

"Target: Science and Engineering" Scores Bull's-eye

by Barbara Grannis

"Target: Science and Engineering" (TSE) is once again right on target at Fermilab this summer. This unique internship program, which combines research, hands-on experience, and instruction in physics, is now in its seventh year at the Lab. Twenty-six students chosen from among the best and brightest in their high schools in Chicago and Aurora were enrolled in the 1986 session. For six weeks they were plunged into the world of science - and the technology which supports science - and got a clear picture of what a career in a scientific discipline may be like.



A family portrait of this year's "Target: Science and Engineering" students and their advisors.

The program gets underway each January when program administrators Lauta Joyner and Dianne Engram mail program announcements to 40 high schools in the Chicago metropolitan area and in Aurora. Nominations are also sought through IIT's "Early Identification Program; Math Counts," a Chicago Urban League program; and an Aurora Urban League program, "Tomorrow's Scientists, Technicians, and Managers." These efforts resulted in about 90 applications this spring, some from TSE graduates who participated in the 1985 program as sophomores and who have now completed their junior year. Strong interest and potential in math and science are major criteria for selection.

The students received a salary for the apprenticeship part of the program and a stipend for their research endeavors. In addition, TSE provided a bus to transport the students to and from downtown Chicago.

TSE students spent half of their day working side by side with a Fermilab staff member. Most of these staffers volunteer for their supervisory duties, assisting the program year after year. The students were stationed throughout the Lab and worked in several different departments in a wide variety of capacities.

David Austin (*Safety/Tech Suppt*) had two students under his wing. Gene Dentino supervised four others who worked as operators in the Computing Department. Over in the Fermilab Village, Finley Markley had a whole crew of summer program participants busy at work. Supervising the group was Ernest Quigel, who was working with the Illinois Research Corridor Summer Job Program for High School Teachers. Three undergraduate students represented the summer college program organized by the Fermilab Equal Opportunity Office. Four TSE students completed the group, which made a correlation of the five different physical properties of thin film of reacting epoxy resin systems. The group measured the viscosity of an epoxy-resin chemical mixture, the point at which the liquid becomes a solid, the adhesive strength of various mixtures, and so on.

According to Lauta Joyner, "The supervisors are a very dedicated group. They really want to see students, particularly minority students, get exposed to the different aspects of science. They recognize the importance of nurturing these young people and are proud of the contribution they make to the students' progress."

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Blood Drive Sets Lab Record

At the blood drive held on July 29, Fermilab staff members set a new Lab mark for blood donors. One hundred and twenty-seven people in all gave blood, many of them responding to a special request for types O+ and O- blood conveyed on table cards set out in the cafeteria by the Medical Office, and broadcast Lab-wide on the video monitors by Accelerator Controls at the request of Personnel.

The Aurora Blood Bank and the Fermilab Medical Office express their sincere gratitude to everyone who gave so generously.

!!!PARTY!!!

By decree of the Director, a Lab-wide party for "the Lab's superb staff" will occur on September 19, 1986, in front of Wilson Hall, between the hours of 3:00 p.m. and 6:00 p.m. The party celebrates (among other things) the completion of the TeV II upgrades and accelerator repairs, and the Lab's rededication "to using these magnificent facilities to advance science." An official proclamation accompanies this issue of *FermiNews*. Food and refreshments will be served, therefore the cafeteria will close at 1:30 p.m. on the 19th, and evening meals will not be served. The Users Center will open at 7:00 p.m.

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The other half of the students' day was spent developing an original research project which tied in with their apprenticeship work. They worked singly or in groups on projects which ranged from production of an optical communicator or a computered monitored solar collector, to studying the scientific uses of photography.

Three high school teachers were on hand to provide the physics background and guidance for the projects. Each teacher had his own area of expertise - Allan Etbach (Naperville Central High School) in physics, Gregory Cichoracki (Carl Sandburg High School) in computer programming, and Muhammad Fahim (Austin Community Academy) in electronics.

One project - lasers and holography - was particularly popular among the students. Allan Etbach was delighted with the depth of the students' exposure in this field. "It's possibly greater than students could attain anywhere else in the country," he noted. "These students are getting an opportunity they could never get in the schools, where time and resources are more scarce - especially in some of the inner-city schools."

The culmination of the TSE program was a luncheon and "graduation" ceremony where students demonstrated their research projects to their peers, families, supervisors, and teachers. They returned to their schools with a summer of achievement under their belts, having taken the first steps toward a career in science.

The 1986 TSE program was co-sponsored by the Friends of Fermilab Association, and funded by grants from Fermilab, the U.S. Department of Energy, The Joyce Foundation, and the Borg-Warner Foundation.

