

Open House and Dedication
ENGINEERING AND COMPUTING CENTER
St. Cloud State University
St. Cloud, Minnesota
September 12, 1986

Overview

St. Cloud State University's new Engineering and Computing Center is the product of a \$3 million remodeling project started in the spring of 1983. Originally the Gray Campus Laboratory School, the building is now home to the departments of Electrical Engineering, Computer Science and Mathematics and Statistics, as well as Academic Computer Services and the Child Care Center.

In the past three years, the interior of the building has been completely renovated and a new office wing has been added. Architect for the project was Pauly & Olsen Associates/Traynor, Hermanson & Hahn, Ltd., of St. Cloud. Donlar Construction Company of St. Paul was the general contractor. The floor plan of the remodeled building is vaguely familiar to those who knew the laboratory school, but the equipment is not: The future is on display.

The development of the Engineering and Computing Center reflects the partnership that has developed between the university and private industry. That partnership is clearly indicated in the list of equipment donated or discounted for use in the center by private industry. Worth a total of \$1 million, that equipment is evidence of the commitment of the private sector to the success of SGSU's venture into education for high technology careers. Less visible but just as important is the counsel given SCSU through the Industry Advisory Council by representatives of Minnesota industries on the leading edge of technological change.



Schedule of activities

- Noon-4 p.m. Conducted tours of building
(tours begin from west foyer)
Equipment demonstrations
Hospitality room (123)
- 4-5 p.m. Dedication (Auditorium)
Welcome and introductions
Speaker
Closing remarks

President Brendan J. McDonald



"In the new Engineering and Computing Center, St. Cloud State University has the product of a remarkable partnership between the state and private industry. The state's recognition of the need for leadership in the fields of engineering and computer science, combined with the assistance and advice given to SCSU by leaders in industry, have produced in one building the faculty and equipment needed to help prepare students for careers in new technologies that are transforming our society."

Vice President Stephen L. Weber Academic Affairs



"Not only is the Engineering and Computing Center the most significant capital undertaking at SCSU in recent years, it is a harbinger of directions for universities in the United States. The renovation of the Campus Laboratory School is an example of how universities respond to changing societal needs. The university has reconfigured itself in response to a demand by society for the training and education of engineers, and that type of reconfiguring goes on constantly. Universities in the United States are finding themselves more and more in the position of renovating existing structures instead of building new ones, and that—along with the function of the ECC itself—makes the building doubly significant."

Dean Louise Johnson College of Science and Technology



"The opening of the Engineering and Computing Center provides space for three growing and inter-related departments: Computer Science, Electrical Engineering, and Mathematics and Statistics. The building makes it possible to have better utilization of the advancements in electrical engineering and computer science, and better use of technology in the mathematics and statistics classrooms. The equipment available to students in the ECC is truly state-of-the-art in an environment where it can be appreciated. Rapid change in these fields will require a continuing partnership between the state and the private sector."

Electrical Engineering

The Engineering and Computing Center is the only home that the Department of Electrical Engineering has known at St. Cloud State University. Created in 1983, the electrical engineering program moved into the building before the renovation was started and made adjustments as work went on around it.

