

Fermilab Helps Students Scout Career in Computing

Some of them plan to make computing a career. Some of them are curious. And some of them, at first, just want to get out of the house. Whatever their motivation, the high-school students who participate in the Explorer Program at Fermilab come away with a working knowledge of computers that would be hard to obtain anywhere else.

The program began when a Boy Scout executive wrote to Fermilab seeking Lab sponsorship of an Explorer Post. The request was forwarded to Lauta Joyner of the Equal Employment Opportunity Office who enlisted the aid of Merle Haldeman (*RD/CDF*), who in turn contacted George Wyatt (*RD/EE*), who said he knew all about the request because he was the one who'd suggested it to the Scouts in the first place. As a result, George, Bill Higgins (*Exp. Area/Ops.*) and Art Kramer (*Compt.*), have spent the last five years introducing groups of high schoolers, freshman through senior, to the intricacies of computing. The students are sponsored by the co-ed Career Interest Explorer Posts 1203 and 1204.

Over 100 students enrolled in the program five years ago. The 18 students in this year's group con-

vene at Fermilab on Tuesday evenings from 7:00 p.m. to 9:00 p.m., 50 weeks per year. Using their own accounts on remote terminals, the students are taught VAX Cluster logon procedures, programming, FORTRAN, BASIC, and other languages. (Protections limit students' access and what they can do.)

"Any kid can join this program," George Wyatt notes. "We stress self-motivation, both in joining the group and in their work. We let them seek their own level of interest and decide whether or not they'd like to pursue a career in computing.

"One of our original group graduated from college last fall and wrote to tell me that the program helped her enroll in the college of her choice. That's the kind of result that makes our work worthwhile."

For more information about enrolling a student in the Explorer Program at Fermilab, contact Lauta Joyner at ext. 3591.

Reward Offered for Information

Universities Research Association, Inc., in conjunction with Crime Stoppers, is offering a \$1500 reward for information leading to the arrest and indictment of the person or persons involved in the recent tragic death of graduate student Jasbir Singh Sidhu.

Bruce Chrisman, Fermilab Associate Director for Administration, noted that the DuPage County Sheriff's Department is handling all factual and informational matters relating to the case, and the reward is Fermilab's way of "becoming involved in, and expressing our concern over, the matter without interfering in an ongoing investigation."

Individuals with information are encouraged to call Crime Stoppers' toll-free number, 1-800-535-STOP. Crime Stoppers, which acts as a clearing house for crime-related information, guarantees complete anonymity for callers.

CENTREX 5 Wants You!

The switch to the new CENTREX 5 telephone system will occur at 9:00 p.m. on September 4, 1987. Communications Services reminds everyone that the change will be easier for everyone if employees attend one of the instructional sessions listed below:

- August 31:** *WH I West.* 11:00 a.m., 12:30 p.m., 2:30 p.m., and 4:30 p.m.
- September 1:** *Curia II.* 11:00 a.m., 12:30 p.m., 2:30 p.m., and 4:30 p.m.
- September 2:** *Curia II.* 7:00 a.m., 9:30 a.m., 11:00 a.m., and 12:30 p.m.
- September 3:** *WH I West.* 7:00 a.m., 9:30 a.m., 11:00 a.m., and 12:30 p.m.
- September 4:** *WH I West.* 9:30 a.m., 11:00 a.m., 12:30 p.m., and 2:30 p.m.
- September 10:** *WH I West.* 9:30 a.m., 11:00 a.m., 12:30 p.m., and 2:30 p.m.

Beginning on September 10, questions can be referred to a "trouble desk," ext. 2750, for one week. For more info, contact Carolyn Hines or Penny Driscoll (recently returned to Wilson Hall) at ext. 3788.

Chris Quigg to Expound on SSC in "Supercollider!"

