number of women graduates from engineering schools today: "In 1950, there were (only) five or six women graduating from mechanical, chemical, electrical, and aero engineering."

Both she and her husband worked for Bell Aircraft in Buffalo, New York, after their graduation. She had worked there only a year when she got pregnant. There too, the climate was less than favorable. "In those days, when the pregnancy advanced to six months, the woman was required to leave work," she explained. Kava Zabinsky opted to stay home with her baby instead of returning to work, she said, although she could have returned if she had wanted.

In 1964, the family moved to Seattle, where her husband began working for Boeing. Five years later, Kava Zabinsky decided to reenter the workforce, only to find again that the climate was not exactly welcoming. "1970 was the year of the great lay-offs! Besides, the changes (in aerospace) in the intervening years were so great, it would have required a full reschooling." That was how she ended up as the chief underwriter for a small life insurance company in Kirkland, Washington, where she worked for 18 years.

She says that she's been away from the workplace too long to venture giving any advice to current and prospective students but volunteered some words from her daughter, Zelda Zabinsky, an associate professor in industrial engineering and an adjunct professor in mechanical and civil engineering at the University of Washington. Her daughter advises women students to be clear on their goals and not to be concerned with discrimination against women. And she stresses the power of networking, for one's own career and to help those who are entering the field.

These days, both Zabinskys are enjoying the benefits of retirement. They travel extensively, on their own and through the Elderhostel program; a trip to Ireland and another to the South Pacific are planned for the next two years. They volunteer, play bridge, cook, and enjoy their children—Steve, Zachary, and Zelda—and two grandchildren.

NASA) to manage the Quality Engineering branch … on the basis of my thorough knowledge of the Space Shuttle main engine and International Space Station systems and their operation," Katz said. "I also had engineers supporting the Theater Area Active Defense (THAAD) program." Since retiring, Katz has been involved in civic activities. He was president of the Democrat Club of Conejo Valley, and he is a representative on the Ventura County Transportation Advisory Committee, a member of the Thousand Oaks Social Services Funding Committee, and a docent at the Museum of Flying in Santa Monica, California. He was on campus recently to take in the Penn State and Northwestern football games. Says Katz, "My wife (Reatha F. Katz [née Hamburg] '50 LAS) and I both enjoyed the tailgate parties prior to and during the games. My wife was a "townie;" she attended Illinois football games as a young girl with her family before she started at the U of I. We visit Champaign twice a year, usually in the

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Urbana Campus Offers Special Residence Hall for Women in the Sciences

Women in math, science, and engineering (WIMSE) now have a special place at the university they can call "home." The WIMSE residential learning community, which is located in the Florida Avenue Residence Halls (FAR) on campus, allows first- and second-year women students in fields traditionally dominated by men to interact more closely with each other and with their professors and mentors.

There are opportunities for students to interact with faculty members, join study groups, and participate in activities to explore careers. The resident adviser on each floor (an undergraduate staff member) is also a student in math, science, or engineering and helps create a strong community. Each floor has a study lounge and a computer lab. In addition, students have access to academic courses taught in the hall, including courses exclusively for WIMSE residents. Past courses have included a special section of Rhetoric focusing on science and technology and a discovery course on science, technology, and society. WIMSE residents publish a newsletter and have developed a Web site. The program, which started last year, has been so successful that it now encompasses two floors of FAR, increasing the number of residents from 33 to 88.

For more information about this program, contact Deborah Richie, Assistant Director of Housing, Academic Programs and Research, 300 Clark Hall, 1203 South Fourth Street, Champaign, IL 61820; phone 217-333-0770, or email *d-richie@uiuc.edu*. To get into WIMSE's homepage on the Web, type: *http://www-students.housing.uiuc.edu/floors/wimse/*.

spring, and just the last couple of years, started to attend Illinois football games."

Leon S. Knowles, '59, passed away on December 31, 1996. He was 57. He is survived by his wife, Dana E. Quillen. Mr. Knowles worked for the Jet Propulsion Lab and Aerojet for about 15 years, then joined Arco in its finance department. After he retired, he ran his own consulting practice in career planning for five years. He received master's degrees in aerospace engineering and in business administration, both from the University of Southern California. Mr. Knowles was active in the Los Angeles Junior Chamber of Commerce, primarily for the LA Watts Summer Games. An award is given annually in his honor at the Games for the most outstanding volunteer.

Richard E. Martin, '50, MS '51, has retired from General Dynamics after 43 years of missile and space engineering. Since his retirement, he has done some consulting with Intelsat on the Chinese Long March rocket and with Lockheed Martin on the Atlas IIAR, a new version due to fly at the end of 1998 with Russian engines on the first stage. Martin says, "It is ironic that the ICBM I helped design, which was targeted at the Soviet Union, will now fly as a launch vehicle with Russian engines." Martin also has been chosen as an "AIAA Distinguished Lecturer" and has talked to seven AIAA sections on "The Atlas Rocket—It Just Keeps Going and Going and … ."

