

# OUTLOOK

A WEEKLY NEWSPAPER FOR FACULTY AND STAFF AT THE UNIVERSITY OF MARYLAND AT COLLEGE PARK

APRIL 5, 1993  
VOLUME 7, NUMBER 25

## College Park Responds to Board of Regents' Plan

The University of Maryland at College Park, in a public hearing, presented its response to the University of Maryland System Board of Regents' proposal to consolidate, reorganize or discontinue ten academic programs currently offered at the university.

Based on an internal evaluation of the programs in question, College Park officials argued against eliminating the programs in all ten cases. In looking at reorganizing or consolidating the programs, they asked the Regents to accept UMCP's established process for the review of aca-

dem programs in lieu of the accelerated program review under the Regents' action plan, *Achieving the Vision in Hard Times: II*.

University representatives also stressed in the course of the hearing that College Park has already unilaterally eliminated and consolidated academic programs, and that those cuts should be weighed by the Regents as they consider the university's response to the current plan.

In the two years preceding the plan now under discussion, College Park has closed one college (the College of Human Ecology) and has

eliminated 32 majors in seven academic programs as part of an ongoing process of evaluating academic programs.

The university's response was presented by President William E. Kirwan at a public hearing held March 26 at the University of Maryland University College Center of Adult Education. Also testifying on behalf of College Park were Robert Lissitz, chair of the Campus Senate; Patricia Moreland, chair of the Senate Committee on Staff Affairs; Jennifer Kelly,

*continued on page 2*

## Dancers to Perform During Photo Exhibition

Melvin Deal and the African Heritage Dancers and Drummers will perform at the Parent's Association Art Gallery in the Stamp Student Union on April 16, at 7:30 p.m., as part of an exhibit that features the group.

Funded in part by the Prince George's Arts Council, the exhibit will run from April 1 to 30 and consists of photographs and paintings from the Art Center's Photo Outreach Program.

The photographs document the process in which the Dancers and Drummers learned their trade

*continued on page 2*



Photo by Barbara Tyroler

African Heritage Dancers and Drummers

## INSIDE

## NSF Awards Science and Math Teaching Grant to UM System

Point of View	
"What It's Like To Be A Staff Senator" .....	4
Crime Scene Cases	
Solving Murders in Miniature.....	5
Saving Wire	
Philosopher Wins NIMH Grant to Explore How the Brain Works.....	6

University Printing Services regrets the error on page one of last week's *OUTLOOK* which cut off the lead headline. The headline should have read "Henson's Legacy Lives on at Major Puppetry Workshop."

The National Science Foundation (NSF) has selected a consortium of Maryland school systems, colleges and universities, and scientific research institutes to receive a \$6 million grant from the NSF Collaboratives for Excellence in Teaching Program for a five-year project to develop new interdisciplinary approaches to the preparation of elementary and middle school teachers of science and mathematics.

The winning Maryland proposal emphasizes five central themes for teacher preparation: (1) Scientific and mathematical concepts and reasoning methods will be studied in content courses that model the practice of active teaching and learning; (2) Special field experiences will engage prospective teachers in research

activities of business, industrial, or scientific research institutions and the informal science education activities of science centers, zoos, and museums; (3) Teaching methods courses and school field experiences will be carefully planned to prepare teachers who can work effectively with the diversity of student abilities, interests, and cultural backgrounds found in Maryland schools; (4) Pre-service teaching experiences will be provided in school settings that have been specially developed as models of outstanding science and mathematics teaching; and (5) Design of the program and recruiting of teacher candidates will aim specifically to increase the number of teacher candidates

*continued on page 3*

## Higher Education 2000: African Americans in Pursuit of Excellence

Participants who want an early bird discount must register by April 12 for the Black Faculty and Staff Association's Sixth Annual Conference. The conference, to be held June 10-11 at the College Park Holiday Inn, will examine topics relating to the history and current role of African Americans in higher education, including issues facing historically black colleges. For more information, call 314-8379.

## Regents Plan Update

*continued from page 1*

president of the Student Government Association; and Jay Thomas, president of the Graduate Student Association.

The university's objections to closing down the programs are based on the quality of the programs and their centrality to the university's mission. It was also pointed out that none of the programs are offered at any other public institution in the state.

Likewise, the university's analysis found that all ten of the programs targeted for review are offered by all nine of the institutions nationally that have been identified as peer institutions to College Park.

"It is thus obvious that these pro-

grams are not peripheral to the mission of the flagship university or the land-grant university of the state of Maryland," the university commented in its written response to the Regents.

In its appeal the university also noted that when compared to its nine peer institutions, College Park offers only about two-thirds of the number of degree programs offered by those institutions. The findings apply about equally to bachelor's, master's and doctoral programs.

College Park officials observed that the program evaluations conducted in response to the Regents' plan unveiled last December have been intense and inclusive, involving academic administrators, students

and campus senate representatives.

During his presentation to the Regents, President Kirwan pointed out that College Park had identified a total of \$2.9 million in funds available for redeployment during the next fiscal year alone, exceeding the goal under the Regents' three year plan of \$2.3 million. The funds, he said, would come from additional program eliminations and selective reduction of departments.

"Obviously the campus can meet the Regents' target of \$2.3 million for redeployment over the next three years as part of the campus' ongoing program reviews and reallocation process."

College Park was designated the System's flagship campus in 1988 by the state legislature. The designation was part of that body's commitment to provide resources to enhance College Park's stature as a world-class major research university with balancing emphasis on undergraduate education. The Regents' action plan now under consideration is part of that enhancement in that it calls for a reallocation of funds to the priority areas within the System as defined by the Regents, one of which is the flagship campus.

President Kirwan told the regents that the university's program review process also has identified priorities within UMCP for use of the redeployed funds, and concluded with the observation that, "We have a process [for academic program review] in place that works," said Kirwan. "If a better system for redeployment of funds exists in the United States, I'm unaware of it."

—Roland King

## African Heritage Dancers & Drummers

*continued from page 1*

through educational workshops with Deal, their director. The exhibit demonstrates how the Outreach Program helps give students and professionals advanced photography experience while providing a service to the community.

