

AMES LAB INSIDER

Ames Laboratory

In August, 57 volunteers took a sample of Ames Lab technology and expertise to the annual Corn Dog and Wonder Bar event—the Iowa State Fair. Now it's time to wrap things up with a STATE FAIR RAP.

*Keep on truckin' with solar cells.
Cleaner soil with horizontal wells.
Incredible detection with ICP's.
Measuring cholesterol—the Micropol LC.
Atomized powders, what a blast!
Thermite reduction—alloys fast.
Laser ablation for metals recovery.
Fiber optics—contaminant discovery.
Ultra-pure materials from the MPC.
Tough ceramic fibers—S-i-C.
Superconductivity is the name.
Zero resistance, that's the game.
Technology transfer and science ed;
We've got it together and we're moving ahead.
We let people know that science is fun,
And that's how it went at Fair '91!*



Things are Going Super!

Supercomputers to Facilitate Math and Science Education

“**S**upercomputers mark a major frontier of integrating computers into the classroom,” said Ann Thompson, chairperson of ISU’s Department of Curriculum and Instruction, at an Ames Lab-sponsored supercomputing workshop held last month. “Supercomputing is one of the most exciting breakthroughs in terms of technology in education in the last ten years,” she continued.

Invited to the workshop by Ames Lab’s Applied Mathematical Sciences (AMS) program, area high school teachers and administrators got a tantalizing glimpse of some powerful technology and shared their ideas for classroom supercomputing applications. “It’s beyond amazement,” claims teacher Greg Luttenegger of Murray, Iowa as the wire-frame tube he created on his computer screen received

its “skin.” Getting dimension, surface texture and color from a hookup to the National Education Supercomputer (NES) at Lawrence Livermore Laboratory in Livermore, California, Luttenegger’s tube shape evolved from an

abstract idea to something concrete through a complex program known as ray tracing. “The way kids will be able to perceive three dimensions is far beyond anything we have now,” he declares.

The summer supercomputing workshop grew out of a grand challenge proposal prepared by AMS Program Director James Corones in



Applied Mathematical Sciences Assistant Program Director Barbara Helland (standing) views a three-dimensional stacking-doughnut application created by Mary Delagardelle, principal of Fellows School in Ames and Steve Linduska, manager of Information Systems for Ames Community Schools.

cooperation with other DOE investigators to meet the challenges of the DOE High Performance Computing and Communications (HPCC) program. They suggested an alliance of national laboratories and universities could

offer an effective partnership in finding new ways to replenish the rapidly diminishing numbers of young people seeking careers in technological areas. “An association of the College of Education at ISU with the AMS group at Ames Lab will create a unique



Ames Lab Graduate Assistant Randy Eckerson gives direction to workshop participants Eileen Kadow of Burt, Iowa (left) and Nancy Schmidt of Maxwell, Iowa.

environment for introducing supercomputers to students and teachers in K-12,” explains Thompson.

Corones received word early this spring that DOE would fund a small educational program this summer. The task of developing the supercomputing workshop fell to Ames Lab graduate assistants Randy Eckerson, Jeff Johnson and Jim Pederson, who is also head of Ankeny High School’s math department. The workshop

was designed to stimulate teacher interest in hooking their Iowa classrooms up to DOE educational supercomputing facilities nationwide, notes Eckerson, the workshop coordinator. “We can help children and teachers use supercomputers and computa-

tional science to investigate meaningful real-world problems.”

Some heavy-duty investigating proved to be the focus of the workshop agenda. Mesmerized by supercomputer technology, participants explored ways to manipulate the images they created, changing the lighting or modifying the structure or surface details through the ray tracing technique.

“Supercomputing techniques such as this provide kids the opportunity to construct their own knowledge,” says participant Mary Delagardelle, principal of Fellows School in Ames. “It offers them a better way to learn.”

