

# General Engineering Newsletter



**Prof.** Wayne Davis confers with students, Joe Macro, Schaumburg, IL and Lam Lee, in the Flexible Automation Coordination Laboratory.

### Revised Constituent Alumni Board, More Activities Goals of GE Department

The revitalization of the General Engineering Constituent Alumni Association is a major goal of the department administration.

**Prof. James Carnahan** has been appointed faculty liaison to fill the vacancy created by the retirement of **Prof. Dave O'Bryant.** 

Carnahan is particularly interested in developing an alumni network with some concrete goals such as: increasing awareness of the value of GE graduates, finding summer internships and permanent employment, and developing opportunities for senior project (GE 242) sponsorship.

He also is seeking alumni ideas on the newsletter, the department brochure and other promotional materials or programs.

One suggestion being considered is to hold a fall reception in Chicago for GE alumni and interested representatives from area industry.

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### New GE Emulator Lab Creates A Flexible Manufacturing Model

A Flexible Automation Coordination Laboratory, an educational and research laboratory, focusing on modeling the interaction among various controllers required to achieve a flexible manufacturing environment has been created in the Department of General Engineering.

Located in Room 202 TB, the new facility was initiated in January 1993 using an education grant from the GM Foundation to the College of Engineering and various gifts from other corporate sponsors. **Professor Wayne Davis** is laboratory director.

Three manufacturing and general engineering courses will employ the emulator. It also will serve as a research laboratory to develop new algorithms for real-time scheduling and control of flexible manufacturing systems.

Thus the emulator has been designed to allow experiments lasting several weeks to be conducted with minimal supervision.

The laboratory layout includes four machining centers capable of holding six jobs represented by color-coded steel washers. Electromagnets will hold the job tokens while they are queued before and after processing. The processing of jobs will be emulated on software at the workstation.

A fixturing center where jobs enter and exit the emulator is capable of storing 16 jobs.

Material handling is modeled by use of electric train layouts where up to seven can operate simultaneously without collisions.

The various controllers are connected via an ethernet to generate a unique Recursive Object-Oriented Control Hierarchy which was developed in collaboration with Motorola, Inc..

Nearly all of the components in the laboratory are custommade and many were installed by students.

The laboratory has been designed to be a safe and economical environment in which students can conduct their experiments.

Additional information concerning FACL is available from **Professor Davis**.

#### From the Department Head



Engineering education is undergoing change, sometimes it is subtle and evolutionary — sometimes it may be radical. We have seen it in the recognition by our accrediting board, the Accreditation Board for Engineering in Technology (ABET), who have finally come to the realization that it is not in the best interest of the student, the institution or the profession to meticulously "bean count" the number of hours devoted to engineering science and engineering design. The new requirement that will be in place within the next two years specifies the total required hours of engineering science and engineering design without specifying how much must be in either category. This is a welcomed change which encourages a focus on providing the best possible course for an engineering student. The capstone design requirement, which has been in effect for ABET accreditation for the past several years, has been in place in General Engineering for over 30 years. Our course is serving as an exemplar for senior design programs in other departments at Illinois and throughout the country.

Perhaps the segment of the undergraduate curriculum that needs radical change is the first two years. Recently, at a College of Engineering Retreat, the topic of the "common" firsttwo-year program was discussed. This segment of the engineering curriculum has had its basic structure intact since the time of Sputnik, a period of over 35 years. Much has changed in that time and new requirements have been placed on the knowledge that many feel the engineer practicing in the 21st century should have. If we were to keep a budget of 16 to 20 credit hours of basic science, should it be all chemistry and physics, or should we also allow biology or the physics and/or chemistry of materials? Should we continue to require, in a budget of one semester (16 hours) of mathematics, that 11 hours should be devoted to calculus? Or should we instead reduce the amount of calculus to two courses (6 hours) and add requirements in statistics, discrete mathematics, or numerical analysis in addition to linear algebra and differential equations? Do we provide too much repetition in the organization of our curriculum? Should a student have to take mechanics in physics followed up by

more mechanics in TAM? Is the thermodynamics they receive in engineering sufficient, or should the thermodynamics also be included in physics? The knowledge base for engineers is expanding. No longer do we have the luxury of repetition, yet we have the obligation to provide the best overall education for our students within a budget not to exceed 131 hours.

