting at GW that is attended by 50-60 software developers.

The next meeting will be held October 16th -18th. For information, please visit the meeting website at www.eGovOS.org. This is an invitation only event, so participants must be registered to attend, and all registrations must be received no later than October 11, 2002. Online, free registration is available on the meeting website.

Representing CSPRI, Mr. Stanco has testified on Capital Hill and met with numerous federal government agencies and representatives from the World Bank, United Nations, European Union, and the G8, all of whom have expressed interest in the open source secure Linux platform for implementing e-government services and solutions. The U.S. Department of Defense is also extremely interested in this approach for secure communications.

It is through Mr. Stanco's efforts – in cooperation with Professor Sead Muftic – that CSPRI has received a $50,000 seed grant from the Defense Advanced Research Projects Agency to explore security issues on the Linux platform. Other funding is also being considered.

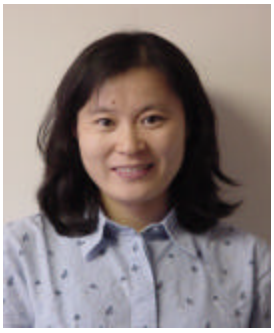
SEAS Hosts Summer Program for Korean Students

This summer, more than 30 students from Korea's Daewon Foreign Language High School attended a two-week engineering and American culture program hosted by SEAS. The program was designed to provide international high school students with numerous opportunities to *experience* American college courses and culture.

Students attended classes and field trips that brought to life the program's main components: information systems, international relations, and American culture. Among the many sites students visited on their field trips were the World Bank, the Smithsonian museums, the White House, the Kennedy Center, the Georgetown area of Washington, D.C., Luray Caverns, and New York City.

Introducing . . .

SEAS hired six faculty members into tenure track positions this academic year, and Dean Timothy Tong is pleased to introduce them to the SEAS community.



Dr. Xiuzhen Cheng

Xiuzhen "Susan" Cheng is an assistant professor in the Department of Computer Science. Her research interests include wireless networking, mobile computing, network security, approximation algorithm design, and statistical pattern recognition. She previously worked as an assistant editor in Tsinghua University Press from 1994 to 1995, and as the chief representative in China for IrriCrop Technologies, Ltd, Australia from 1994 to 1997.

B.S., 1991, Electrical Engineering, China National University of Defense Technology
M.S., 1994, Electrical Engineering, Chinese Academy of Space Technolgoy
Ph.D., 2002, Computer Science, University of Minnesota

Dr. David Chichka

David Chichka is an assistant professor in the Department of Mechanical and Aerospace Engineering. His recent research projects have centered on the coordinated control of multi-vehicle systems, with particular application to satellite clusters and formations of aircraft. His background includes industry experience in the preliminary design of rocket motors and missile control systems, and he has spent several years in research appointments at UCLA and the California Institute of Technology. While with these groups, Dr. Chichka was a leader of a successful effort to design, build, and test a formation flight instrumentation system, which exchanges information between aircraft to determine relative positions within a few centimeters, and other states to a similar level of accuracy.

B.S., 1984, Aerospace and Ocean Engineering, Virginia Polytechnic Institute and State University
M.S., 1985, Aerospace Engineering, Virginia Polytechnic Institute and State University
B.A., 1986, English, Virginia Polytechnic Institute and State University
Ph.D., 1994, Aerospace Engineering, University of California, Los Angeles

Dr. Jonathan Stanton

Jonathan Stanton is an assistant professor in the Department of Computer Science. His research focuses on designing, exploring, and building scalable, secure, high-performance, and reliable distributed systems. He has worked on fault-tolerant clusters, IP network protocols, secure distributed algorithms, and overlay network algorithms. He is the chief architect of a popular open-source group messaging toolkit called Spread, which is used in hundreds of sites around the world. This semester, Professor Stanton will teach a graduate course on distributed operating systems.