Whether students are learning the intricate steps of computer programming or just getting a feel for thinking in three-dimensional space, educational supercomputers may ease the learning process and help more children see themselves as scientists. To this end, things are definitely going super! □

1991 Iowa Games

Approximately 14,000 athletes participated in the Iowa Games, held in Ames from August 2-4. Providing Olympic-style competition for Iowa's amateur athletes of all ages and abilities, the multi-sport festival is a project of the Governor's Council on Physical Fitness and Sports. It is designed to give every Iowan the opportunity to participate in athletic competition. The following Ames Lab medal winners deserve congratulations!



AL BEVOLO, senior physicist, won the Silver Medal in golf in the 50-59 age bracket. He credited his win to his putting, sinking a 45-foot eagle putt to give him a career low score of 75. After 27 years of golfing, this was only the fifth time Bevolo has shot in the 70s for 18-holes. The tournament was played at the Ames Golf and Country Club.



DIANE LOVE, secretary II, won the Gold Medal in weight lifting for bench pressing 130 pounds. She also competed at the Iowa State Fair with weight lifters from five states. Love lifts weights four times a week, runs every day, and is a member of a softball team.



BILL MCCALLUM, senior metallurgist, won two Gold Medals for swimming in the 40-44 age bracket. He won the 100- and 200-yard breast stroke, a remarkable feat since McCallum broke his ankle last spring. Still on crutches, he returned to the pool only 2 1/2 weeks after having his ankle repaired surgically with a stainless steel plate.



TIM RAY, graduate assistant, won two Gold Medals and three Bronze Medals in swimming. The golds were won in the 200-yard individual medley and the 100-yard butterfly. The bronze medals were for the 50-yard freestyle, 100-yard freestyle, and the 100-yard individual medley.



ALAN RUSSELL, associate, won six Gold Medals in the 40 - 49 age bracket. He won the 100-, 200- and 400-meter dashes, the high jump, and the 4 x 100- and the 4 x 400-meter relay. Last March, Russell won the national championship in the 4 x 400 relay in Minneapolis sponsored by The Athletic Congress (TAC).

He was declared an All-American in three events by the national TAC Masters Newsletter in July.



JEFF SHIELD, graduate assistant, won the Gold Medal in the 5K road race in the 25-29 age bracket. The race began at Brookside Park, went down Pammel Drive, Stange Road, and 13th Street and looped around city streets back to Brookside Park.



ANN THOMPSON, associate, won the Gold Medal in the Women's Triathlon for swimming .4 miles, biking nine miles, and running five kilometers. She also won the Bronze Medal for running in the 5K road race. The triathlon was held in Hickory Grove Park near Colo, Iowa.



BRUCE THOMPSON, associate director of science and technology, won five Gold Medals in swimming for the 50-, 100- and 200-yard backstroke, and the 100- and 400-yard medley. He also won the Bronze Medal for the triathlon that included swimming .4 miles, biking nine miles and running five kilometers.



KRIS VOGA, clerk typist III, won three medals in cycling. Voga won the Gold Medal in the road race, racing 26 miles in 75 minutes; she won a Silver Medal in the Criterium, riding seven miles in 19 minutes; and a Bronze Medal in the 12-mile Time Trial, completing it in 35 minutes.

(If you were also an award winner, please let us know and the INSIDER will include you in the next issue.)

Award Winner



SCOTT THORNTON, graphic designer, received a Certificate of Design Excellence for a poster he designed for the 1990 Iowa Special Olympics that will be featured in *Print Magazine's Regional Design Annual/1991*, scheduled for publication in September. His entry was one of approximately 2,000 winners selected from a field of over 40,000 entries from almost every state in the Union.

The Paper Chase

New Program Gives Recyclables the Runaround



When Jack Cummings inspected the trash collection containers at the loading docks of Spedding, Wilhelm and Metals Development last spring, he discovered Ames Lab was throwing away a good thing. "Our waste stream is dominated by paper—enough that it's worth collecting," says Cummings. "Ames Lab is in the research and development business so we use a lot of paper, much of it well-suited for recycling."