Pioneer Cemetery A Lasting Link to the Past

Fermilab has always kept one eye on history while working toward the future. The treasure trove of American-Indian artifacts discovered on site, the original farmhouses moved to the Village and maintained for housing, and the original barns still in use at various locations around the Lab are all a visible and valued part of the area's history.

Not quite as visible, but perhaps most intriguing of all, is the Pioneer Cemetery located on Batavia Road just west of the Meson Detector Building. The cemetery marks the final rest for perhaps as many as 40 area pioneers. Of these, 18 burial sites are still identifiable, the earliest dating back to 1839.

September 24 marks the 14th anniversary of a ceremony held to re-dedicate the Pioneer Cemetery grave of General Thompson Meade, who, as a Lieutenant Colonel, commanded the New York State Militia's 17th Regiment in the War of 1812. Early in October of 1812, Lt. Col. Mead and his 400 troops engaged British troops and their American-Indian allies in an "intense battle" fought on both sides of the Niagara River at Queenston Heights in upper New York state. Despite the defeat of his troops, records of the period indicate Mead "behaved in battle with great coolness and determination." Some time later, Mead was given the title of General in the New York State Militia. General Mead returned to a farm near Batavia to be near his son, Dr. Thompson Mead, Jr.

The General died on March 31, 1851, at the age of 77, and is buried next to his wife, Marian, and three of their grandchildren.

The re-dedication ceremony was conducted by the Kane County Council of the Veterans of Foreign Wars and featured speeches by various local politicians and the area's unofficial historian, Augie Mier, who, together with local resident Ernest Lundine, rescued the cemetery from ruin and obscurity. A bronze plaque, a new flag, and a new flag pole were donated by the VFW; all three still grace the Pioneer Cemetery, a place of history, contemplation, and counterpoint.

Material for this article came from Harold Johnson of Geneva, Neil Olson of the Purchasing Dept., and the September 21, 1972, issue of The Village Crier, FermiNews' predecessor.

Number of people who have barreled over Niagara Falls and lived: 7
- from *Harper's Index*

Margaret Pearson Named to Governor's Corridor Council

Margaret Pearson, Manager of Fermilab's Public Information Office, has been named the Corridor Group's representative to the newly developed Governor's Corridor Council for the Illinois Research and Development Corridor Area.

[The Corridor Group draws its membership from the R&D companies and organizations located along or near I-5, the Illinois Research Corridor, and sponsors science-intensive outreach program such as the INTECH competition for young scientists and engineers.]

The term "Corridor Council" refers to a group of area representatives structured to implement a development strategy for a particular corridor of opportunity.

(From Exchange, the newsletter of the Corridor Group.)

"Networkshop" to Delve into Networking Questions

The Fermilab Computing Department and the Computer Coordinating Committee are sponsoring a two-day Workshop on Networking to be held at Fermilab on Thursday and Friday, October 23 and 24, 1986.

The workshop will cover local networking at Fermilab, as well as wide-area networking throughout the U.S. and overseas. Examples of the use of networking by specific collaborations will be presented. Plans for the future will be discussed.

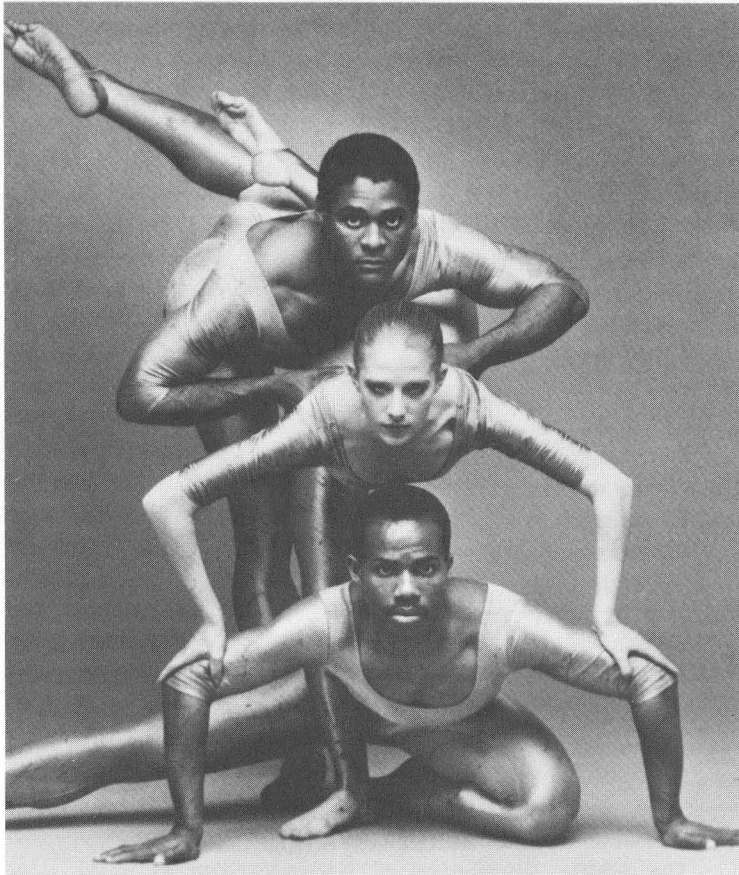
Interested parties should mark these dates on their calendars. An agenda and registration card will be sent in early September. For more information contact Phyllis Hale in the Fermilab Users Office, WH 1E, ext. 3111.