B.A., 1995, Mathematics, Cornell University
M.S.E., 1998, Computer Science, Johns Hopkins University
Ph.D., 2002, Computer Science, Johns Hopkins University

Dr. Jason Zara

Jason Zara is an assistant professor in the Department of Electrical and Computer Engineering (ECE). His primary areas of research interest are the applications of Micro-Electrical-Mechanical Systems (MEMS) actuators to medical imaging, focusing on the development of new instrumentation for high frequency ultrasound and infrared optical coherence tomography. He is also a co-founder of Memscept, Inc., a company focusing on novel applications of MEMS actuators to a variety of engineering fields. Professor Zara is very excited to join the ECE faculty and to help expand and further develop biomedical engineering education at GW.

B.S., 1996, Bioengineering, University of Illinois at Urbana Champaign
Ph.D., 2001, Biomedical Engineering, Duke University

New SEAS Faculty (continued from page 4)

Dr. Theresa Jefferson

Theresa Jefferson is an assistant professor in the Department of Engineering Management and Systems Engineering, and she serves as chair of the software engineering and information systems management concentration. Her research and teaching has emphasized strategic information systems, electronic commerce, intelligent information retrieval and information visualization. Prior to joining the GW faculty, Professor Jefferson worked for SAIC as a consultant to the U.S. Army and NASA. She has many years of practical experience in the areas of information management, computer systems, operations research, and systems analysis.

B.S., 1986, Operations Research, The George Washington University
M.S., 1988, Operations Research, The George Washington University
D.Sc., 1996, Engineering Management, The George Washington University

Dr. Julie Ryan

Julie Ryan is an assistant professor in the Department of Engineering Management and Systems Engineering. Professor Ryan teaches and researches information security issues, and her current research projects involve the security management tensions inherent in a knowledge rich economy, innovative authentication techniques, and security concerns in automated decision support systems. Her professional career has included service in the U.S. Air Force as a signals intelligence officer and civil service with the Defense Intelligence Agency as an intelligence officer. Prior to joining academia, she worked in industry as a senior staff scientist and consultant. Professor Ryan is a co-author of the book "Defending Your Digital Assets Against Hackers, Crackers, Spies, and Thieves", as well as author of numerous articles about information security.

B.S., 1982, U.S. Air Force Academy
M.L.S., 1996, Eastern Michigan University College of Technology
D.Sc., 2001, The George Washington University, School of Engineering and Applied Science

GW Charters Space and Advanced Communications Research Institute

GW announced ealier this month that it has chartered the Space and Advanced Communications Research Institute (SACRI), a new research institute dedicated to the study of innovations in space and satellite research, wireless and mobile communications, and advanced networking applications. The new institute was created from the merger of two synergistic research initiatives at GW – the Institute for Advanced Space Research and the GW Net Lab – and will be located at the GW Virginia Campus in Ashburn, with offices at GW's main campus in Washington, D.C.

The merger of these initiatives brings together GW's top researchers in the fields of satellite communications, wireless technologies, and networking with leading partners in industry and government. SACRI researchers will collaborate on research projects that emphasize satellite communications for advanced technology, next generation systems, air and transportation safety, disaster recovery, and anti-terrorism applications.

Several research projects are currently underway. These include projects on new broadband satellite applications for telecommuting, with funding from Hewlett Packard; advanced GeoPlatform Comsat systems and satellite systems policy and standards, funded by the Communications Research Lab of Japan; and satellite design for advanced satellite distribution systems, funded by TASC Northrop Grumman. In addition, Virginia's Center for Innovative Technology has provided initial seed funding.

SEAS professor Joseph N. Pelton will direct the Institute. SEAS professors Neil Helm, the deputy director and head of satellite initiatives, and David Smith, the deputy director and head of wireless initiatives, will also direct SACRI. An advisory board, co-chaired by Mr. Frank Loch, senior associate, Booz Allen Hamilton, and SEAS professor Hermann Helgert, has also been formed to direct SACRI's ongoing development.

The Institute is actively seeking research partners from industry and government, as well as contributions of equipment for expanding its research laboratories.

SEAS Students Present Progress Reports at AOL Symposium

by Kira Greene, AOL Communications Coordinator

George Washington University students working to help AOL figure out the future of connected-home interactive services recently provided their latest progress report.

