



The Richard A. Henson School of Science and Technology

COMMUNICATOR

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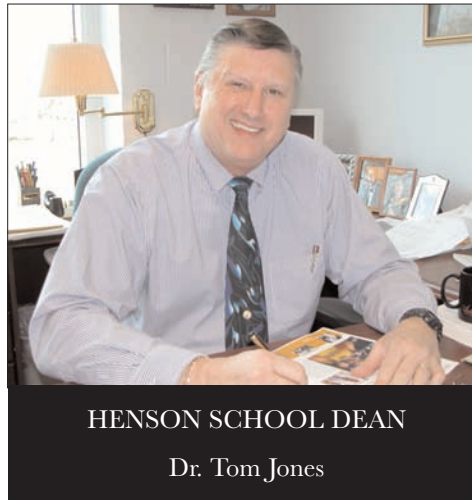


Richard A. Henson

A Greeting From the Dean

Welcome to the inaugural printing of the *Henson Communicator*! Within the pages of this publication, we will periodically provide a correspondence with our school, the SU campus and the greater regional community, giving brief glimpses into the many varied and exciting activities that are happening in the Henson School of Science and Technology. In part, we chose to use the word "communicator" as our title in reference to school namesake Richard Henson's belief and support of community, and in recognition of his leadership role of connecting communities through his innovative development of regional commuter airline operations.

With the close of the spring 2005 semester, the Henson School finds itself at the end of its third year in Henson Science Hall and at the end of its second year in a renovated Devilbiss Hall. The seven academic departments of the Henson School nearly fill the over 200,000 gross square feet of these two halls. With the exception of several "water events" in Devilbiss Hall during the past academic year due to the replacement of its roof, both build-



HENSON SCHOOL DEAN

Dr. Tom Jones

ings have served the school well, and for the first time in the school's history have brought all seven departments on to the main campus and in close proximity of each other.

Additional renovations on the third floor of Devilbiss over this summer will enhance the

Department of Health Sciences, and a new computer lab also on the third floor will provide a much-needed resource for our computer science major. A comprehensive planning operation is underway to establish a funding priority listing for replacement of equipment and computers within the school. With that money earmarked for those necessary expenditures, we then can look to purchasing new state-of-the-art equipment to keep our programs at the cutting edge.

In these pages, you will read about just some of the many activities and accomplishments of the faculty, staff and students of the Henson School from this past year. I am very proud to be the dean of this school and I never cease to be gratified by the dedication and spirit of our faculty and staff in carrying out the mission of our school.



Official Mission Flight Patch



Jeannette Kerns & Kate Shelly

Biology in Space

Early in the morning of May 5, a team of SU students and faculty watched as a rocket was successfully launched 100 miles into space from NASA's Wallops Flight Facility. On board the craft was a biological sciences package carrying T27A murine leukemia cells in a prototype of an instrument to examine effects of microgravity on metastasizing cancer cells.

The first of its kind, the experiment was designed by students and faculty from SU's Department of Biological Sciences. The prototype instrument was designed, constructed and tested by a team from the Aerospace Engineering Department at Old Dominion University (ODU). The purpose of the mission was to assess the ability of these cells to survive the conditions encountered during launch, suborbital flight, vehicle recovery, and extraction from the vehicle and instrument package in anticipation of future flights that will carry the experiment payload.

SU's project team consisted of students Kate Shelly and Jeannette Kerns, biology professor Dr. Gene Williams and Dr. Robert Joyner, director of respiratory therapy. ODU's students were led by Dr. Robert Ash of the Aerospace Engineering Department.

According to Shelly, "Not many students get to operate under microgravity conditions with cancer cells on a sounding rocket." She felt an added plus was the opportunity to collaborating with engineering students at ODU.

Professor Williams, stated that the particular combination of cell type and instrumentation package used in the initial experiment "will prove to be ideal for the metastatic capacity experiments planned in the next phase of the project."

Williams declared the mission a complete success. (Additional information on this project can be found on the biological sciences' Web site: <http://henson1.salisbury.edu/~biology/biohome.html>. the SWAC office at 410-543-ARTS (2787).