A machine in the shape of an oval 54 miles around is comparable to the largest structures built by man, such as a ring road around a major city. Such enormity is not usually associated with scientific instruments, yet this is the size of the Superconducting Super Collider (SSC), a new particle accelerator being designed to explore the structure of matter in greater detail than ever before. On Friday, September 18, 1987, at 8:00 p.m. in Ramsey Auditorium, theoretical physicist Chris Quigg, Deputy Director of the SSC Central Design Group, will describe this colossal machine and explain how it will benefit mankind in his lecture, "Supercollider!"

The construction of the supercollider will go down in history as the most ambitious scientific project ever undertaken. Its primary purpose is pure high-energy physics research, to learn more about the forces of nature and the basic constituents of matter. Dr. Quigg expects the new knowledge gained from the SSC to have a profound effect on our under-

standing of the Universe and our place in it. In addition, the challenge of its construction and operation will stimulate the development of important new technology.

Since receiving his Ph.D. in physics from the University of California at Berkeley, Chris Quigg has taken part in research and teaching activities at the most advanced institutions of high-energy physics research, including ten years as Head of Fermilab's Theoretical Physics Department. In the past few years his research has been concentrated on the physics possibilities of high-energy particle colliders, and he is the author of a prospectus on supercollider physics which has become "the bible" of the field.

To reserve tickets for "Supercollider!" or for further information, call ext. 3353 weekdays between 10:00 a.m. and 11:30 a.m. or 12:30 p.m. and 4:00 p.m. Admission is \$2.00, \$1.00 for senior citizens.

- Tammey Kikta

Use the Ambulance!

The Fermilab Fire Department provides ambulance service on a 24-hour basis, seven days a week. The response crews are Emergency Medical Technicians, certified by the State of Illinois. They receive continuing instruction on a monthly basis orientated to assessment and treatment of emergency medical incidents. This continuing re-training is a state requirement in order to maintain certification.

In addition to the Basic Life Support ambulance service, the Laboratory also provides paramedic service from the Tri-Cities Ambulance District. This service is dispatched, in addition to our ambulance, when need is determined, such as cardiac condition.

Call 3131 immediately when ambulance service is needed. Prompt response and quick initial treatment is most important for the victim in a serious accident or illness situation. When there is any doubt about the seriousness of a situation, play it safe and call for the ambulance. If an incident is clearly not serious, go to the Fermilab Medical Office, Wilson Hall 1 NW, during regular working hours, 7:00a.m. to 5:00 p.m. Outside of regular working hours, report to the Fermilab Fire Station at Site 38 to arrange for hospital transportation if required.

Computer Art Exhibited at Lab

"Most of modern mathematics . . . is pretty bizarre stuff, so completely outside the everyday world that most people never even hear of it. Yet there is one powerful new branch of the subject which, despite dealing with such arcane concepts as fractional dimensions and finite objects with infinitely long edges, has produced some beautiful results that can be hung on a wall and admired just like a painting."

So says David Brooks of the *Washington Post* as quoted in the catalogue for the latest exhibit in the Fermilab Gallery, WH 2 x-over. "Frontiers of Chaos" presents the work of Heinz-Otto Peitgen and Peter H. Richter, both of the University of Bremen, West Germany.

The "dazzling" computer-generated graphics are "produced by a branch of mathematics called fractal geometry, which was first brought to light two decades ago by Polish-born mathematician Benoit Mandelbrot." The results are "patterns more complex than man can draw. Many are vaguely reminiscent of Asian designs and a few look like the pictures of oil droplets and crystal . . . but most are indescribable mixtures of swirls and lines."

The exhibit, made possible by The Goethe Institute, runs through September of this year.

Benefits Notes

Correction

This is a correction to the Employee Benefit Costs article that appeared in the August 14, 1987, issue of *FermiNews*. The total HMO cost did not include the 1986 cost, \$62,211, from the terminated HMO, Great Lakes. The corrected costs are \$1,924,244 for all HMO's and \$15,034,285 for the total retirement and group insurance package. The Summary Annual Report which was mailed to you included the correct amounts.

Supplemental Retirement Accounts

A comparison of past performances through 1986 of TIAA/CREF, T. Rowe Price, Dreyfus and Fidelity, is available from the Benefits Office. The past performance spread sheets compare the performances over a one-, two-, three-, five-, and ten-year period. For a copy, call exts. 3395 or 4361.

