Fire Institute has long history of training Illinois firefighters

By Melissa Mitchell

When 200-plus firefighters, public officials and insurance-company representatives gathered at the UI in 1925 to attend the nation’s first short course on “Fire Prevention, Control and Extinguishment,” those three activities made up the bulk of what firefighters did at the time.

But as the Illinois Fire Service Institute, the state’s fire academy, prepares to host the 75th annual Illinois Fire College June 3-6 at Champaign’s Clarion Hotel and Convention Center, the role of the nation’s volunteer and career fire service has changed dramatically, according to Richard Jaehne, the institute’s director.

“Of 18 million fire responses in 1996 nationwide, 10 percent fought fires,” Jaehne said. The other 90 percent of the calls to the nation’s 30,000 fire departments required firefighters to deliver emergency medical services; extricate people trapped in vehicles following accidents; clean up hazardous materials spills; and respond to other emergency and disaster situations, as well as false alarms.

Through the years, the curriculum of the four-day annual Illinois Fire College – as well as the institute’s year-round program of short-courses and workshops – has been adapted to reflect the ongoing, changing needs of the public served by fire-service personnel. Basic and advanced firefighting, prevention, investigation and officer-training instruction are still offered, but classes on auto extrication; confined space, trench and grain-bin rescue; and structural-collapse awareness are also on the course list.

This year’s Fire College includes a course titled “Firefighting in Your Backyard,” which provides hands-on training that prepares firefighters to respond in the event of an airplane crash.

Another course that reflects the reality of today’s uncertain times is “Emergency Response to Terrorism – Basic Concepts,” designed to provide students with a general understanding of and ability to respond to a host of potential terrorist threats – biological, nuclear, incident, chemical and explosive.

The UI’s original short course on “fire science” was held June 15-18, 1925. Like its modern counterpart, it also featured lectures and hands-on demonstrations, and served as the foundation for what emerged as the nation’s oldest continuing fire school.

According to proceedings from the event, challenges facing firefighters of that era included residential fires that spread rapidly because of the common use of wood shingles, and sewer fires, which frequently occurred when people poured gasoline down the lines.

“The original Fire College was the result of a partnership between the Illinois Firemen’s Association, the State Fire Marshall and the UI College of Engineering,” Jaehne said. “Today, this partnership continues as the Illinois Firefighters Association provides annual Fire College scholarships for nearly 100 Illinois firefighters, and the State Fire Marshal underwrites the cost of basic firefighting classes through the state reimbursement fund.”

“The Fire College was designed by firefighters, for firefighters,” said Jim Straseke, a fire service education specialist at the institute. “Its most important aspects have always been demonstrating current techniques and new methods, having the cream of the crop in instructional staff and maintaining a balance between the theoretical and the practical. Enrollment is open to any Illinois firefighter.”

The theme of this year’s Fire College is “Learn From the Past, Train for the Present and Prepare for the Future.” The keynote speaker will be Denis Oinéal, superintendent of the National Fire Academy. A Jersey City, N.J., native, Oinéal has been a firefighter since 1971, and in 1995 became the first non-political appointee to the National Fire Academy post. He has a doctoral degree in education from New York University, where he taught prior to his appointment at the academy.

IFFSI was designated as the state’s fire academy by the Fire Service Institute Act in 1981. Prior to that, the firefighter training program was part of the university’s extension program. The program’s first full-time instructor was hired in 1958, and in 1961, the university purchased the institute’s present 21-acre training site. The site was developed substantially in the late 1980s, and today includes a tower, storefront/apartment building, boxcar, propane tanker car and maze used to simulate emergency situations firefighters routinely encounter on the job.

In addition to the annual Fire College, the institute offers a winter fire school as well as 40-hour certification and continuing-education courses at the UI training site and at locations throughout Illinois. With 20 full-time staff members based at the

Team hopes to propel watercraft to a new speed record

By James E. Kloeppe1

A team of UI engineering students will attempt to break the world speed record for human-powered watercraft on June 6 during the Harbordest Muscle Boat Championships, to be held in Norfolk, Va.

