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Wilkes University Hosts 55th Annual Eastern Colleges Science Conference

Wilkes-Barre – Wilkes University recently hosted the 55th Annual Eastern Colleges Science Conference (ECSC), a forum for undergraduate science and engineering students to present their research findings in platform or poster presentations, as well as full-length papers.

“One of the biggest advantages of the ECSC over many of the other student conferences is that it is truly multidisciplinary,” said Dr. Anthony Kapolka III, assistant professor of Math and Computer Science at Wilkes and conference coordinator. “Our conference affords the students an excellent opportunity to see how scientists in other fields approach the world, design experiments, solve problems, and present their results.”

Students who submitted papers for review were Jacklyn Pancrudo and Karen Lagrazon from the College of Mount Saint Vincent (biology paper); Ruth E. Freeburg and Mark Gallo from Niagara University (biology); Kristen A. Yankura from John Carrol University (health sciences); MIDN Stephen M. Long, Dr. George E. Piper, and Dr. Bradley E. Bishop, from the United States Naval Academy (physics); Julie Ann Corcoran, from John Carroll University (physiology); and Katie Jungers, John Carroll University (psychology).

Platform presentations concentrated on astronomy, engineering, computer science, biology, chemistry, psychology, molecular and evolutionary biology, genetics, biochemistry, and physics.

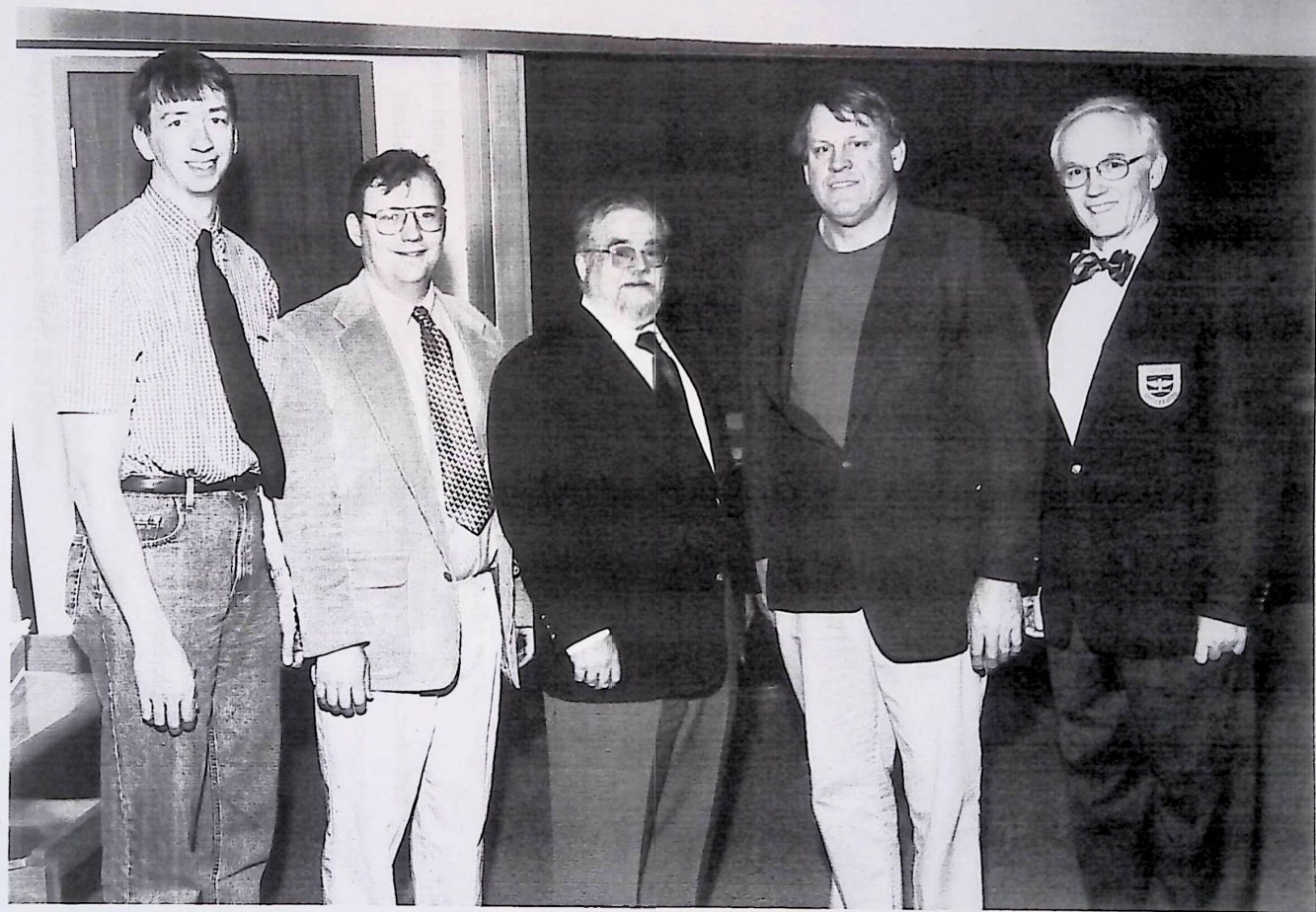
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With 25 active members, the Eastern Colleges Science Conference is an association of primarily undergraduate college and universities. Its main function is to stimulate interest in undergraduate research in the sciences and related fields and to provide a lively forum for the presentation of research papers.