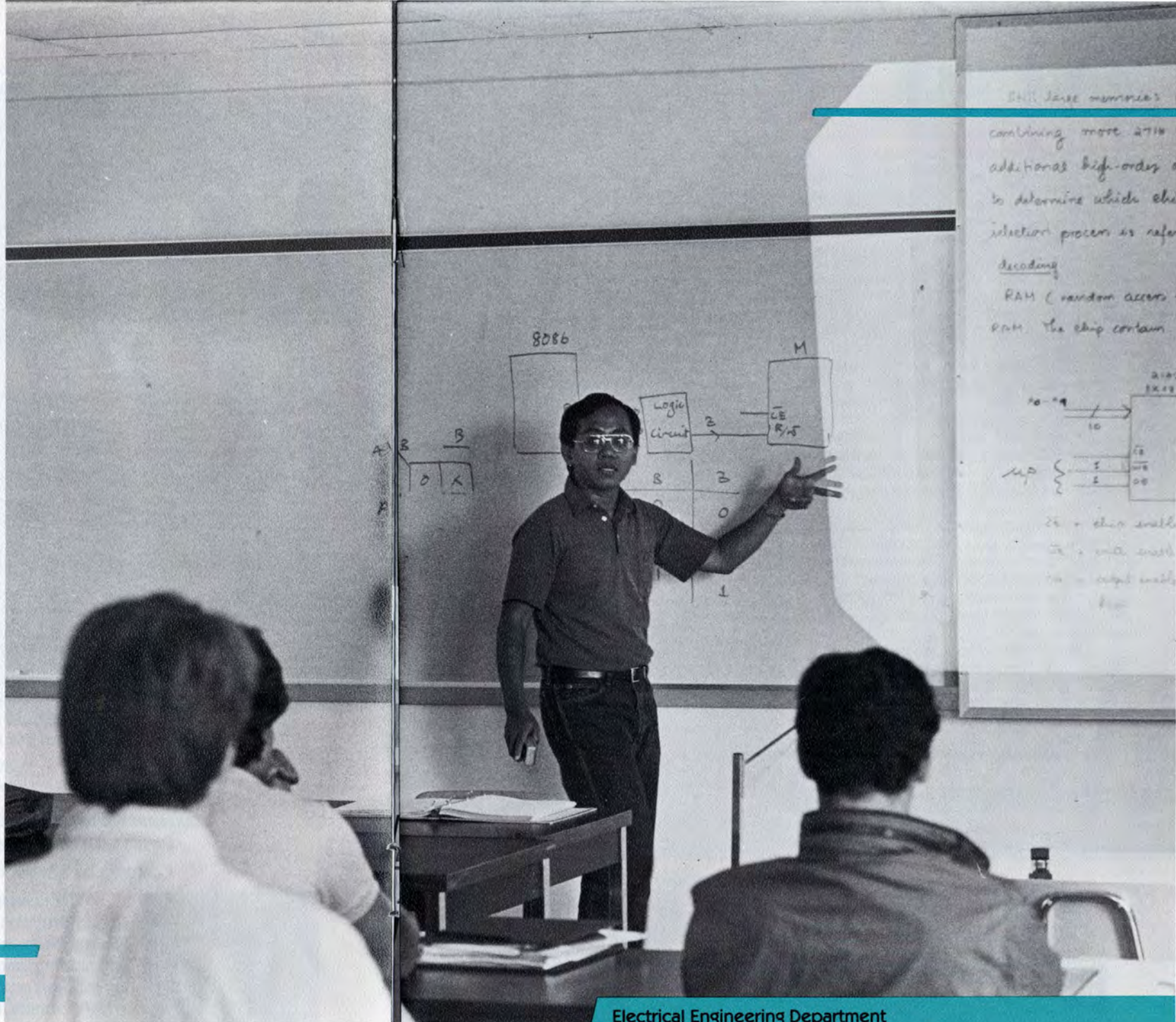
Dr. J. Michael Heneghan, who came to SCSU from Portland State University in Oregon, is the new chairperson of the department. Heneghan, who holds master's and doctorate degrees in electrical engineering from the University of Washington in Seattle, regards the center as a prime indicator of things to come at SCSU. "It's an excellent facility, and the state and private industry have done a fine job in working together to get the program housed and equipped," he has observed.

Authorized by the Minnesota Legislature in 1983, the engineering program graduated four students this past year, and currently has between 60 and 70 majors admitted. About 100 students have indicated interest in being admitted to the program.

Electrical engineering occupies the second floor of the center, an area partly original to the building and partly new construction. In its seven laboratories and two classrooms, electrical engineering majors are learning logic and microprocessor-based system design, digital project design, assembly language and system programming and related technologies.

Dr. Bruce Ellis, professor of electrical engineering, was instrumental in establishing the program, which he directed during its first three years. He and his colleagues are pleased with the excellence of the facilities. His comment:

"Obviously, we can't compare to Stanford and the other giants in the field. But if you look at institutions of comparable size and mission, we're in the forefront here."