Harold E. Weaver, '58, has been a flight test engineer in St. Louis for Boeing (formerly McDonnell Douglas) for all but 3 of his 40 years. During that period, Weaver has tested the F-101B Voodoo through the current F/A-18E/F Super Hornet. Since 1974, he has been active in the Society of Flight Test Engineers (SFTE) and is currently secretary of the St. Louis chapter and a member of the National SFTE Technical Council. Weaver explains: "The SFTE is similar to

ALUMNI SPOTLIGHT

Catherine Larson '87 MS '89

Catherine Larson is one of only five people in the United States who has five propulsion system certifications to support Space Shuttle missions. Yet she will be the first to tell you that when the chips are down, what counts in such a high-pressure job is not that she is a woman but that she does her job well.

Larson is a flight controller for propulsion systems for NASA's shuttle missions. "Yes, that means I'm one of those people you see in NASA's Mission Control during space shuttle flights," she said. "I am responsible for two of the four propulsion systems on board the space shuttle—the orbital maneuvering system (OMS) and the reaction control system (RCS)." She explained that the OMS is used for orbit insertion, de-orbit, and major orbit burns (such as those required to rendezvous with the Mir space station). The RCS is used on orbit for attitude control, maneuvers, and small orbit-adjust burns. "It is also used during entry to provide vehicle control until the shuttle's aerosurfaces become fully effective below Mach 1," Larson said.

Since 1991, she has supported more than 30 shuttle missions as a flight controller. Nearly half of those missions have included ascent and entry phases, the more difficult flight phases in which to achieve certification. Certification is required to support shuttle missions; different certifications can be achieved for specific areas of responsibility and flight phase. She has received three Group Achievement Awards from NASA for her work and an individual Superior Achievement Award for leader-

Catherine Larson, Lead Propulsion Officer, and Bill Reeves, Lead Flight Director, hold up the mission plaque for STS-87. Usually, the individual or team that makes the most significant contribution to a shuttle mission's success is chosen to hang the plaque in Mission Control. The propulsion team was recognized for its efforts during a mission that developed some unexpected turns. As leader of the propulsion team, Larson was given the honor of hanging the plaque.

ship in the planning and real-time execution of shuttle mission 77, which was "an extremely complex flight."

Larson didn't start out in AAE at Illinois. She was going to be a chemical engineer but then decided that that field was not for her. "When I do public speaking, I always tell students that when you don't like what you're doing, it's really hard to be good at it. I found that to be true the hard way." She said that she would never have chosen AAE if **Thomas Hoffelder** ('88) hadn't urged her to sit in on several classes. Larson also credits professors **Lee Sentman** ('58), John Prussing, and Bruce Conway for being supportive during her years at Illinois. However, she says, "I remember really not liking the Friday afternoon lecture series (doughnuts or not!). That was just a really difficult time to focus on technically interesting subjects."

There may have been few women in technical fields in the past but that picture is changing rapidly. Larson says that "there are more and more women being hired every year into technical positions here at Johnson Space Center (JSC)." She said that when she started working at NASA six years ago, she was hired by a woman who eventually went on to be the first (and only) Ascent Flight Director for NASA. Once, early on in her career at JSC, it was pointed out to her that she was the only woman in the Mission Control Room. "If it hadn't been pointed out to me, I wouldn't have noticed. The fact that I was the only woman there went virtually unnoticed to all because what really mattered was that the task at hand was getting done, not who was doing it."

She can think of only one instance where she felt at a disadvantage being a woman, she said. During STS-63, NASA's first rendezvous with the Mir space station, the shuttle's reaction control system developed an anomaly. "As a result, I was called in to a room full of Russian engineers to explain the situation and answer questions … . When I arrived, I was introduced as the American 'expert' in shuttle propulsion systems." Being the youngest in the room "by at least a decade" and a female as well, Larson quelled their doubting stares when it became clear to the engineers that she knew her business. "Again, as I mentioned … , if you do your job well, you will be given due respect."

Right now, Larson's focus is on completing her final certification, in Ascent Propulsion, which she hopes to complete in spring 1998. Then, she'll be one of only four people with those qualifications. "In the history of the shuttle program, there have only been two female Ascent Props. I will be number three," she said. "Of the two … before me, one is the flight director (who hired her) and the other is now an assistant division chief. So I have big shoes to fill!"

Outside of Mission Control, Larson teaches Sunday school and does volunteer work. She also gives presentations to students and organizations on NASA-related topics. For fun, she plays competitive and recreational volleyball and softball. She lives in Houston "with her extremely spoiled cat, Tinkerbell (also known as Tink)."