I would like to hear your comments on what the first two years in engineering should include based on your perspective as a practicing engineer and graduate of the University of Illinois

In the last newsletter I requested your response on the topic that has been on our minds: whether or not the name for the curriculum and the Department should be changed. A name which was suggested was "Systems Engineering and Design". We received 16 letters from alumni/ae, the majority agreeing that the name should be changed to better reflect the topics and the focus of the curriculum, though not all agreed with "Systems Engineering and Design". I will be writing a note to those who have sent me a letter with their thoughts: I continue to offer an open invitation for everyone else to write to me with their thoughts on this matter. It is still an issue that is under discussion and clearly the more input that we have from you, our loyal alumni, the more comfortable we will feel in adopting a name change, if any. I would also like to thank all of our alumni/alumnae who have helped us to develop job opportunities for our graduating seniors. These are a great bunch of young people who are hard-working and smart. I know they will make super engineers, super colleagues, and super employees. They are highly motivated and well-educated. Thank you so very much for helping us help

Our graduate program is continuing on its successful path. We graduated 36 students in the last three years and look to have an entering class next year of about 10-15 students. At present we have 15 students in the joint MSGE/MBA program and we hope to continue enrolling students at this rate. Both of these programs have been highly successful and we have been able to place all of our students in very good entry level positions. As I reported last time, we submitted a Ph.D. proposal to the Dean and discussions are continuing on this matter. I will keep you informed of our progress.

Lastly, I would like to express my thanks to Professor Tom Woodley for his many years of loyal service to the Department and our students on the occasion of his retirement from the Department. Tom provided leadership in the Department and was one of the driving forces, together with Mike Pleck, in developing the computer-based freshman course in Engineering Graphics, starting with the IBM EXCEL project in 1984. Without Tom's expertise we would not have been able to do this project. Good luck Tom. We will miss you and we wish you and Pat the best of health and happiness in your retirement.

Thomas F. Conry Professor and Head

### Nondestructive Testing Evaluation Laboratory Expands, Adds Equipment

Under the direction of **Professor Henrique L.M.** dos Reis, the Nondestructive Testing and Evaluation Laboratory at the Department of General Engineering has been expanded with the acquisition of an ultrasonic immersion system, a real time microfocus x-ray system, and a holography laboratory.

In addition to research capabilities in the above technologies, the laboratory also has research capabilities in the areas of acoustic emission, ultrasonics, acousto-ultrasonics, eddy-currents and magnetic particle.

The laboratory supports research at undergraduate and graduate levels, and provides laboratory demonstrations for the course titled "Fundamentals of Nondestructive Evaluation." By integrating this course in the General Engineering design curricula, GE graduates will learn the importance of design for inspectability.

**Professor Reis** enjoys working with industry, and as a consequence of the new laboratory capabilities, he is currently seeking more industry collaboration and participation with his research activities.

**Professor Reis** is a Fellow of the British Institute of Non-Destructive Testing and of the Acoustic Emission Working Group (AEWG).

# Faculty Members Honored As Outstanding Advisors

Awards as outstanding advisors have been granted to five members of the faculty of the Department of General Engineering.

Recipients are: Profs. Michael H. Pleck, Mark G. Strauss, Deborah L. Thurston, Thomas R. Woodley, and Louis Wozniak.

All of the honorees have been previously selected for the award.

The recipients are designated by the Engineering Council Awards Committee from nominations received from undergraduate engineering students during Spring Pre-Registration.

### Announce Initiates Into Gamma Epsilon

Eight General Engineering students have been selected for membership in Gamma Epsilon, department honorary.

They are: Peter Andrew Friddle, Chicago; Christopher W. Griffin, Lindenhurst, IL; Keith Mueller, Naperville, IL; Mark T. Nguyen, Crestwood, IL; Jeffrey Rhodes, Champaign; Douglas Scott Richards, Aurora, IL; Darren J. Tonarelli, McNabb, IL; and Christopher K. Wyatt, Rochelle, IL.

The name of Jill Anne Tucker, senior from Chicago, was inadvertently omitted from the list of inductees that appeared in the fall newsletter.

Prof. Brent Hall is faculty advisor.

### GE Students Studying 22 Senior Projects For Corporate Sponsors

Twenty-one GE 242 projects encompassing a wide range of engineering activities have been sponsored by leading corporations during the 1994 Spring semester, **Professor James Carnahan**, Coordinator of Project Design Activity, reports.