Electrical Engineering Department

Chairperson J. Michael Heneghan, Ph.D., University of Washington
Bruce Ellis, Ph.D., University of Minnesota
Robert Higgins, Ph.D., University of Missouri
Sura Lekhakul, Ph.D., University of Kentucky
Kevin Miller, Ph.D., University of Wisconsin-Madison
Aswartha Narayana, Ph.D., University of Massachusetts

Computer Science

The first floor of the Engineering and Computing Center houses the Computer Science Department and the Mathematics and Statistics Department. The Computer Science Department is one of the newest at St. Cloud State University, created in 1986 when the Department of Mathematics and Computer Science was divided.

Computer science plays an important role in the technological revolution. While electrical engineering concentrates on the design and construction of the machines that power today's information society, computer science graduates are the people who design the software that makes the machines work.

The department currently has about 80 majors, and about 470 more students have indicated an interest in majoring, according to Dr. Ralph Carr, acting department chairperson. The program is growing, and the space available to it in the building is crucial to that growth.

"There is more classroom space here, and more space to store equipment, which is welcome," Carr has noted. "We have three new teaching laboratories for computer science: one for networking, one for operating systems and one for computer architecture."

In addition, the offices, laboratories and classrooms all have access to a system called Ethernet, a coaxial cable that allows occupants of the building to connect to any computer network available.



Computer Science Department

Acting Chairperson Ralph Carr, Ph.D., University of Wisconsin-Madison
Dorelyn Anderson, B.S., St. Cloud State University
Shen-Then Chang, Ph.D., Oklahoma State University
Paul Ernst (fall 1986 only), B.S., St. Cloud State University
Theresia Fisher, M.S., North Dakota State University
Larry Grover, Ph.D., Michigan State University
Henry Hebert (on leave 1986-87), M.A., Louisiana State University
James W. Johnson, Ph.D., University of Northern Colorado
Monte Johnson, M.A., University of South Dakota
Robert Johnson (on leave 1986-87), Ph.D., City University of New York
Wen-Yu Lu, M.S., Ohio State University
Roger Meyer, M.S., North Dakota State University
Kenneth Quilty, M.A., State University of New York-Binghamton
Mohammad Saeed, Ph.D., University of Nebraska
Annette Schoenberger (starting spring 1987), M.S., Illinois State University
Kevin Stanek, B.S., St. Cloud State University



Mathematics and Statistics

Although the Department of Mathematics and Statistics has been separated from the newly-formed Department of Computer Science, its move into the new Engineering and Computing Center is appropriate.

The two programs overlap in a number of areas, observes Dr. Kent Carlson, former chairperson of the combined department. "We have to maintain constant contact with the Computer Science Department," he has pointed out. "There are common interests and goals. We share the same office complex, we share support personnel and there are some faculty members who cross over departmental lines."

Instead of being scattered throughout several buildings, mathematics and statistics faculty members now have offices in a central area. That means more than just better administration, Carlson says. He looks forward to a better exchange of ideas, more opportunities for the things that make education work, now that faculty members have better access to each other for sharing information.

The wiring of the classrooms with Ethernet benefits the 111 students currently majoring in mathematics and statistics, for mathematics is a discipline that makes good use of computers in the classroom.