"We have been working on this particular project for three years," says Barbara Tyroler, director of the Photo Outreach Program. "This is the culmination of the grant."

Deal uses the Dancers and Drummers project to help Washington, D.C. youth understand African culture while giving them self-confidence to expand their creativity.

"He goes into the schools a lot to tell them about African history, and

he shows them how to make African instruments," Tyroler says. "These kids need a good role model, and he enjoys being one."

In addition to the Maryland exhibit, the Dancers and Drummers will also perform at the National Cathedral, St. Elizabeth's Hospital, and Catocin Park.

The paintings featured in the exhibit are by Maura Doern, a member of the art faculty and a professional painter. In addition, the exhibit will include photos by Tyroler which have been painted on by Houston Hill.

After the Dancers and Drummers perform, there will be an open house with refreshments in the Art Center, also in the Stamp Student Union. All of the events are free to the public.

—Stephen Sobek

## UMCP Smoking Policy and Guidelines Approved by the President March 6, 1993

The university has found that a significant percentage of faculty, staff and students do not smoke. Smoke is offensive to many non-smokers, it is harmful and even debilitating to some individuals due to their physical condition, and there is evidence suggesting that passive smoke inhalation is harmful to non-smokers. In response to the above considerations, it is hereby established as the policy of UMCP to achieve a public facility environment as close to smoke free as practicably possible. Obtaining and maintaining this result will require the willingness, understanding, and patience of all members of the campus community.

It is the policy of UMCP to follow all federal, state, or local laws, regard-

ing smoking. This smoking policy is in addition to any such policies which may be in effect.

Smoking is prohibited in indoor locations. Unit heads or their designees are responsible for: 1) assuring that this policy is communicated to everyone within their jurisdiction and to all new members of the campus community; 2) implementing the policy and guideline and assuring that appropriate notice is provided; and 3) developing guidelines to embrace all special circumstances on the campus is impossible. If unit heads find circumstances in their areas that they believe warrant exception from particular provisions in this

*continued on page 3*



Melvin Deal

Photo by Barbara Tyroler

## OUTLOOK

Outlook is the weekly faculty-staff newspaper serving the College Park campus community.

**Kathryn Costello**

Vice President for Institutional Advancement  
Director of Public Information  
Director of Creative Services

**Roland King**  
**Judith Blair**

**John Fritz**  
**Solly Granatstein**  
**Laurie Gaines**  
**Heather Davis**  
**Stephen Sobek**

Editor  
Staff Writer  
Calendar Editor  
Editorial Interns

**John T. Consoli**  
**Kerstin A. Neteler**  
**Al Danegger**  
**Jennifer Grogan**  
**Susan Heller**  
**Robert Henke**

Format Designer  
Layout & Production  
Photography  
Production Interns

Letters to the editor, story suggestions, campus information & calendar items are welcome. Please submit all material at least two weeks before the Monday of publication. Send it to Editor Outlook, 2101 Turner Building, through campus mail or to University of Maryland, College Park, MD 20742. Our telephone number is (301) 405-4621. Electronic mail address is jfritz@umdacc.umd.edu. Fax number is (301) 314-9344.

UNIVERSITY OF MARYLAND AT COLLEGE PARK



## Student Employees Honored

The Job Referral Service will pay tribute to the 1993 "Outstanding Student Employee of the Year" nominees on Wednesday, April 7, 1993. The top ten student employees will receive scholarships ranging from \$150 to \$200. All students who were nominated will receive certificates. The awards ceremony will be held from 2:30 to 4:00 pm in the Colony Ballroom in the Stamp Student Union. To reserve tickets at no charge, please call the Job Referral Service at (301) 314-8324. Tickets are limited and will be honored in order of receipt.

## Opera Student Wins Regional Metropolitan Opera Competition

A College Park student was one of a select small group of talented young North American opera singers who participated in the 1992-1993 Metropolitan Opera National Council Final Auditions on April 4.

On Monday, March 15, Angela Powell won the audition for the Middle Atlantic Region of the National Council of the Metropolitan Opera, securing for herself a place in the national final competition. In addition to the coveted audition, Powell also received more than \$4,500 in prize money and study awards.

Powell is enrolled in the university's voice opera program, a program that she believes helped her to win the regional competition.

"Opera is much more than just singing," says Powell. "I've learned other things that count, like where to be on stage and how to use body language. I've learned to not just sing, but perform," she says.

"The program's goal is to prepare singers to step into opera roles after graduation," explains Leon Major,

interim chair of the music department at College Park and director of the department's opera program.

In addition to voice and diction lessons, the five-semester graduate program in voice opera also requires a mask class, during which students wear full neutral face masks and use only their bodies for expression.

"The body is a tool as valuable as anything else," says Major. Movement and dance classes also hone this skill.

During the combat class students learn how to faint, fall, and participate in sword and knife fights without injuring themselves. The improvisation class stimulates and develops students' imaginations, while the scene study classes analyze scenes from operas to help students discover the characters. There also is a Shakespeare class and acting lessons.

Powell arrived in New York a few days prior to the April 4 national final auditions to receive coaching from Metropolitan Opera staff and to

rehearse for the competition.

Although approximately 24 opera singers competed, anywhere from eight to 11 of them will sing in the Winner's Concert on April 18. Winners receive \$10,000.

"This really is a talent identification and career development program," says Eleanor Forrer, chairman of the Middle Atlantic Region of the National Council of the Metropolitan Opera, who notes that more than 40 percent of the artists currently on the Metropolitan Opera roster participated in the audition program.

In preparation for the final audition, Powell said she wouldn't even think about the other singers. "I'll just go and do my best," she said.

*[Editor's note: results of the 1992-1993 Metropolitan Opera National Council Final Auditions occurred too late to be included in this issue. If Powell advances, we will report this in the next issue of OUTLOOK.]*

—Beth Workman

## \$6 Million Math Grant

*continued from page 1*

from groups that have been traditionally underrepresented in science and mathematics teaching.