SEAS faculty and students at the AOL Symposium.

The Home of the 21st Century, as the research program is called, began a year ago with funding provided by AOL and supported in part by a grant from Virginia's Center for Innovative Technology. Since that time, students have created a wired home environment within a lab classroom at GW's Virginia campus in Ashburn.

The goal of the alliance is to pursue a vision for the typical home of the future in which electronic devices for entertainment, information access, home automation, home monitoring, and security communicate with the residents of the home anywhere and anytime through a computer network and the Internet.

Funding from AOL supports three project areas: wireless and wired sensors, remote management of the home, and personalization technologies.

The symposium was opened with an overview of the Home presented by graduate student Ritabrata Roy of the Department of Electrical and Computer Science Engineering. The mission for the lab, he said, "is very ambitious. We're trying to redefine the concept of the house from passive shelter into an active, dynamic, responsive unit — an interactive home that is also affordable."

Roy said that building the home of the future will require a shift in our perception of computer applications, and that as researchers, they have made every effort to keep their minds open to new ideas.

Our relationship to the computer also will likely change in the future, Roy said. "Right now, we have to adapt ourselves to the environment of the computer, an artificial domain with blinking command prompts. But in the house of the future, these roles may well be reversed. The computer will have to adapt to our environment — we will not be distracted by artificial props like monitors, keyboards, and mice."

Roy said much progress already has been made in the Home of the 21st Century lab where appliances can now be controlled by a variety of techniques including voice-activated commands, motion sensors, or through the Internet. In addition, a music server is in place providing audio-on-demand, and Roy said they hope to expand soon to video-on-demand.

Another area of study, Roy said, is power conservation. The students are designing a network that consumes a minimum amount of energy in transmitting data, and it will also maximize the length of time the devices can run on batteries.

An achievement of which the student researchers are particularly proud, Roy said, is the fact that a paper titled "Distributed Wired and Wireless Sensors for the Home of the 21st Century Project," prepared by the Department of Electrical and Computer Engineering, was presented at an international conference of the Institute of Electrical and Electronics Engineers in Cairo last December. "GW and AOL are now known to be among the forerunners of this technology," Roy said.

[Editor's note: This article was excerpted from the article "GWU Lab Continues Buildout for Home of the 21st Century" and reprinted with the permission of *AOL Technologist*].

Did You Know?

Computer Science ranks fifth among all majors at GW in terms of attracting the greatest number of undergraduate students.

JIAFS Students Win AIAA Design Competition for Fifth Straight Year

For five straight years graduate students at GW's Joint Institute for the Advancement of Flight Sciences (JIAFS) have won at least one of the top three awards at the annual American Institute of Aeronautics and Astronautics (AIAA) team aircraft student design competitions. Administered by AIAA's student programs department, these competitions are part of a wide-reaching program that recognizes excellence in aerospace engineering study at both the undergraduate and graduate level.

Professor Robert Sandusky with JIAFS team members (left to right): Andy Turnbull, Kyle Mas, Matt Bastow, and Dave Bremner

This year, the JIAFS team of Matt Bastow, Dave Bremner, Kyle Mas, and Andy Turnbull won first place for their airplane design, *Hide-n-Seek*. The team split the $2,500 prize money and will travel to Los Angeles in October to present its design to the AIAA's aircraft technology, integration, and operations 2002 technical forum.

The design problem for this year's competition was an advanced deep interdiction aircraft. The objective was to design a replacement for the FB-111 *Aardvark* supersonic fighter-bomber, a role currently performed by F-15E, F-117, B-1, and B-2 aircraft. The airplane is designed to effectively deliver precision-guided tactical weapons at long range, with worldwide rapid deployment and minimum support. The threat dictates a need for stealth and super-cruise, while reducing response time by one half. The competition parameters stipulated that 200 aircraft would be needed with an initial operating capability of 2020.

Their project was undertaken as part of an aircraft design course series taught by Professor Robert Sandusky of JIAFS. The first semester covers conceptual design, and the second semester covers more detailed methods of preliminary design including wind tunnel testing.