Responding to DOE directives and supporting State of Iowa recycling efforts, Ames Lab initiated an office wastepaper recycling program in June under the volunteer directorship of Jack Cummings, assistant head of Procurement and Property Management. After identifying 8 1/2" x 11" white paper and green bar-striped computer paper as the most prevalent forms of office wastepaper, Cummings began the search for a recycling company to handle the Lab's wastepaper. "You don't want to collect it if you can't get rid of it," notes Cummings.

After reviewing the services offered by different recycling companies, Cummings decided to take a closer look at a company in Des Moines. He invited Lynn Runge, manager of Custodial Services, to visit Pomerantz Diversified Services with him. "Pomerantz is very professional and into recycling in a

big way," says Cummings. "They have elaborate warehouse facilities for collecting and storing wastepaper."

The visit to Pomerantz convinced Cummings and Runge that the company was experienced and capable and a good choice to meet the Lab's needs. "They charge us nothing for their service," notes Cummings. "In fact, they pay us \$12.50 a ton for our recyclable paper."

With the selection of Pomerantz, the paper chase was off and running. Cummings turned his attention to the internal dynamics of the recycling program, first searching for a way to give it a look of permanency within the Lab. "We're into recycling for the long stretch," declares Cummings. "It's not a fad!" Sturdy, modern collection



Custodian Pane Baccam removes recyclable paper from a hanging side container.

containers with a specially designed recycling logo enhance the overall professional look and establish the recycling program as an institutional endeavor.

To put the office wastepaper recycling program into effect, Cummings enlisted the aid of Runge and the custodial staff. "They're the people who

make it click!

They provided a very accurate estimate of the number of collection tubs and hanging side containers needed to serve

Spedding, Wilhelm, Metals Development and the Computer Garage," says Cummings. "The custodial staff deserves a great deal of credit for making the recycling program run smoothly. They collect the recyclable paper and see that the tubs get to the loading dock collection bins designed by

Ralph Appelgate, manager of mechanical services."

Keeping the collection cycle moving on its endless circular track, driver Frank Tourtellott stops once a week and opens the dock-site bins to pick up the recyclable wastepaper. The paper is removed from the tubs and packed into rugged 4' x 4' cardboard boxes that can hold 700 pounds. Full boxes are stored at the warehouse until Pomerantz comes to collect them on their regular stop every two weeks.

"During the first five weeks of the program, we collected 2500 pounds of paper," says Cummings. "It's too early to know if we'll continue to collect in that amount; some people were saving paper, waiting for the recycling program to start. Right now it looks like a ton a month may be a good estimate."

It seems you can't keep a good program down. Joining the paper chase, personnel



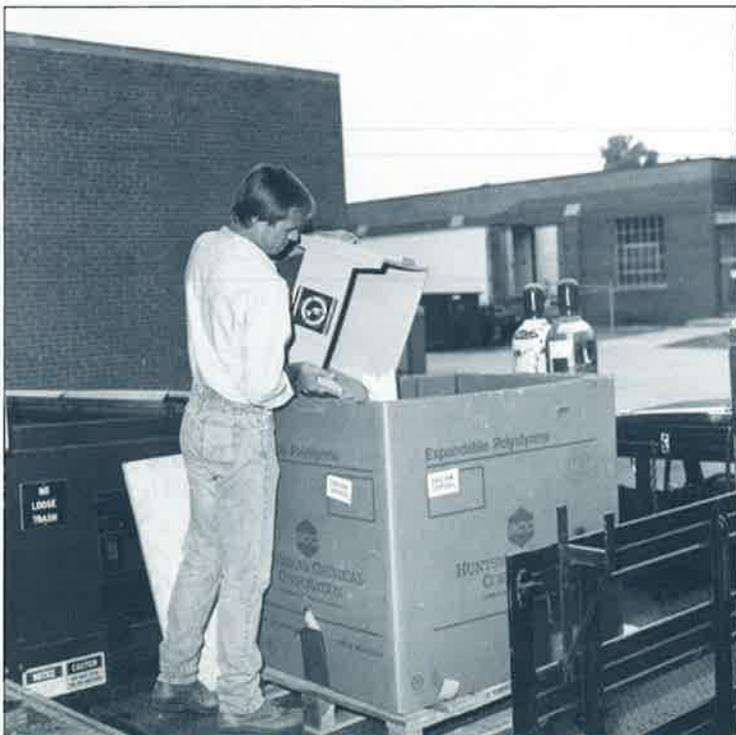
Custodian Dallas Gummert exchanges a full collection tub for an empty one at a dock-site bin.