Work of the project consortium will involve science, mathematics, and education faculty from the University of Maryland at College Park, University of Maryland at Baltimore County, Bowie State University, Coppin State College, University of Maryland at Eastern Shore, Frostburg State University, Morgan State University, Salisbury State University, Towson State University, Baltimore City Community College, the Public Schools of Baltimore City, Baltimore County, and Prince George's County, the Maryland Biotechnology Institute, the Center for Environmental and

Estuarine Studies, and the University of Maryland Medical School.

Dr. James Fey, professor of curriculum and instruction and mathematics at College Park will direct the project. He will work with three co-principal investigators: Dr. Genevieve Knight, professor of mathematics at Coppin State College; Dr. John Layman, professor of curriculum and instruction and physics at College Park; and Dr. Thomas O'Haver, professor of chemistry at College Park. Eight other science and mathematics and education faculty from UMCP, Bowie State, Coppin State, the University of Maryland at Baltimore County, and Towson State will play key roles as working group leaders.

—Gary Stephenson



On March 25 the Math Department and College of Computer, Mathematical, and Physical Sciences welcomed the Association for Women in Mathematics to campus. Pictured are Linda Keen, Marcia Sward, Richard Herman, Cora Sadosky and Raymond Johnson.

## Smoking Policy

*continued from page 2*

smoking policy, they may address requests for specific local exceptions to the president or his or her designee.

This policy relies on the thoughtfulness, consideration, and cooperation of smokers and non-smokers for its success.

Complaints or concerns regarding

this policy or disputes regarding its implementations should be referred to the immediate supervisor for resolution. If a resolution cannot be reached, the matter will be referred by the supervisor to the appropriate department head or vice president for mediation.

The provisions and guidelines attached to this smoking policy shall be subject to future review and revision

to ensure that the objective is obtained. Special attention shall be given to determining if voluntary compliance without disciplinary sanctions has proven satisfactory.

This policy does not apply to privately occupied portions of university-owned residential space, such as dormitory rooms, apartments, and houses.



## Proposals for Women's Forum Needed

The Women's Forum of the University of Maryland System will hold its fourth annual conference on Friday, October 29, 1993, at the University College Conference Center. The Program Planning Committee welcomes proposals for formal papers, workshops, panels, or seminars related to the theme "Access to Success." First consideration will be given to proposals received by Friday, April 16, 1993, and respondents will be notified of the status of their proposals by Friday, May 14. For more information call (301) 985-7743.

## What It's Like To Be A Staff Senator

Jordan Thomas, Technical Staff Senator, Animal Sciences



Jordan Thomas

*"Stand! You've been sitting much too long! There's a permanent crease in your right-and-wrong ... Everybody, Stand!"*

—Sly and the Family Stone

When I was asked to write about my term in the Campus Senate (in conjunction with the upcoming senate staff elections), I recognized an opportunity, not only to use a great line from a sixties rock song,

but to encourage, on a broader scale, the staff activism that this campus needs to succeed as a community.

The upcoming elections for a dozen staff seats in the campus senate will have a major impact on the degree of that "success" and the definition of our "community." The role of the non-faculty citizens—staff, undergraduate and graduate students—is growing on this campus and offers an example to others in the University of Maryland System.

This trend may continue only so long as we citizens assert our legitimate claim to places at the table. But, given the respect that Dr. William Kirwan has shown for the role of the senate in shared governance, new staff senators need not focus on the long-term and philosophical; they should take advantage of the chance for direct input on issues that will affect our work, our lives, and our families.

### Tough Issues

In recent years, the senate has wrestled with the forty-hour work week, program eliminations, campus parking, the budget crises, and elements of the Mercer study. Obviously, we did not "win" on a lot of these issues. I hate to lose, so it's difficult for me to say that winning isn't everything.

But we wrestled, argued, and possibly exchanged some new perspectives. On some of these, we presented a pretty solid front—massive budget cuts, forced conversion to 40 hours without additional compensation and the Mercer proposal to eliminate COLA prompted near-unanimous senate opposition.

Combined with other organizations on campus such as AFSCME and the Women's Forum, College Park produced a strong response that

was heard, if not always heeded, in Annapolis and Adelphi. For me, this was the senate at its best—taking a stand on "larger" issues for a constituency that historically gets far less attention than its contribution to the institution has earned.

Many of the same issues will face the next Campus Senate. If we don't deal with it one last time before the semester ends, campus parking fees and fairness will certainly be on the agenda next year. The College of Agriculture's committee looking at current organization and programs will probably result in changes for the senate to consider. The state's fiscal health and the resulting university budget are sure to cause some heartburn.

But, if only because we at College Park have not yet felt its full weight, the pay program, and all its details that have not been filled in, could be the overriding staff issue for the coming session. The development of job descriptions continues, though it is acknowledged that our three-year-old Position Information Questionnaires (PIQs) are inaccurate at best.

On other campuses, the performance evaluation component has been in operation for over a year with mixed results. There have been suggestions that one or more institutions may be preparing to link the evaluations with pay, a concept that I believe is loaded with too many equity and logistical problems to accept "on its merit." Staff senators will have a chance to play an active part in the creation of fair and workable processes for defining our jobs, evaluating our performance, and compensating our efforts.

I hope the Campus Senate also will pursue further information and take a position on proposed "pay for performance" programs in the Department of Physical Plant that drastically change worker rights, benefits, and compensation. Our role as a body, defined in Article 1 of the Plan of Organization, includes consulting with President Kirwan on "all general policy matters pertaining to the employment and programs of the . . . staffs of the university."

We clearly need the opportunity to evaluate these proposals, not only in terms of their impact on the specific employees, but for their implications for the rest of the campus. Contracting out or in, privatization, or whatever new jargon may be created to describe it—the possible replacement or elimination of our jobs should be a high priority concern of the new senate.

### The Staff Voice

Campus employees should not depend on the faculty to advocate for staff issues in the senate. Sometimes it happens. With all due respect to my fellow senators, it doesn't happen enough. But, in the end, we are the appropriate people to be ensuring that staff concerns are voiced, that action is taken. We must stand and be activists.