The team – led by Scott White, a UI professor of aeronautical and astronautical engineering – has designed and built a high-tech, human-powered hydrofoil. The vessel is called Cetan – a Lakota word meaning Hawk Spirit – and features two parallel hulls, like a catamaran. In place of a mast and sail, however, the boat has a bicycle seat and pedals connected to an underwater propeller, designed to spin at 400 rpm.

There are also two wings – called foils – positioned under the boat,” White said. “As the boat picks up speed, the foils lift the hulls out of the water, reducing drag. As the boat gains more speed, the low-speed foil is pulled from the water and the boat rides on just the high-speed foil, further reducing drag and allowing the vessel to go even faster.”

This will be the first time that a team from the UI has participated in the human-powered watercraft competition. The current world record of 18.5 knots (21.3 miles per hour) was set in 1991 by a team from the Massachusetts Institute of Technology.

To challenge that record, we optimized our design for a speed of 20 knots and utilized space-age materials and components in the construction,” White said. “For example, the hulls are built of graphite epoxy, a strong but lightweight composite, to help keep the boat’s weight under 50 pounds.”

Design work began in the fall of 1997. More than 30 students – from freshmen to graduate students – have been involved in the project. Some
Lucy Mabry

A report of honors, awards, offices and other outstanding achievements of faculty and staff members.

Brian Dampier, professor of journalism, has been the first-ever National Public Radio News Fellow. The fellowship includes a monthly stipend that will allow Dampier to work full-time this summer as an NPR reporter. His research will produce two documentary pieces either for NPR’s “Morning Edition” or “All Things Considered.” Dampier’s stories will focus on significant issues regarding children, and adolescents.

The College of Agricultural, Consumer and Environmental Sciences honored five distinguished faculty members as endowed professors at a special investiture ceremony May 6.

Peter J. Barry, director of the Center for Farm and Rural Business Finance, was named to the Distinguished Chair in Agricultural Finance. Barry’s research, education and service accomplishments reflect a combination of theory, applications and policy analysis in agricultural finance and risk management. His contributions are recognized with gifts from organizations interested in and involved with the provision of financial capital for U.S. agriculture and agribusiness.

Lowell D. Hill, professor emeritus of agricultural and consumer economics, was named the Laurence J. Norton Professor of Agricultural Marketing. Hill’s research focuses on identifying where government is needed to enable the market to function efficiently, where it is clear that government will hamper the market, and the gray areas where the choice between government and the free market depends on social and political factors.

Harris A. Levin, professor of animal sciences, was named to the Gotsell Endowed Chair. Levin has identified the genetic factors involved in conferring resistance to the bovine leukemia virus and holds the patent on a method for detecting animals that will pass resistance or susceptibility to the disease to their progeny. The Gotsell Endowed Chair was established in honor of her late husband, who was the first ACES endowed chair.

Raymond M. Leuthold, professor of agricultural and consumer economics, was named the Thomas A. Heirnyeus Distinguished Professor of Futures Marketing. Leuthold’s research contributions include analyzing the performance and pricing abilities of speculative market participants and the role of information in markets and the distribution of futures prices and spreads.

Hannah L. Slagboom, professor of consumer, and environmental economics and business administration, was named to the Soybean Endowed Chair. The Soybean Research and Education Foundation established the Chair in honor of one of the first endowed professors at the College of Agricultural, Consumer and Environmental Sciences.

The UI College of Agricultural, Consumer and Environmental Sciences with much-needed 21st-century technologies for new agricultural facilities and research and growth. In addition it will free land used by agriculture now for new campus facilities and meeting the needs of campus and community are just some of the facilities that could replace the pastures and aging barns.

Now that the trustees have approved the plans, UI purchasing agents have identified $5 million line of credit available so that property can be bought as it becomes available.

This summer the UI will not have to mow the fields and the university will cut the field maintenance costs by 75 percent. The fields will be opened to the public on the weekends.