Postscript: Larson was the Lead Propulsion Officer for STS-87, during which two astronauts manually captured the SPARTAN satellite, which had started tumbling when the shuttle's robotic arm tried to re-grapple it. Larson was in charge of all the preflight planning and the real-time propulsion team management. "The propellant tracking and allocation (was) part of my job," she said. "I made the call to terminate recapture attempts when we reached the propellant "bingo" (amount of propellant remaining which needed to be saved for future activities). By stopping when we did, we preserved the capability to re-rendezvous with SPARTAN several days later … . Thus, while the SPARTAN satellite was unable to complete its science mission, the satellite itself was safely retrieved and will be available to fly again on a future space shuttle mission."

the AIAA but much smaller (reflecting the smaller flight test community). There are about 900 members; 8 chapters, including a European chapter; and 32 corporate members, including Boeing." He has also been on the Curriculum Advisory Committee for the UIUC's Institute of Aviation for more than 10 years. Weaver graduated from the institute in 1952 and spent two years in Army Aviation, 1955 and 1956.

1960s

Howard Croxen, '64, was recently widowed. His wife, Martha Hill Croxen, passed away on February 24, 1997. She was 53. Mrs. Croxen was born in Champaign, and the couple were married in 1964. Survivors also include her parents of Champaign, three daughters, a grandchild, two brothers, and two sisters.

Patrick Curran, '66, is running for re-election in the 2nd ward of the Rockford City Council. Curran, who is a Republican and owner of Curran's Apple Farm, has held his seat since 1983. Improving homes and neighborhood stability are key issues in the race.

Wallace James (Jim) Hahn, '60, retired in 1996 after 30 years of service with Lockheed Martin Tactical Aircraft Systems in Fort Worth, Texas. When he retired, Hahn (below) was a senior engineering specialist in the Fatigue

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and Fracture Analysis Group assigned to the F-16 airframe. He had also worked on the F-111 airframe and landing gear structures. Before joining Lockheed, he had worked on the first stage of the Saturn V moon project, built by Boeing. Earlier, he spent two years in the U.S. Army, working as an engineer at the Army Chemical Center in Maryland. Hahn's take on his career: "Nothing sensational. I was just a "plugger," but I usually enjoyed my work." He and his wife JoAnn plan to be in Fort Worth near their four children, and their grandchildren.

William Meyer, '60, MS '63, is a B747-400 captain with United Airlines, based in Los Angeles. He flies mostly to the Orient (Japan, Hong Kong, and Singapore) and to the southwest Pacific (Australia and New Zealand). He is also completing flight tests on a homebuilt mid-wing aerobatic monoplane called the Laser 240. Meyer lives in Newport Beach, California.

Edward G. Wilson, '64, retired recently as director of engineering with McDonnell Douglas Aerospace in St. Louis. During his 33 years with McDonnell Douglas, he was involved with the F-4, F-15, F-18, AV-8, C-17, and T-45 aircraft production programs. Wilson and his wife, Janet (née Williams, '62 Commercial Educ), are building a home in the Ozark hills southwest of St. Louis. Their daughter, Bonnie, is currently pursuing her PhD in economics at UIUC. "I hope you are enjoying some of her carillon concerts. She plays the Altgeld chimes each Thursday," Wilson wrote. They would like to hear from other Illini.

1970s

Martin de Wet, '79, MS '82, a principal system engineer for Motorola, is working on the Iridium communications system. Motorola is the developer, system integrator, and prime contractor for the Iridium

ALUMNI SPOTLIGHT

Nadya Heinrich '91, MS '93

In the early 1950s, the aerospace industry didn't look too favorably on women who were ready to start a family (see *Alumni Spotlight* on Helen Kava Zabinsky). In the 1990s, Nadya Heinrich not only can remain at work, she is also able to work part-time as long as she wishes.

Heinrich is a structural engineer with The Boeing Corporation in St. Louis and has been working there since she graduated with a master's degree in 1993. Four months after the birth of her first child, Steven, in May 1996, Heinrich returned to work because "I did not see myself as a stay-at-home mom. I had spent six years of my life devoted to aero engineering because it was something I really enjoyed, so I did not want to give (it) up completely," she said. Now she works a five-hour day and is done by noon. "I wouldn't trade it for the world!" she said. Her part-time status comes with a condition, however: the company allows her to do this as long as being part-time doesn't affect the type of work she does.

Heinrich, who was born in Guyana, moved to Chicago with her family in 1981. "My parents wanted to provide a better future for us than we would have had in Guyana," she explained. She said she knew by her sophomore year in high school that she wanted to be in engineering, "but I didn't know what discipline, so I went into our counseling office and read up on all the different engineering disciplines. AAE was the only one that appealed to me."

Once she got into the program, she credits Professor Ken Sivier and **Steve D'Urso** (MS '89) of McDonnell Douglas (now part of Boeing) for providing her guidance. "(They) got me interested in design. The spark (for design) was there, but they advised me on the background I would need and the direction I needed to take," she said. "They were also very helpful in providing opportunities for me to become involved in design before I got into the work environment."

Heinrich says she cannot emphasize strongly enough the importance of working with mentors, who can provide insight into what to expect out of school. She said that while her classes gave her a good grounding in aero engineering, it was working with her professors that benefited her the most. "Working with Dr. (Ken) Sivier on an AIAA design competition gave me more insight into the design discipline than I would have received having only taken classes. Working with Dr. (Scott) White as an undergraduate gave me

Nadya Heinrich, Doug, and their son Steven.