Health Professions Committee Success

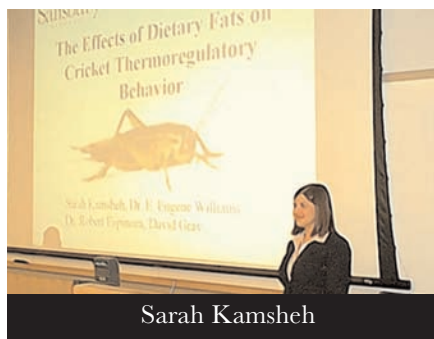
Dean Tom Jones recently announced good news about our students' success in gaining entrance to professional schools this past year. We had 27 students who were advisees of the Health Professions Advisement Committee (HPAC) apply to professional schools this year and 24 (89%) were admitted! Dean Jones attributed this success to the hard work and dedication of our HPAC who gave extensive individual academic and professional advice to students, coached them for interviews (including a videotaped interview rehearsal by the student in front of the committee), took students for visits to various professional schools, brought speakers to SU from professional schools and, most importantly, wrote a combined committee letter of recommendation for the students applications. Jones expressed his appreciation to Marylane McGlinchey, chair of the HPAC, who continues to provide strong sound leadership in the organization and operation of that committee.

A list of students, universities and programs is at the right:

Professional School Admissions

| Student | Major | University | Program |
|-------------------|-----------|------------|-----------------|
| Ralph Bunting | BIOL | Campbell | Pharmacy |
| Elizabeth Burdett | BIOL | Phil. COM | Osteopathic |
| Sara Mae Caldwell | CHEM | Shenandoah | Phys Asst |
| Nick Caruana | BIOL | Georgetown | Medicine |
| Jennifer Crowley | BIOL | Dartmouth | Pub. Health |
| Jessica Denny | EXSC | UMES | Phys. Thrapy. |
| Seth Dukes | BIOL | Howard | Medicine |
| Amanda Ely-Wilson | CHEM/BIO | Penn State | Medicine |
| Jackie Fisher | BIOL | Nova Seast | Osteopathic |
| Matt Folstein | BIOL | Maryland | Medicine |
| Candice Harrison | BIOL | VA/MD | Vet. Veterinary |
| Ashley Hurley | BIOL | Shenandoah | Phys. Asst. |
| Louis Jones | BIOL | Maryland | Pharmacy |
| Janice Leahy | SPAN | Maryland | Medicine |
| Jim Matthews | EXSC | NY College | Chiropractic |
| Angela Moore | BIOL | UMES | Phys. Thrapy. |
| Megan Nestlerode | BIOL | UMES | Phys. Thrapy. |
| Zainab Pirzada | BIOL | Kirksville | Osteopathic |
| Sana Rawala | BIOL | S. Nevada | Pharmacy |
| Sibtain Rawala | BIOL | Maryland | Pharmacy |
| Erin Senkbeil | CHEM | Maryland | Pharmacy |
| Alyssa Smith | EXSC | NY College | Chiropractic |
| Peter Tam | EXSC/BIOL | UMES | Phys. Thrapy. |
| Leslie White | EXSC | UMES | Phys. Thrapy. |

Annual Student Research Conference



Sarah Kamsheh

More than 100 students representing many majors presented scholarly work at the fifth annual SU Student Research Conference on Friday, April 29, in Henson Science Hall and the Guerrieri University Center. SU is at the forefront of an ongoing attempt to have undergraduate students involved in cutting-edge scientific and professional research. The experiences of working closely with colleagues in a research group help students gain needed experience and discipline as they become professionals.

This year's conference continued SU's tradition of supporting student research and education by showcasing the innovative research of top students from across the University. The conference highlights the importance of undergraduate research at this University, with the intention of providing opportunities for students and faculty to learn about ongoing student research in different classes and majors.

The Henson School's Gene Williams (biology) was the recipient of

this year's Outstanding Research Mentor Award. Also nominated for the award was Bob Joyner (respiratory therapy). Dean Tom Jones cited the quality mentoring that all of our faculty give to their students as a key to producing the outstanding quality of the student presentations observed this year.

Pictured here are Phillip Sparr and Lauren Eckert, who each presented posters related to measuring fractal dimensions. Sparr collaborated with Kristi Martini and Aaron Valdivia on "Fractal Dimensions of the Game of Life." Eckert's topic was "Measuring Fractal Dimensions of Cellular Automata in Three Dimensional Space." Also pictured is Sarah Kamsheh who presented on "The Effect of Dietary Fats on Cricket Thermoregulatory Behavior."