Senate activism begins with this week's nomination of candidates to fill 12 vacancies due to term expirations. The current Plan of Organization limits us to one term followed by at least a year off before running again.

Employees can be nominated from the following staff categories: Associate Staff-Librarians (one seat), Associate Staff (two seats), Exempt Classified (two seats), Secretarial and Clerical (four seats), Service and Maintenance (one seat), Skilled Crafts (one seat), and Technical Staff (one seat).

Nominations close April 7, so speed is of the essence at this point. Ballots with candidate statements will follow next week.

To those considering candidacy, an active concern for your job, workplace, and the university community is the main requirement for a seat in the senate. You don't have to address the body even once during your term, though I hope you will because they need to hear what you have to say. Understanding that the body remains dominated numerically, and usually philosophically, by the faculty is useful, if sometimes frustrating. Willingness to sit through some of the more tedious discussions on the relative merits of placing a comma here or there is helpful.

Support from your co-workers and supervisors is critically important (in my case, many thanks to Denise Beaudoin and Molly Wilson for minding the farm in my absence and to Drs. Scott Barao, Tom Hartsock, and Dennis Westhoff for their flexibility).

Lastly, to the voters in all the categories, I urge that you take this election seriously, casting your vote for someone you believe will strongly advocate for you and fight for your share of shared governance. Coming events will impact us as a community and demand that we respond. While the Campus Senate is not the only mechanism for answering these challenges or improving working conditions at College Park, it is a valuable channel of communication. The people we elect to the senate will have a voice that we should not fail to use.

**F**or me, this was the senate at its best—taking a stand on "larger" issues for a constituency that historically gets far less attention than its contribution to the institution has earned.



### Campus Senate to Hold Special Meeting April 19

The Executive Committee has scheduled a special meeting of the Campus Senate for Monday, April 19, from 3:30 to 6:30 p.m. in Room 0126 of the Reckord Armory. Expected agenda items include revisions to the *Code of Academic Integrity* and policy on campus housing for undergraduate students.

## Crime Scene Cases Turn Students into Sleuths

The body lies face up, the blood darkening the carpet under its head. The investigators stare down, wondering how this happened and who could have possibly done it.

The students in CCJS 320, "Introduction to Criminalistics," are learning how to investigate crime scenes in an unusual way.

No, they aren't following police cars to actual crime scenes, but they are learning through experience with Crime Scene Cases.

The cases are six doll house-scaled boxes approximately one foot square, designed as typical crime scenes would appear in different scenarios.

The boxes were designed by Thomas E. Mauriello, who has taught the course since he first developed it in 1980. He thought of the idea for Crime Scene Cases when he observed the "Nutshell Crimes" display in the State Medical Examiner's office and thought it would work well in his class.

The cases were used for the first time last semester. There are six different scenes that the students investigate.

There is a hotel room, where a woman lies shot in bed; a dormitory room with a rape suspect in handcuffs; a closed garage containing a body and a running car; a kitchen with a dead body and cold breakfast; a living room which has been robbed and its owner bludgeoned to death; and a convenience store with both a dead clerk and a dead robber.

Students, working in groups of four, are presented with a fact sheet which provides them with the knowledge that any investigator on the scene would have, including the date, whether the person is actually dead, and circumstances surrounding the death.

The details in the boxes them-

selves are painstaking. Doctors Dollhouse, of Severna Park, Maryland, designed the boxes to Mauriello's specifications. Then he and two former students, Frank Mort and John Shoemaker, created the scenarios to fit the original scenes.

In the living room scene, the body lies on a bloody carpet, near a lamp which is stained with blood on both the base and the broken glass shade. There are unmistakable tool marks on the door frame, which illustrate forcible entry as well as the broken chain lock on the door itself. Footprints outside, under the window, show that the suspect tried unsuccessfully to enter there first. When students look at the bottom of the body they can observe post-mortem lividity, the settling of blood which discolors the skin. In this case the lividity is purple, indicating a normal death.

In the dormitory scenario, a suspect sits in handcuffs in his room. He is accused of raping a woman earlier in the evening while on a date. His pizza sits uneaten on his dresser, beer cans are unopened on the table. The sheets should be taken for evidence; He was sleeping when the police came for him.

The garage scene is an unsolvable puzzle. A woman lies face down, either overcome by the carbon monoxide or from the gash on her head. Her dog is dead on the other side of the garage, and a puff of exhaust signals the car is still running. The bright red lividity of the body indicates asphyxia by carbon monoxide. Did she kill herself deliberately or did the fall cause her demise? The investigators may never know.

The students are evaluated by how many pieces of evidence they find, and by what appropriate ques-



The Garage Scene

tions they ask. Mauriello feels that the Crime Scene Cases lab, with the other labs in the course, are the true indicators of how well the students are understanding what they learn.

"I mainly look at this as a teaching technique, a way to get the information across in a manner with which the kids have a lot of fun, and I have the opportunity to truly see whether the students understand," Mauriello says.

The University of Maryland, to Mauriello's knowledge, is the only university using such a technique in its criminal justice curriculum. He says it is even fairly unusual for a university to have a criminology laboratory like the one here.

Mauriello plans to share, though. He is taking the boxes to Salva Regina University in Newport, Rhode Island, in April for a two-day seminar for the criminal justice students there. This is the first time the scenes will have traveled.

According to Mauriello, his students met with "absolute success" the first time the boxes were used. The lab was tested on four sections last semester who all handily investigated their scenes.

For Mauriello, however, one of the most interesting aspects brought a gleam to his eye. "As a professional investigator, I normally don't get the opportunity to stage the crime before I investigate it," he says with a grin.