In the Library

The Fermilab Library (Wilson Hall, 3rd floor crossover) has one set of transparencies from the XXIII International Conference on High Energy Physics, held at Berkeley, California, on July 16 - 23, 1986. These transparencies are available for photocopying.

"Scientists Wait Out Political Maneuvering over Fate of the \$6-Billion Super Collider" by David L. Wheeler is in the August 13, 1986, edition of *The Chronicle of Higher Education*.

Arts Series: Choreographers' Showcase Returns to Lab in September



The Joseph Holmes Dance Theater returns to Fermilab on September 27.

Fermilab's annual Choreographer's Showcase is as rich and varied as the Chicago dance community itself. This year's event features exceptional new talent as well as some familiar faces who have delighted our audiences in the past. Join us at 8:00 p.m. on Saturday, September 27, 1986, in Ramsey Auditorium for a sampling of the finest ballet, modern, ethnic, and jazz dance our city has to offer.

Classical ballerina Aneva Stout trained in Chicago under Elizabeth Boitsov, a former Bolshoi Ballet dancer, and is currently studying in New York City. At Fermilab, Ms. Stout will perform solo selections from "Les Sylphides" and "Swan Lake."

Modern dancers Amy Osgood and Kate Kuper return to Fermilab to perform the duet "Curio Musica," a "new, good-humored collaboration," which they premiered in the spring of 1986. Also returning is the Joseph Holmes Dance Theater who will perform "Turning Tides," a new piece by artistic director Randy Duncan. The troupe will also dance selections from "Aretha," a "sassy and coy" tribute to Aretha Franklin.

Finally, we welcome the dancers of the Katherine Dunham Center for the Performing Arts in East St. Louis. This 12-member ensemble will perform a Haitian ritual dance and "Reflections of Katherine Dunham." "Reflections" features the Dunham technique, a unique blend of classic and modern dance based on primitive rhythms.

Admission to the Choreographers' Showcase is \$6.00; and tickets are available at the Information Desk in the Wilson Hall Atrium, ext. 3353, from 10:00 a.m. to noon, and 1:00 p.m. 'til 4:00 p.m. weekdays. Please make reservations promptly, as the Showcase is a perennial sell-out. Phone reservations are held for five days awaiting payment.

- Jane Green

First Round of Employee Conservation Program Awards Presented

Ingenuity paid on July 31 when the first group of winners in Fermilab's Employee Conservation Suggestion Awards Program (ECSAP) picked up their letters of congratulation from the Director, and their cash awards of \$50.00 per suggestion, at a special awards luncheon held in their honor.

The program, dreamed up by Bill Riches, Fermilab Energy Management Coordinator, and sanctioned by the Directorate and DOE, solicits Labsters for their suggestions/designs of methods/devices intended to conserve resources at the Laboratory.

Arthur Skraboly, Ernest Villegas, and Jeffrey Western, all of the Research Division, collaborated on "Toroid Using a Hybrid coil." Robert Kubinski of Tech Support won for his "System to Minimize or Eliminate Overcooling and Overheating of Village Lab Buildings." Sijan Qian, Accelerator Theory, walked away with honors for his "Lighting Control for the East Cross-Gallery," and Edward Mayer of the Accelerator Division collected a triple award for "Lighting Control, Booster Tunnel," "Lighting Energy Reduction, Linac Gallery," and "Lower Domestic Hot Water Temperatures in Cross-Gallery Restrooms."

ECSAP is an on-going program. To obtain entry forms and complete details, contact the Energy Management Coordination Office, ext. 3779, MS 119, or the Safety Section secretary, WH 7E.



From left, Director Leon Lederman, ECSAP program administrator Bill Riches, ECSAP winners Ernie Villegas, Jeff Western, Art Skraboly, Robert Kubinski, Sijan Qian, and Ed Mayer, and Associate Director Bruce Chrisman are all smiles following presentation of the first ECSAP awards.