Lynn Runge and Jack Cummings say the new office wastepaper recycling program is running smoothly.

from the Applied Sciences Center recently asked Cummings to order the large collection containers for their complex. The IPRT van brings Applied Sciences Center recyclable paper to the Ames Lab warehouse where it is added to the cardboard boxes awaiting pickup.

Cummings hopes to keep employees interested in the paper recycling effort with a periodic newsletter. It will offer recycling tips for office and home. He invites Lab employees to contribute to the newsletter by submitting novel or unusual methods of reducing, reusing or recycling.



Driver Frank Tourtellott empties recyclable paper into cardboard storage boxes supplied by Pomerantz.

cling. A tally board will also keep employees up-to-date on the Lab's collection efforts.

The future looks sunny for the office wastepaper recycling program. Runge says the custodial staff has received no complaints about the program to date and Pomerantz reports finding no

contaminants (anything that is not white paper) in the Lab's wastepaper. Sorting out 8 1/2" x 11" white paper and green bar-striped com-

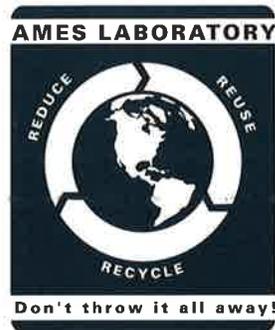
puter paper, Lab employees are doing a good job of source separation, which is a key to the success of the paper re-

cycling program. "I'm glad to see the program going," says Runge. "The custodial staff members feel it's worthwhile and have experienced excellent cooperation from employees. I think it's a good policy!"

A completely voluntary program on the part of all

Ames Lab employees, the office wastepaper recycling program is proving successful because it is an efficient, non-interruptive process that

does a good thing by saving a good thing—paper. **Before you throw it away, give it the runaround!** □



The INSIDER will change to recycled paper with the October issue.

Office Paper Recycling Program

Items to be recycled:

WHITE PAPER ONLY
(8 1/2" x 11", BLACK OR COLORED INK)

COMPUTER PAPER

Do not include:

ENVELOPES

CARBON PAPER

BLUEPRINT PAPER

BINDER/PAPER CLIPS

FAX PAPER

COLORED PAPER

NEWSPRINT

RUBBER BANDS

VIEWFOLDS/PLASTIC

STAPLES ARE O.K.

PLANNING FOR LEARNING

On September 1, Connie Hargrave begins tackling the newly created position of educational coordinator for Ames Laboratory. Hargrave works in partnership with ISU's Department of Curriculum and Instruction to plan initiatives and projects that promote science education. Expect to read more about Hargrave and some of her ideas in a future INSIDER issue.

FROM THE DIRECTOR ... TIGER WATCH

Next February approximately 25 investigators will visit Ames Lab for an intensive three-week review. Known as Tiger Teams, the investigators are both DOE employees and outside consultants trained in assessing the status of environmental, safety and health issues for DOE national labs. Through the INSIDER the Director's Office will keep readers informed and updated about what is happening in preparation for the Tiger Team review. Welcome to the jungle.