Students who are formed into project teams under the direction of a faculty member study the problem during the semester and report back to the industrial sponsor in mid-May.

The following firms are supporting the program:

Archer Daniels Midland Co., Decatur, IL; Armstrong World Industries, Kankakee, IL; Cummins Engine Co., Inc., Columbus, IN, (2 projects); Driv-Lok, Sycamore, IL; Eaton Corp., Rochelle, IL; Eureka Co., Bloomington, IL; Frantz-Sterling Steel Ball Division, Sterling, IL; General Electric Appliances, Louisville, KY (2 projects); Lovejoy, Inc., Downers Grove, IL; MCI Telecommunications Corp., Richardson, TX; Northwestern Steel and Wire Co., Sterling, IL; Outboard Marine Corp., Waukegan, IL; Ralston-Purina Co., Davenport, IA; Revere Ware Corp., Clinton, IL; Sanford Corp., Bellwood, IL; Storm Products Co., Advanced Technology Group, Hinsdale, IL; Testor Corp., Rockford, IL; and Vapor-Mark IV, Niles, IL (2 projects).

Additional information concerning GE 242 projects and corporate sponsorship can be obtained by contacting **Professor Carnahan**.

### GE Students Receive Numerous EOH Awards

Several students in the Department of General Engineering were cited for their presentations during Engineering Open House competition February 25-26.

Theme for the annual event was "Above and Beyond."
GE students, their entries and their place in the judging are as follows:

Undergraduate awards:

- First place to John Smejkal for "Testor 242 Project,"
- Second place to Lisa Anderson and Tim Phillis for "Crushing Structures;" and
- Third place to C. J. Knuffman and Peter Vadhanasindhj for "Design of Nesting Structure;"

Graduate awards:

- First place, **Brad Whitmore**, \$500 Lockmiller Award, for "Robotic Programming Through Simulation;"
- Second place to Mark Maslov for "Basins Lab, Fractals, and Algorithm Visualization; and
- Third place to **Brad Bauman** for "Flexible Manufacturing Simulator."

Whitmore and Maslov received their awards at the Knights of St. Pat Ball on February 26.

### Engineering, Industrial Design will be Integrated In New Project, Course

An interdisciplinary research project has been initiated at the University of Illinois at Urbana-Champaign to develop methodologies in achieving effective collaboration and integration of industrial design and product engineering in the early phases of product development.

The project is also expected to develop computer-based design tools that will allow industrial designers and engineers to work simultaneously and cooperatively.

Also a new integrated industrial design course will be developed where industrial design and engineering students will conduct interdisciplinary product design projects sponsored by industry. Too, newly developed computer-based industrial design tools will be evaluated.

Profs. Yong Se Kim (General Engineering), Tom Woodley (General Engineering), Mark Arends (Art and Design) and Mike Philpott (Mechanical and Industrial Engineering) are co-principal investigators of the project.

Both industrial design and engineering design address aspects of product development prior to manufacture: industrial designers emphasize the styling and consumer aspects of products, while design and manufacturing engineers focus on the functionality and manufacture of products.

Unfortunately, however, they have been traditionally educated and treated as separate activities. Because of increased international competition, the rapid development of new manufacturing technologies, and diverse and refined consumer demands, collaboration and integration between industrial design and product engineering are becoming inevitable to maintain the competitiveness of U.S. industry and economy.

Additional information is available from Prof. Kim.

### Announce Changes In Clerical Staff

G.E. Department Head **Thomas F. Conry** has announced two major changes in clerical staff.

Marilyn Butler, staff secretary, retired on April 30 after 33 years service in General Engineering. She says she will remain in the community except for some travel she has been planning. In the department she has served primarily as secretary to the department head.

Administrative Aide Sydney Cromwell transferred to Theoretical and Applied Mechanics after ten years in General Engineering on February 27.

Succeeding her is Sheryl Hembrey, staff clerk, who has been working at TAM. She has been employed by the University for the past 14 years. Ms. Hembrey also is pursuing an undergraduate degree in the College of Commerce and Business Administration.

### Gamma Epsilon Honors 1994 Distinguished Alum At Annual Awards Banquet

Paul Rimington, President and CEO of Diemasters Manufacturing, Inc., Elmhurst, IL, received the 21st Annual Gamma Epsilon Distinguished Alumnus April 14 at the GE Spring Awards Banquet at University Inn.