— Heather Davis



The Living Room Scene



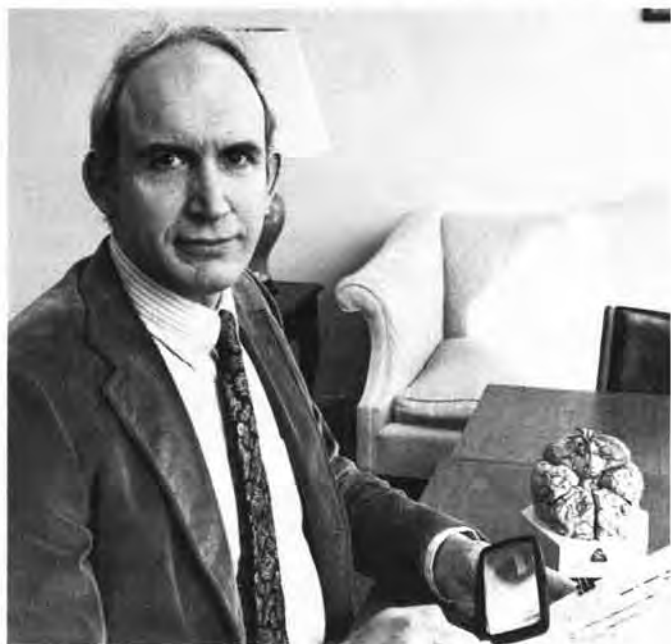
The Dormitory Scene



### Panel to Discuss National Electronic Information Policy

The Decision and Information Sciences Committee will sponsor a panel discussion on Wednesday, April 14, 1993, in the Rouse Room (1412) of the Business and Management and Public Affairs Building. There will be a reception at 2:00 p.m., and the discussion will last from 2:30 to 4:30 p.m. Panelists will include Jock Gill, director of Electronic Publishing and Public Access Electronic Mail for the White House; Daniel C. Michaelis, director of International Standards for Bell Atlantic; and Daniel Weitzner, senior counsel for the Electronic Frontier Foundation. To be moderated by Glenn Ricart, director of the Computer Science Center, the panel will discuss such issues as copyright/property rights for electronic works, the economic value of information and control of electronic networks.

## Philosopher Wins Grant to Prove the Brain was Built to Save Wire



Seeing the forest for the trees: From the philosophical perspective of bounded resources, philosophy professor Christopher Cherniak was led to compile 1000 pages of published anatomy drawings of *c. elegans*, a microscopic worm, into this single diagram. That diagram, which he holds in the photo, is the first depiction of an entire nervous system at the level of individual neurons.

Save wire. That is the "very simple rule" which philosophy professor Christopher Cherniak is using lately to explain why the human brain is built the way it is.

To explore his wire-saving hypothesis Cherniak has just received a half million dollar grant from the National Institute of Mental Health (NIMH).

Operating from the notion that neural messages travel at a limited speed, and that there is a limited amount of neural wire in the brain, Cherniak has arrived at the principle which he says "acts like a generative grammar for the nervous system": Save wire.

The goal of Cherniak's research is to explain the structure of the brain through network optimization theory, a concept used in computer science to speed the sending of messages by minimizing the distance over which they must travel.

Just as computers have evolved from the slow, gigantic mainframes of the 50s to today's lightning-speed laptops, the human brain evolved to process information as quickly as possible. Cherniak says that microchips and the brain both work faster by conserving wire.

Cherniak tested his wire-saving thesis successfully on the nervous system of a microscopic worm species—a fact which may reveal something of the nature of the human brain. "This research has the promise of making some broad and far reaching generalizations about nervous system organization across species," said an NIMH review of Cherniak's research.

NIMH reportedly gave Cherniak's proposal one of its highest ratings in recent history. "His preliminary findings indicate that as a philosopher, he is playing the important role of pointing out the forest for the trees in neuroscience—an area outside his early formal training," stated the NIMH assessment.

NIMH may seem like an unusual source of funding for a philosopher, but Cherniak is an unusual philosopher.

Before switching from physiology to philosophy as a Harvard undergrad, Cherniak spent his young life immersed in science fairs, culminating in his winning the Westinghouse Science Talent Search in the early 60s.

With his experience in both the hard sciences and humanities, Cherniak despises the "Ford assembly line" brand of scholarship which isolates disciplines from each other.

His current research is a model of cross-disciplinary scholarship which combines philosophical inquiry with hard science.

"This is a College Park story," Cherniak says. "The atmosphere of the campus is one that quite genuinely has a history of encouraging and promoting cross-disciplinary research," he says.

In addition to the Philosophy Department, Cherniak has been a member of the Institute for Advanced Computer Studies and the Committee on the History and Philosophy of Science.

Falling under the relatively new rubric of cognitive science, the NIMH study "starts at the most abstract reaches of philosophy and proceeds to the most concrete levels of neuroscience."

It began as a philosophical critique of the rational actor. For years, Cherniak has argued against what he sees as philosophy's great mistaken assumption, most evident in game theory: that humans have infinite reasoning power.

Instead, the discipline should recognize that real humans—like the world itself—have limited resources. Cherniak's motto: "We do not have God's brain."

Cherniak has found that philosophy is not alone in overestimating human mental power. Neuroanatomy also often assumes that messages in the brain can be relayed instantaneously over an infinite supply of wire.

In actuality, he says, human neural messages obey a speed limit of about 55 miles per hour, which necessitates the shortest route possible.

In the first part of Cherniak's project, he tested his wire saving theory on "the only creature on earth for

which we have complete anatomy," a millimeter-long worm called *caenorhabditis elegans* (*c. elegans* for short).

He tried to determine if *c. elegans'* neural network saves the most wire possible. He asked, "Does this animal have the best of all possible brains?"

To answer that question, philosopher Cherniak began number crunching. Since science had established a complete picture of the worm's anatomy, Cherniak was able to calculate the exact number of configurations possible for the worm's 300 nervous cells. He came up with 40 million possible alternative placements.

Next, he ran the 40 million possible placements through "a dozen bottom-of-the-line ordinary office computers" to see which layout required the least wire. After operating simultaneously for a week, the computers revealed that the worm had won. *C. elegans'* existing neuroanatomy had the shortest possible connections.

"The outcome was that, to quote a phrase from Marx (not Groucho), the actual is the ideal regarding the neuroanatomy," Cherniak quips.

Since the ultimate focus of the NIMH grant is the human brain, the next task is to prove his hypothesis on that most complex neural network.