Phillip Sparr & Lauren Eckert

Faculty/Staff Earn Awards

During the past academic year the following Henson faculty or staff received recognition for their professional contributions:

- Three members of the Department of Mathematics and Computer Science received recognition. The MD-DC-VA Section of the Mathematical Association of America awarded Homer W. Austin its John Smith Award for Distinguished Teaching. The Maryland Council of Teachers of Mathematics recognized Harel Barzilai with its 2004 Outstanding College Mathematics Education Professor Award. Don C. Cathcart received SU Alumni's Faculty Appreciation Award.
- Diane Davis of the Department of Health Sciences was a Phi Eta Sigma Freshman Honor Society Inductee.
- The Ecological Society of America named the Biological Sciences Department's Joan Maloof Outstanding Earth Advocate.
- Eugene Williams, also of the Department of Biological Sciences, was honored with the 2005 Student Undergraduate Research Conference Outstanding Student Research Mentor Award.
- Dawn Johnson, executive administrative assistant to Dr. Tom Jones, dean of the Henson School, was awarded the University System of Maryland's Regents Faculty and Staff Award for Excellence for her "exceptional contribution to the institution."

GIS Students Present Maps

To better inform Maryland's state delegates and senators about the land-use issues in their districts as well as to provide them with a useful reference map to use during discussions with constituents, the Eastern Shore Regional GIS Collaborative (ESRGC) completed a project to create a large-format map of land use for each state legislative district in Maryland. These maps were given as gifts to the senators and delegates during SU Day at the Legislature, held on January 25, 2005. The maps were prepared by SU students working under geography and geosciences faculty supervision as part of an internship with ESRGC.

Housed at SU, the ESRGC seeks to provide access to geographic information system (GIS) technology, data, technical support and training to the local governments of Maryland's Eastern Shore. The ESRGC is a joint effort between the Mid-Shore Regional Council, the Tri-County Council of the Lower Eastern Shore of Maryland and SU. Services ESRGC services include providing advice on GIS implementation, technical support, equipment loans, data collection efforts, data analysis exercises, cartographic services and GIS training. These services are provided at either no cost to the county or municipality or at a much reduced cost. (Additional information on the ESRGC may be found on at www.esrgc.org.)



Sen. John Giannetti is presented a land-use map by GIS student Allie Norley and Seidel School Dean Dennis Pataniczek

Chairs' Perspectives

Biological Sciences

Our curriculum has undergone substantive revision this year. Most of the changes were driven by activity related to our USDA Higher Education Challenge Grant. New biotech lab activities related to the detection of genetically modified crop plants in food were introduced into the 101 course and several other new or re-worked labs were also added. Labs were added to both of our genetics offerings (BIOL 360 and 370). In domino fashion, having the genetics labs in place allowed us to move some of the labs formerly done in cell biology (BIOL 350) to genetics where they belong and to introduce some new cell labs. New labs in Molecular Genetics (BIOL 370) also allowed for changes in the Contemporary Genetics (BIOL 440) course.

Although it is a little early to tell, our number of majors seems to be on the upswing. We have continued with recruiting activities initiated last year. The quality of our students is also very strong. This year, a record number of students were inducted into the biology honor society, Beta Beta Beta. The environmental health program also has beefed up its recruiting, making trips to several community colleges and high schools.

Our faculty continues to be very active in the area of research and professional development. This activity includes applying for and receiving external grants, publishing peer-reviewed papers, presenting at national and international meetings, and serving as consultants on professional matters. Many of our faculty advise undergraduates on research projects. Some of these students were co-authors on published papers; some presented their work at professional meetings, at NCUR and at our own Undergraduate Research Symposium

Chemistry

The Department of Chemistry was very productive during the 2004-2005 academic year. The 12 members of the faculty generated 5,758 student credit hours and 8,132 student contact hours; served on 29 school and University committees, frequently assuming leadership roles; supervised 23 undergraduate research students; had several articles accepted for publication; and gave numerous presentations locally, regionally and nationally.