Now that the Trustees have approved the plans, UI purchasing agents have identified a 15-acre area imme-

For quick reference, the following is a list of the 26 university-related units included in the plan:

• 23 acres, needed by the Division of Intercollegiate Athletics.
• 29 acres for the Division of Campus Support Facilities.
• 20 acres for Veterinary Medicine Research Center needs.
• 70 acres for the Arboretum.
• 40 acres for technology-commercialization centers and future university research and service accomplishments.

As for purchasing, the highest priority will go to buying land north of Churchill Street, which was main street by early through the University of California–Berkeley and the University of Michigan that are No. 1 and No. 2 respectively in the General Assembly for the FY 2000 budget. But UI trustees agreed last week the lawmakers need to get the real facts about what kind of revenue increases are needed, not just des-

hed. And one of the aims on the Urba-

to time it will free land used by agriculture now for new campus facilities and meeting the needs of campus and community are just some of the facilities that could replace the pastures and aging barns.

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If the University of Illinois ACES are promising to be good neighbors to their new neighbors in the new South Campus, representatives of the Lake Park Sub-

Division in Champaign and the Yankee Ridge Subdivision near Urbana. Residents of both have frequently raised concerns about fear of odors from the new livestock facilities fouling their residential area.

Odor-control technologies will be included in the design of the new technologies, according to the planners, and animal centers will be located at specified distances from residential areas.

In other matters, it’ll be a matter of fa-

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inside Illinois

Inside Illinois is an employee publication of the University of Illinois at Urbana-Champaign. The department is the University’s official employee communication vehicle. It is published on the first and third Tuesday of each month by the News Bureau of the University of Illinois at Urbana-Champaign. As the official voice of the University, it serves to inform employees of news and events and to encourage reader response.

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Assistant Editor: Bill Wiegand
Photographer: Mary Halder

News Bureau contributors: Jim Barlow, life sciences; Christa Burtch, accounting, applied life studies, social work; Hyung-Fong, general assignment; James E. Kloppe, physical sciences; Andrea Lyn, communications, humanities, social work; Melissa Michels, arts, international programs Mark Neuber, business, law

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Publisher: Donald D. Hoffman
Confidence can play a part in the feel-good effects of exercise

Studies in the hundreds have proven what many attest from personal experience: Exercise can make a person feel good, reduce stress, enhance a sense of well-being. Yet no one really knows why, says Edward McAuley, a UI professor of kinesiology. Few studies have successfully identified the mechanism underlying this relationship.

Based on a study being published this month in the journal Health Psychology, at least part of the connection appears to come from a person’s self-confidence about exercise, McAuley said. The emotional, or “affective,” benefits you get from physical activity are dependent, in part, on what you believe you’re capable of – what researchers call your exercise “self-efficacy,” McAuley said.

The study, co-written with graduate students Heidi-Mai Tang and Stephanie Talbot and Suzanne Martinez, shows that the higher a person’s self-efficacy, the more likely he or she is to feel emotional benefits from exercise, McAuley said. “It suggests that enhancing the environment, providing information that enhances efficacy, can improve the exercise experience, at least emotionally. That becomes important particularly if the calorie counter, the emotions that are experienced in exercise, are implicated in getting people to do it again,” he said.

The study, funded in part by the National Institute on Aging, McAuley and his research colleagues fed bogus data to 46 low-active college women, most of whom exercised less than once a week. Half of them, chosen at random and labeled as “high-efficacy,” were told after individual fitness tests on a stationary cycle that they placed in the top fifth for fitness among women of similar age and level of activity. The other half, labeled “low-efficacy,” were told after the same tests that they placed in the bottom fifth. All the subjects were shown false computer printouts to show how their heart rates compared with their peers’, and all were given positive messages about exercise.

In a follow-up, first given several days after the first, each subject was first reminded of her previous test results, then was asked to work out for 20 minutes on a Stairmaster. At intervals before, during and after the exercise, each was asked to respond to questions from two measures designed to assess sense of well-being, psychological distress and fatigue.

The results showed the high-efficacy group responding with a significantly greater positive response and reduce negative feelings, compared with the low-efficacy group. People with lower efficacy might feel themselves getting tired or needing to limit their activity, McAuley said. “In the high-efficacy group, they are more likely to say, ‘I can go further, I can work harder, I can feel positive,’” he said.