Running the same kind of computer test on the human cerebral cortex would be an impossibly huge task for even the most super supercomputer, Cherniak says. Therefore, he must rely on "a number of indirect tests of wiring rules."

One such test accounts for the location of the brain in the unlikelyst of locations—the head. Although the natural place to put the "the most delicate organ" would be in the protected recesses behind the rib cage, the brain is actually located "as far forward as possible"—in the front, or head, of the human organism.

Why? Because there are many more connections at the front than at the back of the brain. By counting these connections, Cherniak has found that locating the brain in the head (the "front" of body) "saves you a lot of wire."

So far such indirect tests on the human anatomy are all consistent with the idea "that the anatomy is really driven by saving wire."

"It looks like that's some big hint of the way the brain functions," says Cherniak. "An enormous and to me completely unreadable hint."

—Solly Granatstein

### Remember to Return Your CYC Survey by April 16

Included in a recent paycheck was a Center for Young Children (CYC) survey for all UMCP parents with children under five years of age to determine child care needs at College Park. The center would like all surveys returned by April 16. If you didn't receive a survey or have lost it, call 405-2797 to receive a copy.

## Kudos To...

From time to time, *OUTLOOK* runs this section calling attention to the accomplishments, awards and achievements of College Park faculty, staff, and students. Kudos to... is compiled from memos, letters, phone calls, and departmental newsletters. We'd like to hear from you. Send information, and a black and white photo, if possible, to *OUTLOOK*, attn: Kudos, 2nd floor, Turner Building.

**Ivo Babuska**, physical science, who was awarded a medal by the Charles University in Prague for his outstanding achievements in mathematics at the 1992 International Symposium on Numerical Analysis.

**Robert Barefield**, business, who has been awarded a grant under the Project for U.S. Educational Administrators to travel to Germany to learn how the student affairs process relates to international students.

**Richard E. Berg**, physics, who was awarded a two-year National Science Foundation grant for his workshops for middle-school teachers.

**Michael E. Fisher**, physical science, whose paper "Magnetism in One-Dimensional Systems—The Heisenberg Model for Infinite Spin," was the second most-cited paper published in the *American Journal of Physics* between 1945 and 1990.

**Hilmar I. Forkel**, physics, who gave a talk on "Direct Instantons in QCD Baryon Correlation Functions" at the Centre d'Etudes Nucleaires, in Saclay, France.

**Clifford M. Foust**, history, who has been selected to receive the 1993 Edward Kremers Award of the American Institute of the History of Pharmacy. He was chosen for his book *Rhubarb: the Wondrous Drug*.

**Denny Gulick**, mathematics, who last May received the Dean's Award for Excellence in Teaching from the College of Computer, Mathematical, and Physical Sciences.

**Gary Harshman**, applied agriculture graduate, who won the 1992 Golf Course Superintendents' Association of America Turfgrass Student Essay Contest.

**Bill Hodos**, psychology, who received the Maryland Psychological Association Award for Outstanding Scientific Contributions to Psychology.

**Samuel Kotz**, business, who has recently published his latest book, an updated edition of *Univariate Discrete Distributions*.



**Cathy Trost**, journalism, has been named the first director of the new Casey Journalism Center for Children and Families.



**Dominic Cossa**, music, was inducted into the Academy of Vocal Arts Hall of Fame in Philadelphia. Only two singers each year are given this honor. Joining Cossa this year is former music faculty member George Shirley.



**George Dieter**, engineering, has been elected a member of the National Academy of Engineering. The Academy honors those who have made "important contributions to engineering theory and practice, including significant contributions to the literature of engineering theory and practice."



**Edwin A. Locke**, business and management, was awarded the 1993 Distinguished Scientific Contributions Award by the Society of Industrial and Organizational Psychology, a division of the American Psychological Association.

**Arie Kruglanski**, psychology, who was awarded the General Research Board semester award.

**Stephen E. Loeb**, business and management, who recently received the 1992 Outstanding Accounting Educator Award from the Maryland Association of Certified Public Accountants.

**Rabindra N. Mohapatra**, who has recently published two books and has been selected to serve on the editorial board of the European journal *Progress in Particle and Nuclear Physics*.

**Joseph C. Pati**, physics, who directed the fourth in a series of International Schools on Particle Physics and Cos-

mology at the Interface, held in Puri, India. Pati also delivered the keynote address at the Department of Atomic Energy International Symposium on High Energy Physics in Bombay, India.

**Thomas C. Schelling**, economics, who won the National Academy of Sciences Award for Behavioral Research Relevant to the Prevention of Nuclear War.

**Thomas L. Schumacher**, architecture, who is the recipient of the American Collegiate Schools of Architecture's Distinguished Professor Award.



# CALENDAR

## March of Dimes WalkAmerica Comes to UMCP

Public Relations students in the College of Journalism are organizing the first March of Dimes WalkAmerica to take place in College Park. Set for Sunday, April 18, the ten kilometer walk will begin near Tawes Theatre on campus and will travel through College Park and Berwyn Heights, past Lake Artemesia. The athletic department, residence halls, and the Greek system are some of the participating groups that will try to raise \$10,000 to help fund prenatal and maternal health care programs aimed at reducing birth defects and infant deaths. For more information, call 1-800-326-BABY or (301) 405-2435.

## April 5-13

### 5 MONDAY

**Architecture Exhibit:** "Soundings: The Work of John Hejduk," designs by the dean of Cooper Union Architecture School, Architecture Gallery, through April 30. Call 5-6284 for info.

**Art Gallery Exhibition:** "Art/Nature/Society," Selections from the Permanent Collection, through April 16. Call 5-2763 for info.

**Campus Recreation Services,** entries open for intramural tennis doubles and badminton doubles, 8:30 a.m., 1104 Reckord Armory. Entries close April 12. Call 4-7128 for info.