IMPACT OF UNIVERSITY LAYOFFS ON AMES LAB

As the INSIDER goes to press, six Ames Lab merit employees have lost their jobs in the bumping process resulting from the University layoffs due to cuts in state-appropriated funds. The last day of work for the three custodial and three clerical employees was on or before September 3; replacements began work immediately.

THANK YOU VERY MUCH!

A tremendous thank you to the 57 employees who volunteered their time, expertise and patience to staff the Ames Lab exhibit at the Iowa State Fair. It's fair to say it wouldn't have been the same without you—it wouldn't have been at all. You did a super job!

NOW AVAILABLE

Reprint request cards are now available in the Storeroom as a regular stock item.

THE MORE YOU READ THE MORE YOU KNOW

Need order information when purchasing books for your group? A set of BOOKS IN PRINT is available for use in the Office of Information. You are welcome to refer to it at anytime.

NEW EMPLOYEES

Camilla Abbott, Typist Clerk (Shivvers)
Taher Aljundi, Graduate Assistant (Weeks)
Nathan Anderson, Graduate Assistant (Barton)
Gyanendra Bam, Research Helper (J. Shinar)
William Bandurski, Associate (Buttermore)
Ashlea Bechtel, Typist Clerk (Bilyeu)
Nevenka Brnicevic, Visiting Scientist (McCarley)
Ranjit Castelino, Research Helper (D'Silva)
Thomas Chambers, Research Helper (Yeung)
Scott Coon, Research Helper (Rosenberg)
Scott Detar, Maintenance Helper (Appelgate)
Doug Dietrich, Research Helper (Max Porter)
Randy Eckerson, Graduate Assistant (Corones)
Cynthia Feller, Clerk Typist II (Volz)
Jianren Feng, Predoctoral Associate (D. Johnson)
Michael Green, Student Associate (Franzen)
Ronald Groves, Research Helper (Gerstein)
Hugh Hammond, Safety Program Coordinator (Mathison)
Zia Ul Haque, Research Helper (D'Silva)
C. J. Hardgrove, Student Associate (Harmon)
Lenny Hood, Student Associate (Chumbley)
Simon Huss, Graduate Assistant (Buck)
Jeffrey Johnston, Research Helper (Corones)
Badal Khanra, Visiting Scientist (King)
Youngman Kim, Postdoctoral Fellow (Akinc)
Stefan Kycia, Research

Helper (Goldman)
Paul Lacroix, Student Associate (Espenson)
Chi-Xiong Liao, Visiting Scientist (Ng)
Robert Lindemeyer, Associate (D. Thompson)
Feng Lu, Graduate Assistant (J. Shinar)
Victorine McDonald, Student Associate (Barton)
Dean McMurchy, Research Helper (I. Anderson)
Michelle McPhillen, Graduate Assistant (Small)
Mark Mehl, Programmer (D. Jensen)
Giuseppe Milana, Associate (Wheelock)
Robert Milofsky, Postdoctoral Fellow (Yeung)
LeBone Moeti, Associate (Barton)
John Murphy, Research Helper (Vanderploeg)
Shrilata Nath, Technical Information Specialist (Corones)
Kaj Olsen, Research Helper (Ng)
Shawna Pace, Graduate Assistant (Harmon)
Paul Panetta, Graduate Assistant (Finnemore)
James Pedersen, Graduate Assistant (Corones)
Scott Petrick, Graduate Assistant (Barton)
Patricia Pulvirenti, Graduate Assistant (R. B. Thompson)
Rebecca Rich, Graduate Assistant (Barton)
William Rudolph, Senior Scientist (Barton)
R. Wade Scheel, Research Helper (Edelson)
Daniel Schlichte, Research Helper (I. Anderson)
Steven Schmitt, Research Helper (Chriswell)
Junghyun Sok, Graduate Assistant (Finnemore)