During the fall semester we developed written departmental standards for tenure, promotion and annual performance evaluation. These standards emphasize the importance of classroom/laboratory teaching and embrace the diversity inherent in the Boyer model of scholarship. During the spring semester we finalized criteria and procedures for selecting Cort Scholars. The first Cort Scholar will be selected for the fall semester 2005.

Of course, the true success of the department is measured by the successes of our students. Five of our 12 graduates applied to graduate or professional schools (two pharmacy, one medical school, two Ph.D. chemistry programs). All five were accepted, and most received multiple offers. Another student was accepted to pharmacy school and will complete her chemistry degree next year in our accelerated chemistry/pharmacy track.

Geography and Geosciences

This year, we had a bumper crop of graduates, 28, which may be the department record. We continued to update and improve the geography curriculum by revising the tracks in the major. Another initiative was to improve the department's digital infrastructure. Funding by the dean made it possible to upgrade instructional technology including a wireless network in our area (all labs and offices) as well as significant improvement in all aspects of the hardwire network, creating a marked increase in our capacity for instruction and research. Dr. Michael Scott's Eastern Shore Regional GIS Cooperative (ESRGC) received over 20 grants and contracts worth approximately \$90,000, generating nearly \$9,000 in overhead. The coordination of department instructional needs with the ESRGC is starting to bear fruit, providing significant increase in bandwidth, data access to go along with increasing student opportunities to obtain experience in a real world setting.

Health Sciences

The 2004-2005 year was marked by some significant events. The Applied Health Physiology Graduate Program was moved from the Seidel School of Education and Professional Studies to the Henson School of Science and Technology. It is envisioned that the program will now have a permanent home.

We continued to try to improve the physical situation in classrooms and laboratories. For example, the laboratory countertops in the CLS/MT labs were resurfaced with laboratory grade laminate, and painting of some of the old hood base units was performed. The 1968 lab cabinets were scrubbed to remove graffiti. A classroom that was not being used was converted into the applied health physiology lab, and equipment from Maggs was moved to that room. We hope to try to complete the renovations to Devilbiss some time this year, especially since both programs will be receiving accreditation site visitors during the next academic year. Enrollments in respiratory therapy continue to increase. This is wonderful news; however, it will be critical to develop a plan to stabilize the situation, especially as related to faculty workload and personnel.

Mathematics & Computer Science

It was very busy and productive year. Publications and presentations by our faculty make us very visible nationally as do workshops for faculty and undergraduates that we have planned for this summer. Our faculty continues to be active in applying for and receiving external grants. In addition to the Gear-up grant funded through MHEC and the Math ADEPT, PascGalois and Sonification projects funded by the National Science Foundation, we are involved with school systems in two states on grants to improve the qualifications of their teachers. The MSME is off to a rousing start and addresses the same issue for all three Delmarva states.

We inducted a record number of students into Pi Mu Epsilon; we have a healthy number of graduates and, as nationwide enrollments in mathematics programs have been dropping, ours have risen. We are continuing to build our curriculum in computer science and successfully recruited two additional Ph.D. faculty members in CS, who came on board last fall. In mathematics, the number of students interested in pursuing graduate work has enabled us to offer courses in Complex Analysis (this spring) and Galois Theory (next fall) along with strong sections of our regular upper-division courses. We also had a large and impressive group of students complete their student teaching and become certified to teach mathematics at the secondary level.

Nursing

The department finalized the RN-B.S. curriculum plan and received approval from both the UCC and the Maryland Board of Nursing for implementation. The admission statement for first bachelor's degree students was revised and strengthened to give prospective applicants a clearer picture of what the expectations are for admission to the upper division courses. The Student Policies Committee reviewed applicants and awarded nine scholarships to nursing students. Accreditation work is ongoing with the four taskforces reporting twice to faculty and the chair completing an annual report to each accrediting body (The Commission on Collegiate Nursing Education and the Maryland Board of Nursing).

The Department of Nursing had two "political" visits this year. In October we were visited by the Maryland Senate Education, Health and Environmental Affairs Committee (EHE) and in April we were visited by Congressman Benjamin Cardin. The focus of the EHE visit was nursing enrollment and related issues, while Congressman Cardin stated he was on a fact-finding mission to discover what the current issues in nursing education are and what the federal government might do to address these issues. On August 27, 2004, Dr. Tom Jones, Dr. Karin Johnson and Dr. Susan Battistoni met with Elisha B. Pulivarti, executive director for the State of Maryland's Governor's Office on Asian Pacific American Affairs and five people who came with him, including a president from a college in India. The purpose was to discuss an alliance between a college in India and the SU Nursing Department.