**Returning Students' Workshop:** "Assertiveness," today and Apr. 12, noon-1 p.m., 2201 Shoemaker. Call 4-7693 for info.

**President's Commission on Women's Affairs Meeting,** noon-2 p.m., 2118 Lee. Call 5-8506 for info.

**UM Baseball vs. Coppin State,** 3 p.m., Shipley Field. Call 4-7122 for info.

**Systems Seminar:** "Resonant Tunneling for Multi-Valued and Fuzzy Logic Applications," H.C. Lin, 3:30-5 p.m., 2120 A.V. Williams. Call 5-6634 for info.

**Contemporary Spanish Cinema:** *El Rey Pasmado*, (Imanol Uribe, 1991), 4 p.m., Language House. Sponsored by Maryland Humanities Council. Call 5-6441 for info.

**Entomology Colloquium:** "The Endocrine Regulation of Wing Polymorphism in Insects," Anthony Zera, U. of Nebraska, 4 p.m., 0200 Symons. Call 5-3911 for info.

**Computer Science Colloquium:** "Amadeus Measurement-driven Analysis and Feedback System," Rick Selby, UC Irvine, 4 p.m., 0111 Classroom Building (106). Call 5-2661 for info.

**Horticulture Colloquium:** "In Vitro Tissue Culture Techniques for *Ilex*: Micropropagation and Embryo Rescue," Pam Maddis, 4 p.m., 0128 Holzapfel. Call 5-4374 for info.

**Space Science Seminar:** "The Heliospheric VLF Radio Emissions," R.L. McNutt, Jr., Johns Hopkins U., 4:30 p.m., 1113 Computer/Space Sciences. Call 5-6232 for info.

**Campus Recreation Services,** intramural wrestling weigh-ins, 5-8 p.m., Cole Field House. call 4-7128 for info.

**Open Music Rehearsal,** Guarneri String Quartet reads works by Beethoven and Haydn, 5 p.m., Tawes Recital Hall. Call 5-5548 for info.

**American Heart Association CPR Course,** for adult, child, and infant skills, April 5 and 12, 6-9:30 p.m. Registration required, \$20 fee. Also offered April 6 and 13; April 7 and 14; April 8 and 15. Call 4-8132 for info.\*

### 6 TUESDAY

**Red and White Day,** demonstrate school spirit and support by wearing school colors in honor of National Student Athlete Day.

**Ecology and Evolutionary Biology Seminar:** "Brood Parasitism in Ducks," Mike Sorenson, Smithsonian Conservation Research Center, noon, 1208 Zoo/Psych. Call 5-6943 for info.

**Annual French and Italian Department William Falls Memorial Lecture:** "Ecrire Ailleurs: Marguerite Yourcenar et l'Amerique," Michele Sarde, Georgetown U., 2 p.m., Language House Reception Hall. Call 5-4024 for info.

**Graduate Student Government Meeting,** 3-5 p.m., 1143 Stamp Student Union. Call 4-8630 for info.

**UM Baseball vs. Towson State,** 3 p.m., Shipley Field. Call 4-7122 for info.

**Committee on History and Philosophy of Science Lecture:** "Robust, Ad Hoc, and Exploratory Statistics: Epistemological Dimensions," Frederick Suppe, 4:15-6 p.m., 1407 Chemistry. Call 5-5691 for info.

**National Student Athlete Day Forum,** featuring former student athletes and distinguished guests, 7:30 p.m., Football Complex meeting room. Call 5-4741 for info.

### 7 WEDNESDAY

**Center for Teaching Excellence Conversations About Teaching:** "Politics on Campus II: Does the Curriculum Really Need to Be Transformed?" 12-1:30 p.m., Maryland Room, Marie Mount. Call 5-3154 for info.

**Counseling Center Research and Development Meeting:** "Effects of Acculturation Levels and Sociocultural Variables on the Adjustment Difficulties of Asian Americans and Asian International People," Edward Lai, noon-1 p.m., 0106 Shoemaker. Call 4-7691 for info.

**Molecular and Cell Biology Seminar:** "Multi-Drug Resistance in Cancer," Michael Gottesman, NIH, 12:05 p.m., 1208 Zoo/Psych. Call 5-6991 for info.

**Overeaters Anonymous Meeting,** 1-2 p.m., 3100E Health Center, weekly meeting open to campus community. Call 4-8142 for info.

**UM Baseball vs. Howard,** 2:30p.m., Shipley Field. Call 4-7122 for info.

**Italian Lecture:** "The New Italian Feminism: Theory and Practice," Rebecca West, U. of Chicago, 3 p.m., 0105 Jimenez. Call 5-4024 for info.

**Astronomy Colloquium,** topic TBA, Neil Tyson, Princeton, 4 p.m., 1113 Computer/Space Sciences. Call 5-3001 for info.

**Committee on History and Philosophy of Science Lecture:** "Meta-Analysis," Karen Soeken, UMAB, 4:15-6 p.m., 1407 Chemistry. Call 5-5691 for info.

**Intramural Wrestling Tournament,** April 7-8, 5-10 p.m., Reckord Armory gym. Call 4-7218 for info.

**Women's Studies Lecture:** "But Where is Your Home? Black Feminist Thought as Outsider Within Theorizing," Patricia Hill Collins, U. Cincinnati, 8 p.m., 2203 Art/Soc. Call 5-6877 for info.



Kihei Sasajima's *Mountain Stream* (1954) will be featured in Mark Sandler's Gallery Talk on April 8.

### 8 THURSDAY

**Returning Students' Workshop:** "Multiple Roles," weekly discussion and support group to help women manage a variety of roles, 11 a.m.-noon, 2201 Shoemaker. Call 4-7693 for info.

**Distinguished Lecturer Series:** "Poetry and the Living World," W.S. Merwin, Pulitzer Prize winner, 3:30 p.m., 2203 Art/Soc. Call 5-1478 for info.

**Writers Here and Now,** William Merwin, 3:30 p.m., 2203 Art/Soc. Call 5-3820 for info.

**Meteorology Seminar:** "Diurnal Variations of the Climatic Effects of Aerosols and Greenhouse Gases," George Stenchikov, 3:30 p.m., 2114 Computer and Space Science. Call 5-5392 for info.