Photo Left to Right:

Matthew J. Zukoski, of Forty Fort, visiting assistant professor, Math and Computer Sciences, Wilkes; Dr. Anthony Kapolka III, of Dallas, assistant professor, Math and Computer Science, Wilkes, and conference coordinator; Dr. Arthur H. Kibbe, of Clarks Summit, chairperson and professor, Pharmaceutical Sciences, Wilkes, conference steering committee member and keynote speaker; Lance Evans, Manhattan College, and president, ECSC; Dr. Christopher N. Breiseth, president, Wilkes University

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An immersion course fit for youth scholars

■ A program at the Discovery Center seeks 'to get more kids into science and technology.'

By ASHLEIGH GRAF
Of The Morning Call

At the Discovery Center for Science and Technology, David Catalogna walked briskly up to the front table in a small room tucked away from the shrill voices of children.

He began fiddling with the white Apple laptop and projector that rested just within reach. As the computer loaded the Web site he had developed in the last week, a look of concern crossed his face: most of the site was blank.

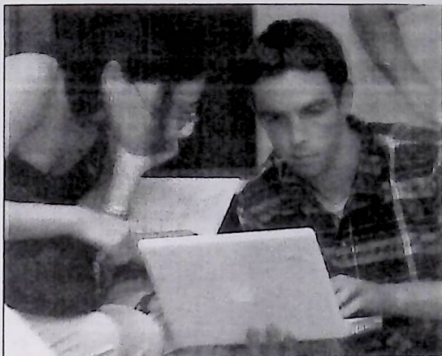
"I don't know what's up with these pictures right now," the high school junior said, "but they were working, uh, about 10 minutes ago."

Though some of the images could not be seen, Catalogna and his partner Jon Galarza were able to show Friday afternoon a movie they filmed as part of their participation in the Information and Communication Technologies Youth Scholars Program.

These teenagers and 17 other Freedom High School students are part of the two-year pilot course funded by a \$446,000 grant from the Lucent Technologies Foundation and Agere Systems.

Since the program is an extended one, time commitment was a primary factor when choosing students to participate, teacher Wayne Marsh said. And since the course is career-oriented, the application process also inquired about the students' plans.

In the initial week-long sequence, Terry Boulton from Lehigh University and Matt Zukowski from Wilkes University familiarized the students with computer programs such as Adobe Photoshop and OneShot — a new camera that is not



ARTURO FERNANDEZ / The Morning Call

Heather Capuano (left), a Freedom High School junior, watches Lehigh University graduate student Tim McLaughlin finish work on a Web page Friday during a news conference on the Discovery Center's youth scholars program.

yet in wide circulation.