Extracurricular Activities

Activities Office Reminder

Recreation Facility memberships expire on September 30, 1986. You may renew your membership for the coming season beginning on September 8, 1986. For more information, contact Hellen McCulloch, ext. 3126.

"Argonne Pioneers" Plan First Reunion

An "Argonne Pioneers Club" is being formed, and organizers have arranged a special kick-off event for people who were Argonne National Laboratory employees between the years 1942 and 1957.

The first reunion will be held on Sunday, October 12, 1986, at 5 p.m. at the Orland Chateau, 14500 LaGrange Rd. in Orland Park. A per-person (spouses are welcome) charge of \$16.00 includes meal, tax, tip, and wine at your table. A cash bar will also be available.

Registration deadline is October 3. Fermilab employees who formerly worked at Argonne and wish to attend the reunion are asked to pick up registration forms from the Fermilab Publications Office, WH 3E, and send the forms, together with a check payable to Argonne Pioneers Reunion, to P.O. Box 8326, Argonne, IL, 60439. Inquiries can be directed to Art Lindberg at Argonne extension 7314.

Film Society

On Friday, September 12, 1986, the Fermilab Film Society will present *Careful, He Might Hear You*, a "brilliantly acted and exquisitely photographed film [which] won eight Australian Film Awards, including Best Film, Best Director, and Best Actress. It is the emotionally charged story of a custody struggle over a six-year-old boy." Showtime is 8 p.m. in Ramsey Auditorium. Admission is \$2.00 for adults, \$.50 for children. Tickets are available at the door.

Art Institute Offers Courses at Lab

The School of the Art Institute Extension Program offers courses to adults who wish to attend the School but can do so more conveniently at a suburban extension site. The courses listed below are held at Kuhn Bar in the Village:

Watercolor (Section I): Saturdays, 9:30 a.m. - 4:00 p.m., Sept. 20 - Oct. 25. Watercolor (Section II): Saturdays, 9:30 a.m. - 4:00 p.m., Nov. 1 - Dec. 6.

Life Drawing/The Portrait: Thursdays, 9:30 a.m. - 4:00 p.m., Sept. 25 - Oct. 23.

Color Workshop: Thursdays, 9:30 a.m. - 4:00 p.m., Oct. 30 - Dec. 4.

Off-Loom Weaving (Section I): Tuesdays, 9:30 a.m. - 4:00 p.m., Sept. 23 - Oct. 21. Off-Loom Weaving (Section II): Tuesdays, 9:30 a.m. - 4:00 p.m., Oct. 28 - Nov. 25.

Registration is open until classes commence. For information and/or a catalog, call (312) 443-3777. Scholarships are available.

Congratulations to:

Lynn and Robert (*Accel/Booster*) Scala on the birth of Kristine Marie, who joined the population at 2:30 p.m. on July 25, 1986. Kristine Marie weighed 6 lbs., 6 oz., was 21 in. long, and was welcomed home by big sister Tracy and big brother Jason.

Maria and Jose (*CDF*) Vignoni on the birth of Veronica who arrived on August 5, 1986, at Copley Memorial Hospital. Veronica weighed 7 lbs. and was 47 centimeters long. She was welcomed home by Mariana and Alejandro, big sister and big brother respectively.

Carol and Ian (*Physics Dept.*) Leedom on the birth of Vanessa Frances, born August 9, 1986, at Delnor Hospital. Vanessa weighed 8 lbs., 2 oz., and was 21 in. long. She is the Leedom's first child.

Percentage of Americans who say they were told the facts of life by their mother: **21**
By their father: **5**
Percentage of children born in 1961 who were firstborns: **25.8**
Percentage today: **43** - from *Harper's Index*

Benefits Note:

It is that time of year again when employees have an opportunity to elect the Connecticut General Medical Plan or a Health Maintenance Organization Plan (HMO). Information will be sent to your mail station outlining plan provisions and costs. Please review it with other members of your family.

The HMO representatives are scheduled to meet with employees in the Auditorium in Monday, September 15, 1986, at 2:00 p.m., 4:00 p.m., and 7:00 p.m., and on Tuesday, September 16, at 8:00 a.m., 10:00 a.m., and 1:00 p.m. If you are considering an HMO, you ought to attend one of these meetings. Spouses are welcome. Between now and then, watch for information in the mail and posted near the Wilson Hall elevators. - *Paula Cashin*

U.S. spending on health care in 1960 expressed as a percentage of the gross national product: **5.3**
Today: **10.6**
Percentage of Americans' disposable income spent on insurance premiums: **11.1**
- from *Harper's Index*

Classified Ads Deadlines

Deadline	Issue
9/23	10/3
11/4	11/14
12/2	12/11

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