- Paula Cashin

News from NALREC

The temperature hovered close to 100 degrees this year for the annual Fermilab Family Picnic, but the heat could not hamper the fun seekers who attended. They ate, drank, got wet, played hard, and totally enjoyed the day. The Picnic Committee wishes to extend a big "thank you" to all the folks who helped make this year's event a huge success. Without our loyal volunteers, it would have been much more difficult for everyone. Thanks again.

Also a big success was the Augustfest evening. The band was terrific and we all want to compliment Sharon Koteles, Alma Karas, and Etta Berry for a fun time.

The following events will take place in the next couple of months: a Race Night at Arlington Park, a Moonlight Dinner Cruise on the lovely Fox River, and a Road Rally. Watch *FermiNews* and posters for more information.

- **Trudy Kramer**

Percentage of Americans who say they have altered their plans because of astrology reports: 7

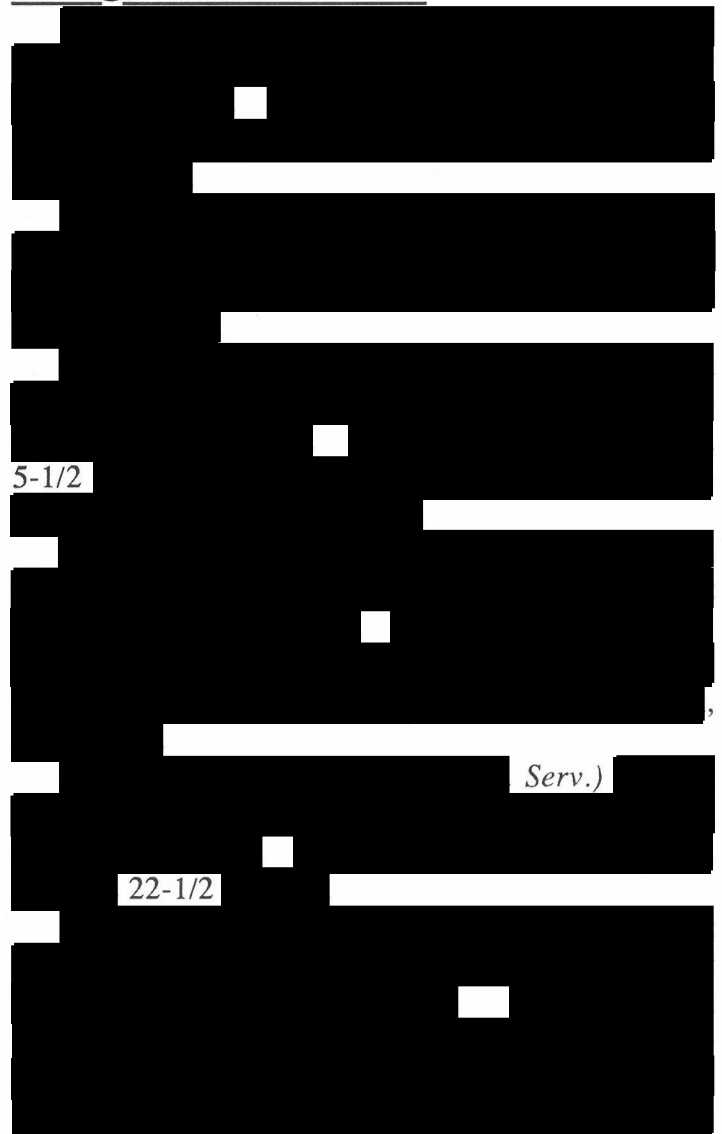
- from *Harper's Index*

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Congratulations to:



Activities Office.

Current gym memberships for the Recreation Facility will expire September 31, 1987. New memberships for the 1987-1988 fiscal year will be available starting September 2, 1987.