As the course progresses, the students will become more adept at using the technology they are learning. Eventually, they are expected to take that knowledge into local businesses.

To learn more about what the students can do, representatives from St. Luke's Hospital and JustBorn also viewed the presentations, Discovery Center's executive director Lin Erickson said.

son said.

"The whole goal of this initiative is to get more kids into science and technology careers," Erickson said.

When the students go into area businesses, they will be expected to develop Web sites and add new characteristics to sites that may already exist. Marsh hopes those same companies will be

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inclined to offer the teenagers internships after graduation.

Cherry Woodburn, the Discovery Center's director of information and communications technology initiatives, takes that plan one step further. She envisions the students learning about the opportunities available in the Lehigh Valley and thus deciding to stay here as adults.

"We've got to make sure that we

have that workforce in the future," Erickson agreed.

Though there is a great deal of excitement within the center, getting companies to respond has been a bit more daunting, said Karen Knecht, one of the center's educators who works with the Youth Scholars program.

Knecht said many businesses do not have a person to mentor the students — a requirement for the course. But the length of time involved has appealed to some, she said.

"I think knowing they don't have to be committed for two years is a little

helpful," Knecht said.

While all of the grants Lucent makes are geared toward helping young people learn about high technology, the Discovery Center program is different from the 18 others the company is sponsoring.

Unlike the others, the Discovery Center program focuses mainly on ca-

reers, said Robert West, of Informal Learning Experiences, a Washington, D.C.-based company that is overseeing the program. He said the Youth Scholars program helps the students see what careers are available.

"It's so they don't close their options too early," West said.

Matthew J. Zukoski



Fall 2001	ED 581 - Visual Basic Programming
Spring 2001	CS 327 A - Compiler Design
	CS 298 A - Multimedia
Fall 2000	CS 115 D - Computers and Applications
	CS 125 G - Computer Science I
	ED 583 A - Courseware Design and Construction

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Research and Education:

I am currently working towards my Ph.D. in Computer Science at Lehigh University in the vision and software technology (VAST) laboratory in room 514 of Packard Lab. The lab is headed by Professor Terence Boult.

My research area is medical imaging. In particular I am working on the problem of image registration. I am working on my thesis with advisor Terry Boult. Our idea is to augment the algorithm of mutual information maximization with contour modeling to create a robust registration method for medical images. We will use this technique as a means of performing medical image compression.

I have been working at the Hershey Medical Center (Hershey, PA) as a researcher in the Department of Radiology since October, 1997. On November 28, 1999, I presented a paper titled "A Comprehensive Comparison of Lossy Medical Image Compression Methods" at the RSNA Conference in Chicago, Illinois. The paper was co-authored by T. Iyriboz, S. Sablak, Kim Addis, and P. Stage based on our work at the Hershey Medical Center. In 1998 I presented three projects at the 1998 Radiologic Society of North America (RSNA) Conference held in Chicago, Illinois from November 29 through December 4, 1998. The projects were:

- A low-cost teleradiology system using Java (co-authored with T. Iyriboz and K. Hopper)
- A Quantitative Evaluation of Medical Image Digitizers (co-authored with T. Iyriboz, T. Boult, and K. Hopper)
- A Novel Approach to Medical Image Registration (co-authored with T. Iyriboz, T. Boult, and K. Hopper)

I also have an interest in medical image compression. I presented a paper titled *A Comparison of Wavelet and Joint Photographic Experts Group Lossy Compression Methods Applied to Medical Images* at the Society for Computer Applications in Radiology (SCAR) 99 Conference in Houston, TX on May 7, 1999.

My past degrees are:

- M.S. Computer Science, Virginia Tech, 1990
- B.S. Electrical Engineering, Wilkes University, 1986

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