The award is bestowed each year on a General Engineering graduate for outstanding accomplishments in one's profession and continuing contributions to the Department and/or UI College of Engineering.

The plaque was presented by Saul Lopez, Chicago, Gamma Epsilon president.

Rimington received a B.S. in GE and B.A. in LAS (Political Science) in 1967 from UIUC. He received a MBA in 1975 from U. of Chicago (Finance).

He was employed as an Advisory Systems Engineer with IBM Corporation, Chicago, 1967-75; was co-owner and V.P. (customer support) Professional Computer Resources, Inc., Oak Brook Terrace, 1975-86; Director of Education, Pansophic Systems, Inc., Lisle, IL, 1987-88.

Rimington has held his present position with Diemasters since 1989. The company was acquired from Bally Manufacturing when the firm left Bensonville for Las Vegas.

He also has been a Director of Overland Bolling Co., Franklin Park, IL since 1986.

He has authored several articles in technical journals and presented several papers at various conferences and institutes.

Rimington has been active in civic affairs serving on the Epiphany Lutheran Church Council 1987-92 (president 89-90); Board of Directors, Swedish American Museum, 1993; and Board of Directors, Elmhurst Chamber of Commerce, 1993-94.

His hobbies include tennis, jogging, snow and water skiing, wind surfing, reading and traveling.

He is married and the father of a son and a daughter.

### Prof. Woodley Retires From GE Faculty in January

Thomas R. Woodley, Associate Professor, retired from the GE faculty on January 5, 1994.

He joined the GE department in August 1980 as a lecturer. Previously he had been a visiting lecturer in TAM and M&IE.

From 1972 to 1975 he was head and professor of military science ROTC.

**Professor Woodley** received a B.S. in 1951 from the U.S. Military Academy and M.S. 1958 and Ph.D. 1979 from TAM at UIUC.

He taught GE 232, Engineering Design Analysis and GE 234 General Engineering Laboratory and was a frequent advisor for 242 projects.

### GE Department Honors Are Presented April 14 At Awards Banquet

Academic awards were awarded at the annual General Engineering Awards banquet April 14 at University Inn, Champaign.

Also receiving recognition was a distinguished alumnus and a professor.

The banquet was jointly sponsored by Gamma Epsilon and the G.E. department.

Donald Lee Chamberlain, Polo, IL, received the Edward S. Fraser Award as the outstanding senior in General Engineering. The award consists of \$200 cash and a plaque. Also his name will be inscribed on the wall plaque that is on permanent display in the Transportation Building.

Recipient of the Randolph P. Hoelscher Award is Meggan E. Fitzgerald, Evergreen, IL, as the outstanding G.E. junior. She received \$100 cash and a certificate signifying exceptional scholarship, leadership and cultural breadth.

Honored as the Distinguished Alumnus was Paul Rimington, Elmhurst, IL, by Gamma Epsilon. (Details appear elsewhere in a separate item.)

**Prof. Edward N. Kuznetsov** was presented the Excellence in Teaching Award, determined by Gamma Epsilon. Recognized for excellence in undergraduate instruction, the award consists of \$500 cash and a plaque.

The Jerry S. Dobrovolny Award given annually to a G.E. student who has demonstrated outstanding leadership qualities and academic scholarship went to **Bradley James Whitmore**, Coal Valley, IL. The award was \$500 in cash and a certificate.

Jill Ann Tucker, Chicago, received the Elizabeth Ruff Award consisting of \$500 cash. Criteria for the honor is to be a sophomore or junior woman in G.E. who demonstrates the traits of sincerity, cooperation and supportiveness.

A special Incentives for Excellence Scholarship Prize from the National Science Foundation will be shared by Ernie J. Ramirez, Highland Park, IL, and Edwin F. Valencia, Skokie, IL. Each will receive \$500 cash from an award in recognition of Nilda Barreiro who received a NSF Minority Graduate Fellowship in 1993.

Other awards included:

- Herbert J. Sprengel Award \$100 and a certificate to Jillian Borthwick, Hoffman Estates, IL, for the best design project by a G.E. junior;
- Bernt O. Larson Project Design Award (first place) \$150 and a certificate each to Bruce Atkins, New Berlin, IL; Andrew Wang, Libertyville, IL; Bradley J. Whitmore, Coal Valley, IL for their project, "Design of a Two Position Turntable." Prof. Mark Spong was faculty advisor.