Gym memberships, which are \$30.00, may be purchased for one week only at Wilson Hall in the Activities Office, 1E, August 14 through August 18 from 11:00 p.m. to 2:00 p.m. Otherwise, memberships must be purchased at the Recreation Office in the Recreation Building.

If you have any questions regarding memberships, please contact Jean Guyer, ext. 3126.

Percentage of Americans who think they look younger than their age: 57 - from *Harper's Index*

Recent Retirements

Stanley C. Snowdon

"It has been my pleasure to work as an accelerator designer at Fermilab since the Lab's inception. The team assembled by Bob Wilson worked enthusiastically to update previous work done by the Berkeley group. My efforts were quickly directed to magnet design since I had a prior interest in that area. That first year was a most interesting time during which everybody contributed to the exchange of ideas.

"My task was to provide realistic magnet concepts for the many accelerator applications. The highlights in magnet computation center around the creation and improvement of various codes. My own efforts have been project-oriented. Our booster magnets required pole shaping. Similar pole shaping had been accomplished by Hildred Blewett at BNL, Martin Foss at the Carnegie Cyclotron, and Werner Hardt at DESY. These methods utilize complex variable transformations and were adapted to the generation of booster profiles.

"Immediately following the commissioning of the Fermilab Accelerator, the Lab pushed ahead with the Doubler/Saver upgrade. Again, complex variables were of use in magnetic field design. Although no iron shaping was required, the question was how to arrange available superconductors to provide the best field shapes. These considerations continue on into the SSC.

"Concurrent with accelerator design there were many requests for experimental and beamline magnets. ROSIE, E-687, E-706, and E-735 come to mind as convenient descriptors for specific applications.

"Finally, in recent times Phil Livdahl has been responsible for bringing the Loma Linda project to Fermilab. This project involves designing and building a 250-MeV accelerator for use in proton therapy. The magnets for this facility are of interest to a magnet designer since the magnet ends play a more significant role in obtaining the desired fields. Hence, three-dimensional calculations are needed.

"In short, my work at Fermilab has been exciting in that each application gives one a deeper appreciation of the creative ability of others and has allowed me to make my contribution, for which I am thankful."

Anne N. Burwell

On road and online, Anne Burwell adapts. Anne has been at Fermilab since 1969 (ID #613). Since then, her computing engines have gone from the old IBM punch cards and a 48-hour turnaround time on a system shared with Argonne, to the IBM mainframe here at Fermilab, while her motorcycle engines have gone from a Vespa to a 1200cc Honda Goldwing.

Anne's memories of Fermilab go back to the Village days when the first one at work in winter was the one who shoveled the snow. Working as a programmer for Jim Sanford, Anne was involved in putting the experimental program into database form, and wrote the first computerized PREP inventory program. From those beginnings, Anne's endeavors grew over the years to encompass the Lab's mailing list, called the ONION file for an Angela Gonzales illustration on an early conference poster, which now holds over 10,000 names and addresses. Anne and her computers worked the first conference sponsored by Fermilab in the early 1970s. She's worked every conference since then, making ONION the Lab's resource for mailing lists, mailing labels, and all the related minutia required for a successful conference.

And then there's the matter of the motorcycles. On a trip to Italy in the early 1970s with husband Roland, Anne noticed the "elegant ladies of Rome" getting around on Vespas. Returning to the States and a gasoline shortage, Anne acquired a yellow Vespa "and a whole new set of friends." A nasty spill that never would have happened on a larger machine led Anne to upgrade to a 360cc Honda . . . and a 400cc . . . and a 500cc . . . and an 1100cc . . . and a 1200cc. These days, Anne has "downgraded in my old age" and hits the road (figuratively) on an 800cc BMW.

At her retirement dinner a few weeks ago, Anne looked out over the crowd and realized "I had a funny story to tell about everyone there, and there wasn't a person who hadn't helped me at one time or another. When I think back on my years at Fermilab, I'll remember the people."

California is the only state Anne hasn't visited via motorcycle; she plans to correct that shortcoming after an August cycle tour of Maine and Canada and a February trip to Australia. No cycles on that one.