SEAP Students Experience Hands-on Learning

For eight weeks this summer, approximately 450 students from 86 high schools around the United States participated in the GW and Department of Defense Science and Engineering Apprentice Program (SEAP). The SEAP program, which entered its twenty-second year this summer, exposes selected high school students to career opportunities and options in science, all under the guidance of mentors in federal laboratories. Working under a scientist or engineer, each student received hands-on laboratory experience.

Left to right: General Spence (Sam) Armstrong, Dr. Katie Olsen, SEAS Professor Thomas Mazzuchi, Dean Timothy Tong, and SEAP Coordinator Mary Phillips

In addition to their laboratory experiences, students also had the opportunity to visit the White House, the U.S. Naval Observatory, and the Washington National Cathedral, and to see a planetarium show at the Air and Space Museum, and the taping of the TV program "Crossfire." At the program's closing ceremony on August 16th, General Spence (Sam) Armstrong, Senior Advisor to the NASA Administrator, and Dr. Katie Olsen, Associate Director for Science, Office of Science and Technology Policy, the White House, addressed the students.

To help meet the country's future need for scientists and engineers, GW has initiated another adjunct program: Science, Technology and Research Students (STARS). STARS attempts to identify and influence junior high school students who may not have previously considered science as a career option, and it specifically targets students underrepresented in the science and engineering fields.

SEAS and GW are pleased to announce that this year the University offered its first scholarship to attend GW to a SEAP graduate. Lucas E. Dobson, a freshman at SEAS, received the SEAP scholarship for 2002. Congratulations to Lucas.

Professor Raymond Pickholtz Advises FCC

Professor Raymond Pickholtz of the Electrical and Computer Engineering Department served as an outside expert panelist on the Federal Communications Commission's (FCC) Spectrum Policy Task Force (SPTF) last spring and summer.

Because of the growth and use of wireless devices and services, the use of the electromagnetic spectrum is on the verge of exploding. The U.S. Congress wants to encourage the development of new and useful wireless products but is concerned that new wireless products will interfere with existing services, broadcasting, public safety, and military uses of the spectrum. Therefore, FCC Chairman Michael Powell announced the formation last June of the SPTF to study new strategies for U.S. spectrum policy management.

The SPTF met last spring and summer to study these issues, and it will continue its work until the FCC develops a specific policy regarding use of the spectrum and the means to mitigate the potential for harmful mutual interference. This policy may include, for example, refined measures for what constitutes "harmful interference", requirements for spectrally efficient digital transmission, and sophisticated receiver processing. In addition, numerous policy issues exist regarding how to handle interference in global positioning, the statutory requirement for position location for wireless emergency 911 calls, and whether to eliminate certain television channels or unused government channels and use them for new wireless services.

Professor Pickholtz will continue to provide outside advice and ideas to the task force.

Professor Lang Does Real "Field" Work

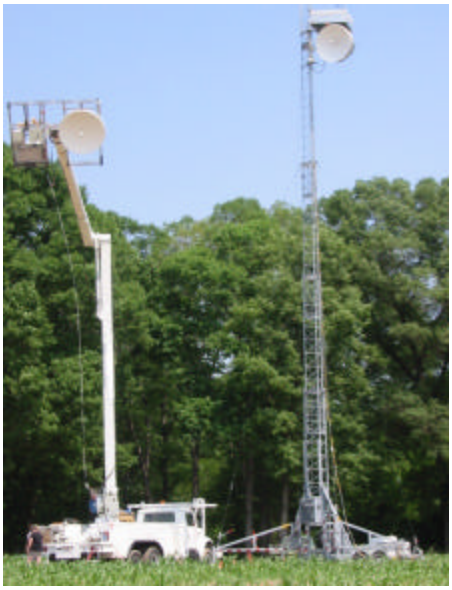
Professor Roger Lang of the SEAS Electrical and Computer Engineering Department (ECE) spent the summer watching the corn grow. Well, not exactly.