Second prize of \$75 and certificate each to William R. Horvath, River Forest, IL; Jerome W. Jarvis, Wooddale, IL; Jon J. Smejkal, Flossmoor, IL for "Modification of Material Handling for a Paint Kit Line." Prof. Wayne J. Davis was faculty advisor.

# **Faculty Notes**

#### Prof. Ramavarapu Sreenivas

- gave an invited seminar "Supervisory Control of the Untimed Behaviors of DEDS" on the 18th of February, 1994, at the Systems Science and Mathematics Department of Washington University at St. Louis.
- is a member of the Conference Editorial Board for the 33rd Conference on Decision and Control to be held in Orlando, Florida this December. He is also a member of the Technical Program Committee of the 37th Midwest Symposium on Circuits and Systems to be held in Lafayette, Louisiana this August.

### Prof. Mark G. Strauss

- is currently the program director for a 3-year federally funded graduate program to train rehabilitation engineers;
- has submitted a \$1.6 million proposal to the National Science Foundation to explore impediments which face students with disabilities in pursuing a degree in math, engineering or science.

### Prof. Deborah L. Thurston

- has been appointed Associate Technical Editor for The American Society of Mechanical Engineers, **Journal of Mechanical Design** in the area of Design Theory and Methodology;
- also been appointed Area Editor for another technical journal, The Engineering Economist.

### Prof. Yong Se Kim

- will present a plenary session talk at IFIP Conference on Feature Modeling and Recognition in Advanced CAD/CAM systems to be held May 1994 in Valenciennes, France. The paper, co-authored with G.E. graduate student, Sreekumar Menon is entitled "Cylindrical Features in Form Feature Recognition Using Convex Decomposition;"
- will present a paper, "Handling Blending Features in Form Feature Recognition Using Convex Decomposition," at the 14th ASME International Computers in Engineering Conference in September 1994 at Minneapolis, MN; The paper is coauthored by Sreekumar Menon;
- is chairing the Artificial Intelligence and Feature-Based Design and Manufacturing technical area at the 14th ASME International Computers in Engineering Conference.

## **Alumni Notes**

1933 Arthur P. Bear is retired and resides in Pearland, TX.

1937 Walter L. Black, MS '70, Johns Hopkins U., has retired from Aai Corp., Cockeysville, MD. He resides in Fallston, MD.

1941 Herbert O. Ireland, MS'47, Ph.D. '55, who is Professor Emeritus of C.E. is living in Gilman, IL.

1947 L. Thaxton Hanson, JD '50, U of Mich., died at his California home last fall. He was retired from the California Div. One Court of Appeal.

1950 J. William Bullock, MS (Geography) '55, of Colorado Springs, CO, recently was awarded a Certificate of Honor from the National Aerospace Association for "exceptional contributions to the fields of flight operations and weather research."

1953 Richard W. Reynolds, MS (ME) '58, is serving on the UI Athletic Advisory Board as a representative of the UI Alumni Assn. He retired as director of mechanical research for Sundstrand Aerospace, Rockford, IL after 34 years.

1957 Kenneth Anderson, President, Anderson Seal Co. Inc., recently developed a system with others to place a corrosion resistant concrete in concrete pipes using the packerhead system.

1961 Randal M. Smith, MBA '63, of Kokomo, IN has retired after more than 30 years with PPG Industries.

1963 Gresham T. Brebach, Jr., MBA '64, recently was promoted to Vice President, Systems Integration and Professional Services, Digital Equipment Corp., Maynard, MA. He resides in Darien, CT.

W. Jay Lovelace, MBA '67, U of So. Florida, has been promoted to Vice President-General Manager, Satellite Systems, Honeywell, Inc., Phoenix, AZ. This "high tech" division designs controls for satellites and other spacecraft including space shuttle and space station. He resides in Scottsdale, AZ.

1965 Ronald J. Kessner of Orlando, FL, has been elected Vice President of the American Society of Heating, Refrigerating and Air Conditioning Engineers. He is regional sales and marketing manager, Carrier Corp. of Florida.

1967 Paul Rimington, MBA'75, U of Chicago, was a member of a committee sponsored by the National Institute of Standards and Technology (NIST) that provided input for a National Research Council report: Learning To Change - Opportunities to Improve the Performance of Smaller Manufacturers. Paul is President of Diemasters Manufacturing, Inc., an OEM contract manufacturer of metal stamped, fabricated and assembled parts. He resides and works in Elmhurst, IL.