**Information Policy in the Electronic Age Seminar:** "Access to Government Information in an Electronic Age," Robert Oakley, Georgetown U., 4 p.m., 1412 New Public Affairs Bldg. Call 5-2033 for info.

**Gallery Talk:** "The Development of the Creative Print Movement in Japan," Mark Sandler, 5 p.m., 2309 Art/Soc. Call 5-2763 for info.

**Reliability Seminar:** "Designed Experiments for Wire Bond Placement in Microelectronic Assemblies," James Creiman, Westinghouse Electric, 5:15-6:15 p.m., 2110 Chemical and Nuclear Engineering. Call 5-3887 for info.

**Fiction Reading,** Severna Park, Maryland science fiction author of *Speaking Dreams*, 7:30 p.m., University Book Center. Call 4-2665 for info.

### 9 FRIDAY

**Geology Seminar:** "Graduate Student Day III," B. Shane, N. Katyl, K. Ratajeski, D. Sarkar, 11a.m., 0103 Hornbake. Call 5-4089 for info.

**Mental Health Lunch 'N' Learn Seminar:** "Seasonal Affective Disorder," Norman Rosenthal, NIMH, 1-2 p.m., 3100E Health Center. Call 4-8106 for info.

**Systems Seminar:** "Machine Learning and Dynamic Programming," Andrew G. Barto, U. of Massachusetts, 2 p.m.,

2168 A.V. Williams. Call 5-6634 for info.

**UM Baseball vs. Wake Forest,** 3 p.m., Shipley Field. Call 4-7122 for info.

**Meteorology Seminar:** "Extended Range Forecasting in a Simple Global Model," Walter Robinson, U. of Illinois, 3 p.m., 2114 Computer and Space Sciences. Coffee and cookies served at 2:30 p.m. Call 5-5392 for info.

### 10 SATURDAY

**UM Baseball vs. Wake Forest,** 2 p.m., Shipley Field. Call 4-7122 for info.

### 11 SUNDAY

**UM Baseball vs. Wake Forest,** 2 p.m., Shipley Field. Call 4-7122 for info.

### 12 MONDAY

**Campus Recreation Services,** intramural horse shoes singles and doubles entries open, 8:30 a.m., 1104 Reckord Armory. Entries close April 19. Call 4-7218 for info.

**Contemporary Spanish Cinema:** *Tristana*, (Luis Buñuel, 1969), 4 p.m., Language House. In Spanish with English subtitles. Sponsored by Maryland Humanities Council. Call 5-6441 for info.

**Entomology Colloquium:** "The Ecological Consequences of Host Plant Choice by the Cottonwood Leaf Beetle, *Chrysomela scripta*," Mark Hardin, 4 p.m., 0200 Symons. Call 5-3911 for info.

**Computer Science Colloquium:** "Model-based User Interface Development Tools," James Foley, Georgia Tech, 4 p.m., 0111 Classroom Building (106). Call 5-2661 for info.

**Horticulture Colloquium:** "Enzyme Activity in Auxin Metabolism and Embryogenesis in Carrot Tissues," Gary Kuleck, USDA, 4 p.m., 0128 Holzapfel. Call 5-4374 for info.

**Space Science Seminar:** "TSMM Flat Crystal Spectrometer Measurements of Coronal Abundances in Solar Active Regions: Variations on the Fip Theme," Julia Saba, Lockheed Solar and Astrophysics Laboratory, 4:30 p.m., 1113 Computer/Space Sciences. Call 5-6232 for info.

**Latin American Studies Center Author Dialogue,** in Spanish, featuring Chilean author José Donoso, about his novel *Casa de Campo*, 5 p.m., 2215 Jimenez. Call 5-6441 for info.

**Art Center Leisure Learning Mini Course:** "Budget Travel to Europe," Paul Finver, American Youth Hostels, today and April 19, 7-8:30 p.m., 1137 Stamp Student Union. \$10 students, \$15 non-students. Call 4-ARTS for info.\*

### 13 TUESDAY

**Ecology and Evolutionary Biology Seminar:** "Homology of Mandibular Muscles Among Vertebrates: Phylogenetic Patterns and Their Ontogenetic Basis," Jaikun Song, noon, 1208Zoo/Psych. Call 5-6884 for info.

**Information Policy in the Electronic Age Seminar:** "Electronic Policy and the Evolution of Networked Information Environment," Paul Evans Peters, Coalition for Networked Information, 4 p.m., 2460 A.V. Williams. Call 5-2033 for info.

**Symphonic Wind Ensemble,** John Wakefield, conductor, 8 p.m., Grand Ballroom, Stamp Student Union, Call 5-5548 for info.

### 14 WEDNESDAY

**Counseling Center Research and Development Meeting:** "The Evolution of Body Image in American Culture," Caren Cooper, noon-1 p.m., 0106 Shoemaker. Call 4-7691 for info.

**Molecular and Cell Biology Seminar:** "Role of Fibronectin and Integrins in Cell Adhesion and Migration," Kenneth Yamada, NIH, 12:05 p.m., 1208 Zoo/Psych. Call 5-6991 for info.

**Water Resources Lecture:** "The Solid-Water Interface: A Common Meeting Ground for Engineers and Chemists," Werner Stumm, Swiss Federal Institute of Technology, 3 p.m., 1202 Engineering. Call 5-6829 for info.

**Astronomy Colloquium:** "The Two Micron All Sky Survey" Susan Kleinmann, U. Mass, 4p.m., 1113 Computer/Space Sciences. Call 5-3001 for info.

## Calendar Guidelines

The OUTLOOK Calendar publishes university-sponsored events, subject to space availability. Preference is given to free, on-campus events. The deadline is two weeks before the Monday of the week in which the event occurs. Mail listings with date, time, title of event, speaker, sponsoring organization, location, fee (if any), and number to call for information to: Calendar Editor, 2101 Turner Lab, or fax to 314-9344. Calendar phone numbers listed as 4-xxxx or 5-xxxx stand for the prefix 314- or 405- respectively. Events are free and open to the public unless noted by an asterisk (\*). For more information, call 405-7339.