Actually, he spent part of his summer working in a field in one of Maryland's agricultural research areas with the GW/National Aeronautics and Space Administration (NASA) radar, which gathers data to help develop and prove electromagnetic models for soybean, wheat, oat, and corn crops, and other plants and trees.

Since vegetation affects weather patterns (by absorbing moisture through its root systems and releasing it as water vapor through its leaves), NASA and GW are interested in knowing how to sense and measure soil moisture under vegetation, in particular, under corn. In fact, NASA ultimately hopes to use satellites with remote sensing capabilities to develop global circulation models that will allow scientists to assess more accurately, the relationship among soil moisture, vegetation growth, and weather.

This is where Professor Lang; Mr. John Petrella, manager of the SEAS ECE laboratories; and Cuneyt Utku, a doctoral candidate in electrical engineering, come in. Using a radar constructed at GW, they have been working to model vegetation as a series of cylinders and discs that can be used to try to predict what the satellites will see. If this modeling method can be validated, researchers will be able to use electromagnetic models in conjunction with data gathered by satellites to predict crop yields, soil moisture, and weather patterns more effectively.

Professor Lang has used the radar during the past ten years to conduct other, similar experiments in Oklahoma, Pennsylvania, and Alabama. This year's project ends on September 30th and has been done in conjunction with Ms. Peggy O'Neill, a staff scientist at NASA/Goddard Space Flight Center.



A multi-frequency, active radar system developed by GW/NASA (left) and an L-band, single-frequency radiometer (right) collect data on corn.

SAIC Patents (continued from page 1)

student research, applications, and publications in the School's five departments.

Mark V. Hughes, SAIC deputy manager and sector vice president, as well as a very active SEAS alumnus, initiated the technology transfer process. His colleague, Norm Brown, directs the commercialization efforts of SAIC and is also a graduate of GW.

SEAS Students Receive DoD Scholarships

Evan Dornbush and Joseph Mathews learned this summer that they had been named to receive scholarships from the U.S. Department of Defense (DoD) to study computer security and information assurance.

Dornbush is a senior double majoring in computer science and criminal justice, and Mathews is a graduate student pursuing a master's degree in computer engineering, with a concentration on computer architecture and networks.

Last year, the U.S. government designated GW a Center of Academic Excellence in Information Assurance Education, and with that designation comes DoD funding to provide scholarships to qualifying SEAS students to study computer security and information assurance. The DoD scholarships cover tuition, fees, and books, as well as a stipend for housing. For undergraduates, the housing stipend is $10,000, and for graduate students, it is $15,000.

In return, students who accept the scholarships are required to intern with the DoD, the National Security Agency (NSA), or an affiliated U.S. government agency while in school, and to work for the DoD or NSA for a specified period (one year for each year of the scholarship) after graduating. Mathews will intern at the Naval Research Labs next summer in accordance with the scholarship, and Dornbush is looking forward to working with the Defense Information Systems Agency (DISA). DISA is a military group that deals with defensive and secure communications and information assurance.

Dornbush, who said he was "shocked" that he was selected to receive the scholarship, is excited about the future. "Once reality set in, I realized I am going to be trained by the most professional and distinguished minds in the field of security and information assurance." Mathews had a similar reaction, saying, "During the IASP [Information Assurance Scholarship Program] interviews, I got the impression that the scholarship was perceived as a prestigious opportunity for the School and the student, not to mention an extremely competitive one. After that, I never really gave it a second thought and was thus very shocked to hear that I had received it."

The NSA established the Centers of Academic Excellence in Information Assurance Education program to reduce vulnerabilities in our nation's critical information infrastructure by promoting higher education in information assurance and producing a greater number of professionals with information assurance expertise. GW is one of just 36 universities in the U.S. that the NSA has certified as a Center of Academic Excellence in Information Assurance Education. To be selected, a university must meet rigorous NSA criteria that measure both the depth and maturity of the university's established education and research programs in information assurance.