1969 Roland C. Wolff, Danville, CA has formed the International Business Development Co. in Blackhawk, CA. Formerly he was Vice President and General Manager of the Westinghouse Electric Corp.

1970 James P. Krakora, MBA '86, U of Chicago, is project manager for Network Management and Operations for Motorola's Iridium Satellite Communications Project, Chandler, AZ. He is a resident of Gilbert, AZ.

1971 Bruce A. Huber, MBA '74, Harvard U., has been named President of Ruppman Marketing Technologies, Peoria, IL. He resides in Morton, IL.

1972 Dennis D. Lane, MS (CE) '73, Ph.D. (CE) '76, has been designated as N.T. Veatch Distinguished Professor of Environmental Engineering, Department of Civil Engineering, University of Kansas.

# UI

### UI Day at State Fair

The annual University of Illinois Day at the Illinois State Fair will be held Monday, August 15 at the State Fairgrounds, Springfield.



### **Important Dates to Note**

Summer Session Begins
Summer Session Exams
Aug. 5-6
Fall Classes Begin
Aug. 25
Homecoming Weekend
Oct. 1-2
Thanksgiving Vacation
Fall Classes End
Pecember 9
Fall Exams
December 12-17

### New Engineering Library Opens on March 15

The new Grainger Engineering Library located on Springfield Avenue between Burrill Drive and Mathews Avenue opened for business on March 15.

The formal dedication will be held in October.

The \$26 million project was made possible by an \$18.6 million donation from the W. W. Grainger Foundation.

Collections from three sites - Engineering Hall, Altgeld Hall and the Main Library - will be transferred to the new facility.



#### 1984 Reunion Scheduled

The ten-year reunion of the class of 1984 will be held September 10 prior to the Illini-Missouri football game. Complete details are available from the Alumni Association Office.



1976 William Scott Bennett, MS (EE) '78, is senior staff engineer, Martin Marietta Astronautics Group, Denver, CO. He is a resident of Englewood, CO.

John B. Holz, MS '81, has been promoted to Director of RISC Systems Marketing by the IBM Corp. of Somers, NY. His new assignment will have him based in Tokyo, Japan.

1977 William C. Chedister, is Vice President of Sales for Circle Systems, Inc., Hinckley, IL. He has recently moved from Batavia to Geneva, IL.

Steven E. Mair, MBA '79; JD '85, U of Pacific, has accepted an appointment as General Counsel, McLaren/Hart Environmental Engineering Corp., Cordova, CA. For the past eight years he has conducted a private practice in Sacramento, CA where he resides.

Gregory R. Martin, MBA '79, Western II. U., has been named Manager - National Accounts, Bently Nevada Corp., Minden, NV. He has moved to Naperville, IL.

1979 Jay Richard Goldberg of Libertyville, IL resigned his position last year with Surgitek, Inc. to become a full-time doctorate student at Northwestern U. in Biomedical Engineering. He has a Walter P. Murphy fellowship. He recently was issued his sixth patent.

1980 Thomas F. Taylor has been assigned as operations officer, Strike Fighter Squadron Twenty-Five at Naval Air Station, Lemoore, CA. The Squadron is an FIA-18 Hornet Squadron has been recognized as the best fighter squadron on the West Coast. LCDR Taylor also has been qualified as a combat strike leader and a night vision goggle instructor.

1981 John R. Regan, MS'84; MBA '89, U. of Chicago, is employed with Apex Investment Partners, Chicago.

1982 George W. Perkins recently was discharged from the U.S. Marine Corps.

Shannon Dale Reynolds has accepted a position as Area Technical Specialist, Novell, Inc., Dallas, TX after 12 years service with IBM. He resides in Euless, TX.

David Taylor is stationed at Cecil Field, FL with the VFA-131 "wildcats" a squadron that deploys with The Carrier Battle Group Seven aboard the USS George Washington. The Navy's newest nuclear-powered aircraft carrier. Lt. Cmdr. Taylor, who lives at Orange Park, FL, serves as an administrative officer on the ground overseeing The Squadron's correspondence and personnel records.