End of program interviews and surveys for December and May graduates indicate a high level of satisfaction with the nursing faculty, curriculum, and clinical experiences.

Physics

The Department of Physics faculty members have been active this year involving our students in novel learning activities. These have included participation in the World Year of Physics problem-solving competitions, construction and launch of a rocket, computational

research on chemical abundances in M101 galaxy, an internship working on systems for unmanned aircraft, and design of balloon payloads by physics majors and by middle school students whose teachers were involved in the ADEPT physics class. We continue to emphasize student-centered professional development activities.

Dr. Joseph Howard's applications for tenure and promotion to associate professor were successful.

Cort Scholarship Announced

Bruce Cort and his family recently funded a new scholarship for the Chemistry Department in honor of Irving Cort, former chief chemical officer for the U.S. Army. The Cort family has ties with SU through Bruce Cort, SU class of 1971, son of Irving. The Cort family's generosity will enable the Chemistry Department to grant yearly scholarships of \$1,000 to freshman chemistry majors.

Dr. John Tyvoll, new chair of the Chemistry Department, stated "Bruce has said that excellence is something that one achieves and that this is accomplished, at least in part, by providing the best resources. To that end, he has certainly put his words into deeds. The faculty and students of the chemistry department are deeply appreciative of the generous contributions Bruce and his family have made to our program."



Mr. Bruce Cort, Alex Court and Chemistry Majors



Dr. Augustine DiGiovanna

Augie Retires

After 33 years of enthusiastic and exemplary service to SU, the Henson School and the Department of Biological Sciences, Dr. Augustine (Augie) G. DiGiovanna has retired. His many friends and former students will fondly recall his excellence in scholarship, teaching, advising, leadership, service and even his contribution to the construction of Henson Science Hall.

Augie joined SU in 1972. His main teaching responsibilities were in the areas of human biology including anatomy, physiology, pathology, embryology and aging. In the 1980s, he was a visiting professor at the University of Maryland College Park during the summers. He was awarded SU's Distinguished Faculty Award (1995), the School of Science Excellence in Academic Advising Award (1997), the Alumni Association Faculty Appreciation Award (2003) and the University of Maryland Board of Regents Faculty Award for Teaching (2004). He is a member of the Gerontological Society of America (GSA) and the Human Anatomy and Physiology Society (HAPS). He is also active in the Maryland Consortium for Gerontology in Higher Education and the Association for Gerontology in Higher Education (AGHE). Augie is author of the book *Human Aging: Biological Perspectives*, a McGraw-Hill publication (2000).

Departmental Honors Awards

| Department | Award | Student Awardees |
|--------------------------------|--|---|
| Biological Sciences | Biology Faculty Award | Jocelyn Anderson Matthew Folstein Sarah Meekins |
| Chemistry | James F. Glenn Memorial Award Junior Chemistry Scholar Award | Amanda Ely Brittany Rowe |
| Geography & Geosciences | Eugene Farace Outstanding Senior Award Geographic Society Award | Benjamin Berbert Zachary Baccala |
| Health Sciences | ASCP National Student Honor Award | Sue Hudson Lauren Sacchetti Lindsey Shortall Marijana Stella Heather Twombly |
| Mathematics & Computer Science | Distinguished Computer Science Student Award Most Promising Mathematician Department of Mathematics & Computer Science Service Award Most Promising Mathematics Educator Most Promising Statistician | Daniel Pace Jathan Austin Lauren Eckert Gregory Muarch Pamela Kenny |
| Nursing | Sigma Theta Tau Nursing Honor Society Scholarship Undergraduate Nursing Achievement Award Marilyn Seidel Nursing Scholarship Avery Hall Nursing Scholarship Diana Marie Clayton Memorial Award Fondes Outstanding Graduating Senior Nursing Award | Margaret Zak Beverly Scott Elizabeth Miller Christina Pizzillo Shannon Nelson Jennifer Hsu Jovonne Chandler Kimberly Orwig |
| Physics | Excellence in Physics Award | Joseph Norman Robert Shawhan |



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