McAuley thinks the results suggest efficacy influences how one deals with the body’s signals during exercise. People with lower efficacy might feel themselves getting tired or needing to limit their activity, McAuley said. “In the high-efficacy group, they are more likely to say, ‘I can go further, I can work harder, I can feel positive,’” he said.

The high-efficacy group also showed greater positive affect, McAuley said. “They were more likely to say things like, ‘I really enjoyed this,’ ‘I really felt I could do this.’ People with lower efficacy might respond differently,” he said.

Two additional tests given a day later and even further out also showed the effect of efficacy surviving the initial experience, McAuley said. “It suggests that the beliefs we have, about how we’re going to do, the sense of emotional responsiveness that it creates, is greater than the impact of actual exercise.”

The results support what many attests to from their own personal experience: Exercise can make a person feel good, reduce stress and enhance a sense of well-being.

John F. Schaich

John F. Schaich, a former professor and director of the UI Police Institute, died May 3 at Provena Covenant Medical Center, Urbana. He was 68.

Schaich graduated from the University of Pittsburgh and served in the U.S. Navy during World War II.

From the 1940s through the early 1960s he was a criminologist with the Illinois State Police in Springfield.

In 1962, Schaich became a professor at the UI Police Institute and was named the acting director of the institute in 1976. He contributed to the development of several courses and manuals while at the institute. He was named interim director in 1977 and retired shortly thereafter.

He was a lifetime member of the Illinois Association of Chiefs of Police. ❖

Deaths

Wilma G. Dillman

Wilma G. Dillman, former UI secretary, died May 18 at Provena Covenant Medical Center, Urbana. She was 74.

Dillman was employed at the UI Natural History Survey for 30 years. She later worked for the Small Claims Department at the Champaign County Courthouse for eight years.

She is survived by four daughters, a son, 12 grandchildren, 12 great-grandchildren and a sister.

Harry L. Hanson

Harry L. Hanson, a former UI maintenance engineer, died May 24 at Provena Covenant Medical Center, Urbana. He was 68.

Hanson served in the U.S. Army from 1952 to 1954. He farmed and also worked for Farm Services Inc., Melvin and Paxton. He worked at the UI from 1969 to 1994 and was later self-employed in Hanson’s Floor Care until 1998.

He is survived by his wife, Dianna; a son; a daughter; and two sisters.

Memorial contributions may be made to the Pontotou Lutheran Church.

John F. Schaich

John F. Schaich, a former professor and director of the UI Police Institute, died May 3 in Bradenton, Fla. He was 81.

Schaich graduated from the University of Pittsburgh and served in the U.S. Navy during World War II.

From the 1940s through the early 1960s he was a criminologist for the Illinois State Police in Springfield. He introduced, developed and administered the first criminology laboratory for the state of Illinois. He introduced blood/breath alcohol testing to Illinois and developed the statewide program.

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of the students participated through a special topics course and received credit; only four participated in person.

"This has been a real learning experience for the students," White said. "They have been exposed to a variety of concepts in such disciplines as aerodynamics, structural mechanics, materials processing, propulsion, control theory and human factors."

In preparation for the Harborfest Muscle Boat Championships, student team member Ricardo Fourtado found the boat—exercises daily and practices with the boat regularly on Crystal Lake in Urbana.

"The boat is very stable and handles extremely well," said Flores, who has been involved with the project since it began. "The ride is smooth. Cuts clean through the water."

A biking enthusiast, Flores can develop nearly one horsepower of output for brief periods of time—long enough, he hopes, to break the record.

"I will have to go up to speed on the high-speed foil and then operate at maximum power over the 100 meter race course," Flores said. "But win or lose, this has been a great project to work on."

Later this summer the UI team will travel to Intertalent, Switzerland, for the World Human Power Championships to be Aug. 14-15.

"This competition is sponsored by the International Human Powered Vehicle Association, the governing organization," White said. "We anticipate competing against nearly 100 teams in Switzerland."