Evan Dornbush (left) and Joseph Mathews (right)

Upcoming Events:

Frank Howard Distinguished Lecture Series: Mr. Leslie E. Robertson will present the annual Frank Howard lecture on Wednesday, October 30th, at 7:00 PM in the Grand Ballroom of GW's Marvin Center. Mr. Robertson, a structural engineer and the owner of Leslie E. Robertson Associates, is responsible for the structural design of hundreds of buildings and structures around the world, including the World Trade Center in New York. SEAS and the Engineer Alumni Association will sponsor the lecture and host Mr. Robertson.

Welling Professor: Dr. Elliot Soloway, an internationally renown advocate for the use of technology in education, will be on campus October 9th for the first of his visits as a James Clark Welling Professor. Dr. Soloway will present a teaching seminar for all SEAS faculty from 10:00 AM to 12:00 PM in 307 (Kayser Room) Marvin Center. Following this, all interested Computer Science faculty and students will have the opportunity to meet with Dr. Soloway in room 736 of Phillips Hall from 1:30 – 3:00 PM. Dr. Soloway will also present a lecture from 4:00 – 5:30 PM in the third floor amphitheater of the Marvin Center. The lecture is open to the public.

Information Security Conference: The third annual Information Security Tune-up Conference will be held on GW's main campus on October 12th. The conference is open to the public. For more information on the conference, please see www.seas.gwu.edu/~jjchryan/tuneup02.html.

In Memoriam: Dr. Robert Heller

SEAS is saddened to announce that Dr. Robert Bernard Heller, Professor Emeritus of SEAS, died on October 12, 2001. Professor Heller was 80 years old.

Professor Heller was a native of Brooklyn, New York and attended City College. He received his advanced degrees at St. Louis University, and while working on his masters and doctoral degrees in nuclear physics, he moved in circles with the Nobel Laureate Owen Chamberlain and the pioneer nuclear physics genius, Enrico Fermi. From 1951 to 1954, Professor Heller was the senior physicist in charge of all medical electronic devices and radioactive drugs at the U.S. government's Food and Drug Administration (FDA). At the FDA, he was responsible for the development of the first standards for utilizing radioactive drugs.

In 1960, Professor Heller joined the faculty of The George Washington University and taught at GW for more than 30 years, before retiring in 1991. As a teacher, he was tireless in his devotion to his students, and as a colleague, he was a dedicated advisor and friend to many. Students who had the opportunity to take classes in electromagnetic fields and transmissions systems will remember his dynamic lectures; faculty members will remember his distinct style of both humor and cantankerousness.

Professor Heller's connection to GW remains through his family. His three children and their spouses attended GW as undergraduates and one of his granddaughters recently graduated from GW.

Edelson Memorial Scholarship Established

SEAS is pleased to announce that The Professor Burton I. Edelson Memorial Scholarship fund is a reality, thanks to the hard work and generous contributions of many of Professor Edelson's family members, former colleagues, and students. The Scholarship is now endowed at $25,000 and will be used to assist promising students who need financial aid to continue or complete their education in electrical and computer engineering, computer science, or telecommunications and space applications.

SEAS takes great pride in perpetuating Professor Edelson's memory through this scholarship, and we welcome contributions to the scholarship fund. Anyone interested in donating to the fund should contact the Director of Advancement for SEAS, Ms. Lee Williams, CFRE at 202-994-4121 or via e-mail at: lwilliam@gwu.edu.

Aviation Summit (continued from page 1)

and Costa Rica, along with high-level officials from Guatemala, Mexico, and Panama.

The summits are a central part of the aviation safety and security program developed by the University Consortium, a partnership between the GW Aviation Institute and George Mason University. Las spring, the FAA awarded GW a three-year, $9 million cooperative-agreement to develop this aviation safety and security program. Under the direction of SEAS professor Vahid Motevalli, the Consortium has built the program around the critical safety and security elements of oversight needed for full and successful compliance with the conventions of the International Civil Aviation Organization (ICAO).

Those invited to the summits have unique authority to shape the future of aviation at the highest political and policy levels of their respective governments. The summits provide them the opportunity to use the Consortium as a resource, exchange views, and focus on their oversight roles for aviation safety and security. Ultimately, the Consortium hopes that the summits will help to identify the commitments and resources needed to remedy deficiencies in safety and security oversight programs.