1983 Joe L. Brittin, MA (Management Information Systems) '91, Sangamon State U., is a nuclear safety engineer with the Illinois Department of Nuclear Safety. The Brittin's had a son born October 22, 1993.

Michael J. Harrison, MBA '89 SMU, is a manager, Change Management Services, Andersen Consulting, Phoenix, AZ.

Gregory J. Hnilicka has been a physics teacher for the past 2 1/2 years at Metamora Township High School. He formerly was a senior project engineer with Sundstrand Aviation.

Cynthia B. Moeller Werbach of Brighton, CO, is a project engineer with Hughes Aircraft Co. She gave birth to her first child on November 12, 1993.

1984 Tom Clarke, MBA '93 UIC, has been employed as a mechanical engineer with Kohler Co., Kohler, WI. Clarke who resides in Sheboygan, WI, works with the Advanced Technology Group of the plumbing and products division.

Ervin Scott Eiler, MBA '93, U of Mich, is employed by Electronic Data Systems, Troy, MI.

Kevin W. Krak, Marengo, IL, is Vice President of Operations, Gallant Construction.

Thomas A. Mulholland is manager, industrial sales, Public Service Co. of Colorado, Denver, CO. He makes his home in Wheat Ridge, CO.

Michael C. O'Connor is a printing systems marketing executive, Xerox Corp., Boston, MA.

1985 Mary Ann Bitz-Widing, MS'87, has been promoted to energy systems engineer at Argonne National Laboratory Decision and Information Sciences Division. She will be responsible for design, development and evaluation of computer systems in support of energy, military planning, decision making and information systems projects.

Tim Kalafut, MS (Manufacturing Management) '93, GMI Engineering and Management Institute, has been named Transmission Supplier Quality and Purchasing Team Leader, Saturn Corp., Spring Hill, TN. He resides in Franklin, TN.

Joseph J. Ketowski, MS (ME) '86. Northwestern, has been appointed chairman, Pre-engineering and Manufacturing Technology, Oakton Community College, DesPlaines, IL. He has been at OCC for the past two years, teaching CAD/CAM, CMC, Robotics and Mechanical Design. A first child was born in April 1993.

Paul G. Stewart has been promoted to account executive, Johnson Controls, Inc., Cleveland, OH. A second son was born in April 1993.

John S. William, MBA '89, U. of Chicago, has been named Vice President, Mortgage Securities Trading, Goldman, Sachs and Co., New York City. He resides in Maplewood, NJ.

1987 Mun Young Choi, Ph.D. '92, Princeton, is a faculty member in the mechanical engineering department at UI-Chicago. His research will focus on fundamental combustion, optical diagnostics of reacting flow and practical fire studies. Recently married to Suzanne Kim of Potomac, MD, Choi resides in Chicago.

Laura Lavering-Gesell Thiel, MS'87, is a member of the technical staff of MRS Inc., Oakton, VA. Recently remarried she has moved from Los Angeles, CA to Springfield, VA.

Jim Haack, MBA '93, Wash. U., is a Corporate Product Manager with L Comp Inc., distributor of electrical hardware. He resides in St. Louis, MO.

Neil T. Wilkie, MEA '92, Va. Tech., has been promoted to Design/Assembly Coordinator, PAC-FAB Inc., Sanford, NC. He became a NC registered professional engineer in June 1993. A daughter was born in July 1993.

1988 Jacquelyn Sue Beller McGroarty, MS'90, has been promoted to senior clinical information specialist, R. W. Johnson Pharmaceutical Research Institute, So. Raritan, N.J. She resides at Neshanic Station, NJ.

Theodore C. Botimer, Ph.D. '93 MIT, is an Assistant Research Engineer, Institute of Transportation Studies, U. CA-Berkeley. A resident of San Francisco, he currently is working on a feasibility study for high speed rail in LA to San Francisco corridor.

Robert L. Erickson, MS'90, has accepted a position as software engineer with Health Star, Inc., Riviera Beach, FL. He resides in Ft. Lauderdale.

**Sharon M. Sowers**, MS'90, of Rochester Hills, MI is an Engineering Systems Engineer, EDS, Detroit, MI. A baby girl was born to the Sowers in July 1993.

1989 Kristin Callaway Chapman, JD'93 No. Il. U., is an associate patent attorney, Sundstrand Corp., Rockford, IL. She recently moved from Rockford to Janesville, WI.