Mathematics and Statistics Department

Chairperson Gail Earles, M.S., Education, Illinois State University;
M.S., Mathematics, Rutgers University
Mohammed Bahauddin, Ph.D., New Mexico State University
Howard Bird, Ph.D., Kansas State University
Allen Brink, Ed.D., University of Northern Colorado
Gary Buls, M.S., Iowa State University
Dee Dee Bruyere, M.S., St. Cloud State University
Kent Carlson, Ph.D., Montana State University
Janis Cimperman, M.S., St. Cloud State University
Alyn Dull, Ed.D., University of South Dakota
Robert Earles, Ed.D., University of Northern Colorado
Charles Ernst, Ph.D., Ohio State University
Patricia Ernst, M.S., St. Cloud State University
James Harper, Ph.D., University of Oregon-Eugene
Mary Hebert (on leave 1986-87), M.A., University of Oregon
Miles Hubbard, B.S., St. Cloud State University
Sandra Johnson, M.Ed., University of North Dakota
Ravindra Kalia, Ph.D., Lucknow University, India
Sandra Keith, Ph.D., University of Pennsylvania
James Kepner, Ph.D., University of Iowa
David Lahren, D.A., University of Northern Colorado
Vernon Leitch, Ed.D., University of Northern Colorado
Leo Leung, D.A., Idaho State University
Joseph May, M.A., Mankato State University
Donald Miller, Ph.D., Florida State University
David Robinson, Ph.D., University of Iowa
Kathy Sufka, B.S., St. Cloud State University
Tamara Ulferts, B.S., St. Cloud State University
Everett Van Akin, Ph.D., University of Minnesota
Howard Wachtel, M.A., University of Wisconsin-Madison



Academic Computer Services

Academic Computer Services provides access to the building's five Vax mini-computers and three MicroVax computers for students whose coursework requires it. Those students come not only from the departments of electrical engineering and computer science, but also from departments ranging from economics and interdisciplinary studies to management and finance and quantitative methods and information systems.

The main service area is located in the large room called the Beehive, formerly the gymnasium of the Campus Laboratory School. The polished floors remain, but the clicking of keyboards has replaced the squeaking of sneakers.

A total of 160 work stations is provided in the Beehive. Later this fall, a nearby room with 45 to 50 more work stations will go into operation. In addition, there is room in the Beehive for 40 to 80 more work stations. Those additional terminals will be added when needed, according to Randy Kolb, director of Academic Computer Services.

The completion of the Engineering and Computing Center expands and improves the operation of Academic Computer Services. In 1975, Academic Computer Services was separated from Administrative Computer Services. One small room was used for academic computing. Then, until 1983, its facilities were confined to the basement of Brown Hall. After moving to its present location, the operation had to continue functioning during the remodeling of the building. The continuous access that the service provides to students was interrupted only once, over a weekend.

"This major expansion accommodates the growth that has occurred in academic computing in ten years," Kolb commented. "The newly-remodeled building demonstrates a commitment to continued growth."



Staff members, Academic Computer Services, 1986-87

Director Randy Kolb
Jim Christensen
Karen Ewing
Larry Schafer

Carl Schmitt
Diane Schmitt
Gordon Schmitt
Dave Wogen

Equipment donations and discounts

Equipping the laboratories of the Engineering and Computing Center would not have been possible without the donations and discounts granted to St. Cloud State University by the private sector. Since the establishment of SCSU's electrical engineering program, six high technology firms have contributed to the program and one has contributed to the Department of Computer Science. They are:

- Digital Equipment Corporation, which granted discounts totaling more than \$332,000 on the purchase of numerous pieces of equipment priced at \$730,000.
- Intel Corporation, which has donated equipment worth \$337,000, including eight work stations and numerous peripherals for engineering laboratories.
- Northern Telecom, Inc., which has donated various pieces of equipment worth about \$20,000.
- Tektronix, Inc., which has granted discounts of more than \$146,000 on the purchase of equipment.
- CPT Corporation, which gave the university five word processing work stations worth \$60,000 and two Unix computers worth \$60,000.
- Sperry Corporation, which has donated to the State University System the Explorer Artificial Intelligence system, worth \$127,000.
- Cray Research Foundation, an arm of Cray Research, Inc., which awarded a grant of \$35,000 to the Department of Computer Science. The grant will allow the department to purchase work stations and lease a long-distance telephone line that will connect the stations to a supercomputer at the University of Minnesota.



Open House and Dedication Steering Committee

Alyn Dull, Mathematics and Statistics
Bruce Ellis, Electrical Engineering
Larry Grover, Computer Science
Randy Kolb, Academic Computer Services
Louise Johnson, Dean, College of Science and Technology
Ray Rowland, Information Services

Appreciation to members of Vanguard for greeting and hosting services and to department student groups for tour guide services.

Appreciation to faculty members for equipment demonstrations.

This booklet prepared by SCSU Information Services.

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