Glen Southard, Research Helper (Murray)
Byoungjin Suh, Graduate Assistant (D. Johnston)
Gerald Swartzbaugh, Specialist V (D. Thompson)
Veronica Thompson, Clerk Typist II (Hamilton)
James Troy, Research Helper (Vanderploeg)
David Turner, Postdoctoral Fellow (Ho)
Stephanie Walter, Typist Clerk (Merritt)
Duane Weisshaar, Visiting Scientist (Marc Porter)
Brenda Wirth, Typist Clerk (McNee)
James Withers, Chemical Hygiene Officer (Mathison)

Liqui Yang, Postdoctoral Fellow (DePristo)
Seongmo Yoo, Graduate Assistant (Weeks)
David Young, Student Associate (Rosenberg)
Jeffrey Zaugg, Student Associate (Yeung)
Andrew Zeiner, Research Helper (Wheelock)
Zizhong Zhu, Postdoctoral Fellow (Ho)

PROMOTIONS

Karen Phillips from Secretary III to Program Assistant III
Shellie Siders from Clerk Typist III to Secretary III

Scholarship in Memory of Larry Burkhart

In memory of Larry Burkhart, a \$500 scholarship is awarded each year to an outstanding senior in chemical engineering. This year's recipient, Julie Friend, will receive the award during Engineers Week in September. Cory Grabenbauer was last year's winner. Burkhart, senior chemical engineer and former program director of Materials Chemistry, passed away on July 10, 1989, at the age of 60.

The Amoco Foundation, the Burkhart family, and former students and friends made contributions to the scholarship in memory of Burkhart. The scholarship recognizes Burkhart's outstanding teaching and service to the chemical engineering department, students and his profession. Burkhart was the



Larry Burkhart

major professor and advisor to more than 50 ISU graduate students, 24 of whom received Ph.D. degrees. Many of his students accomplished great things; one of them, James Halligan, is the president of New Mexico State University.

A plaque donated by the family hangs in ISU's Chemical Engineering Department. The name of each scholarship recipient is engraved on the plaque. □

The Breakfast Club

Breakfast at Tiffany's it's not, but these Ames Lab employees are finding something more enduring than diamonds—good friendships.

Engineering Breakfast meets at 7:30 a.m. on the first Thursday of every month at Country Kitchen, north. Del Bluhm, manager of Engineering Services, and Duane Michelsen, retiree and former manager of Facilities Services, originally started the breakfast get-together 23 years ago in an effort to promote camaraderie and goodwill between engineers working at the Ames Lab Research Reactor

and other Ames Lab engineers. A successful endeavor, the Engineering Breakfast provides a relaxed, informal atmosphere to “talk shop” or catch up on what friends are doing outside of the Lab. “It’s where we eat breakfast and tell lies,” jokes Facilities Manager Mark Godar.

Prompted by monthly reminder calls from Program Assistant Dorothy McNee, the Thursday morning breakfasts are usually well attended. “There are no scheduled cancellations,” says Bluhm. “The breakfast gatherings run year-round and people attend when they can.”

Waitress Lola Niederjohn

looks forward to serving breakfast to the engineering group each month, and it’s a good thing since she’s been doing it for 15 years! “You get to know people pretty well when you wait on them once a month over that many years,” she says. “They’re not bad tippers.” Sharing a little known secret, she adds, “Del always has to have two strawberry jellies.” Hope that doesn’t get you in a jam, Lola! □



Retired engineers never die, they just make plans to attend engineering breakfasts. Duane Michelsen, visiting from Arkansas, reaches for the coffee pot.



Engineering breakfasts can be just like home when there's coffee and the morning paper. Del Bluhm reads the morning news.



While Del Bluhm is temporarily distracted, waitress Lola Niederjohn checks to make sure he gets two strawberry jellies.



Visiting, joking and eating add up to 23 years of fun.



There's just nothing like having your picture taken, even at breakfast. (From left, Mike Marti, Mark Nelson and Mark Godar)

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*Address correction requested
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