William V. Howard, Woodstock, IL, has been promoted to chief engineer-estimates with E. W. Zimmerman Construction Products, Inc. He recently became the father of a baby girl (Sept. 1993).

Pamela Lappin Horn has been named supervisor, Product Development Engineering, UARCO Inc., Barrington, IL. She is a resident of Bartlett, IL.

Thomas J. Maas, Fishers, IN, is a quality assurance supervisor, Inland Fisher Guide, Division of General Motors, Anderson, IN.

**Deborah L. Pierson**, MBA'93 SMU, is a Data Marketing Support Manager, MCI Telecommunications, Richardson, TX. She is a resident of Dallas, TX.

Karen A. Shinefulg, Highland Park, IL, has been named systems engineer, Abbott Laboratories, Abbott Park, IL.

Kris Allyn Warmann, Ypsilanti, MI, is a product design engineer, Ford Motor Co., Dearborn, MI.

1990 Lori B. Gardberg, Aurora, IL, has accepted a position as Product Specialist (technical marketing), NALCO Chemical Co., Naperville, IL.

Chris Grimes has been promoted to design engineer, Rehrig Pacific Co., Los Angeles, CA. Grimes was transferred from Dallas, TX and now resides in Manhattan Beach, CA.

Julie Ann Lipper has been promoted to project coordinator, Plant Engineer for Exxon Chemical, Baton Rouge, LA.

Michael Peter LoMonaco is a sales engineer with The Trane Company, Grand Rapids, MI.

Jay A. Saltzman, JD '93, U. of Mich., is an associate with the Fitch, Even, Tabin and Flannery Patent law firm of Chicago. He was recently admitted to the bar in Illinois.

Michael A. Scott, MS'93, has been employed as the first Illinois rehabilitation engineer with the Illinois Department of Rehabilitation Services. He will provide assistive technology services/devices for individuals with disabilities across the state and will provide technology-training for the department's staff.

Stephanie Ann Connolly Vives, MS (Operations Research) '92 MIT, is a quality engineer with Ford France S.A., Charleville, France. She was married to Guillaume Vives in August 1993.

1991 Scott K. Essington, MS/MBA '93, has been employed as a product planning analyst, Ford Motor Co., Dearborn, MI. He will be the first two-year rotational training program in light truck product development in June.

Valerie Elizabeth Keller, JD '94, U of Mich, will become an associate with the Wiley, Rein and Fielding law firm, Washington, D.C. in October.

Steven P. Seaney, MS (ME) '94, U. of Wis-Madison, will receive his advanced degree in May. He was married to Lisa Marie Conn last March.

James R. Taylor is program manager, Office of Technology Development, U.S. Dept. of Energy, Germantown, MD. He is developing mixed waste treatment technologies for the Rocky Flats Plant near Denver, CO, a former weapons production site.

Jinah Yun has accepted a position as project engineer with Sargento Cheese Co., Plymouth, WI. She formerly was a maintenance planning engineer with Oscar Mayer Foods Corp.

1992 Craig A. Bridell has been employed as a project manager with ARCO Construction Co., O'Fallon, IL, a design-build general contracting and construction management firm specializing in distribution, office/warehouse and industrial facilities.

Dave Briglio, Barrington, IL, is a staff engineer with Midwest Consulting Engineers, Inc., Rolling Meadows, IL.

Eric H. Chern has accepted a position as trader with O'Connor and Associates, Chicago. The firm has a limited partnership with Swiss Bank Corp., which trades derivative instruments throughout the world.

Christopher D. Lux is a field engineer with Commonwealth Edison Co. He is a resident of Mount Prospect, IL.

Mindy Beth Souden has been named Engineer II with Sargent and Lundy, Chicago.

1993 Lt. Steven R. Berger is a tank platoon leader in The Republic of South Korea with the 2172 Armor Battalion.

Thuy-tien Hoang is an extraction supervisor for Central Soya, Indianapolis, IN. He resides in Brownsburg, IN.

Michael Allan Johnson has started his own business, Midwest Construction and Excavation, Inc., Paxton, IL.

James Anthony Ringenbach is an application engineer, Bison Gear and Engineering Corp., Downers Grove, IL. He obtained the position through the GE placement service and George Thomas (GE '83) now vice president of Engineering for Bison.

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Robert W. Evans, Editor Department of General Engineering 117 Transportation Building 104 S. Mathews Urbana, IL 61801