

The Pelican

A Newsletter for the F.I.T. Family

VOLUME XIII

JULY, 1981

NUMBER 7

F.I.T. team aids Shuttle preparations

A research team at F.I.T. that developed design criteria for systems to remove liquid fuel fumes from various Space Shuttle operations has been awarded a contract by NASA to continue work on the project.

The recent award of a \$63,000 contract to F.I.T. totals nearly \$500,000 support for work that began in 1973.

"The vapor removal systems designed are in use at Kennedy Space Center at areas where liquid fuel and liquid oxidizer operations are located," explained Dr. John Thomas of the Medical Research Institute.

It is the mixing of fuel and oxidizer that produces power for the Shuttle in space. On the ground, systems are used at the launch pad, at the Orbiter Processing Facility where spacecraft are refurbished for re-launch, and at the facilities where the liquid materials are stored.

"We are proud to be a small part of the great Shuttle team effort," Dr. Thomas said.

He is serving as study manager on the new work, and will tackle the project with co-investigators Dr. Ronald Barile of the Chemical Engineering Department and Dr. Thomas Bowman of the F.I.T. Mechanical Engineering Department.

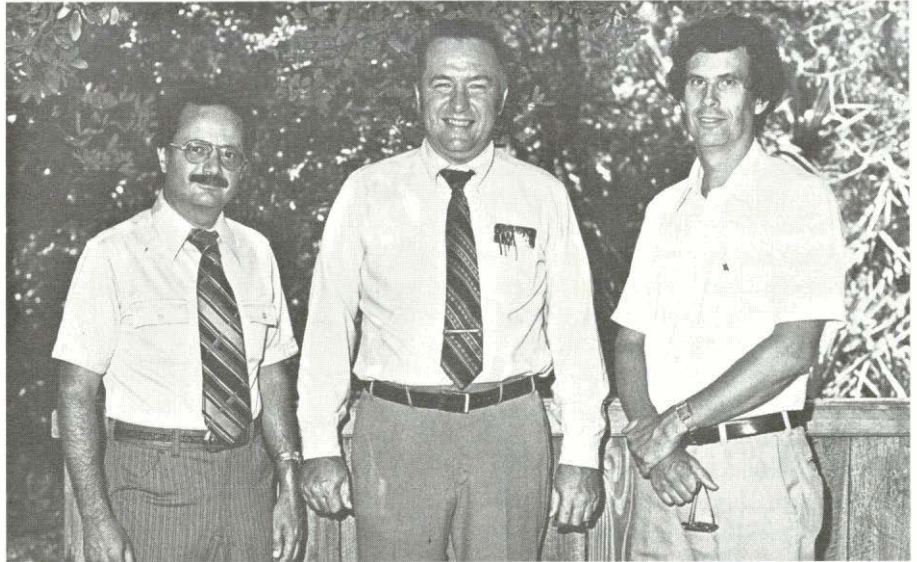
The vapor removal system used in Shuttle operations relies on a solution pumped through spray nozzles, with vapors passed through the spray.

"Now that we've had a launch, we know more about what the problems are," Dr. Thomas said, explaining that the systems "worked very well." But the loading of the Shuttle orbiter indicated the systems must have a larger capacity than first believed necessary, he said.

New work was also mandated by an expected stiffening of environmental standards in the near future and to reduce operational costs, the researcher said.

Dr. Thomas explained that the new contract will allow work to progress during the next year, with the objective of obtaining an optimum hypergol vapor removal system to be operational as Shuttle launches begin to occur on a regular basis.

Dr. Thomas has been co-investigator or study manager on all the related NASA contracts since 1973. In addition to his NASA work he has conducted research in



From left, Drs. Barile, Thomas and Bowman

the areas of alternative liquid auto fuels, pesticide carcinogenesis, influenza, syphilis, and immunofluorescence. He is currently teaching environmental toxicology.

Dr. Barile recently joined Chemical Engineering after spending 14 years on the faculty at Purdue University. Dr. Barile has 17 years of research and teaching experience in the general fields

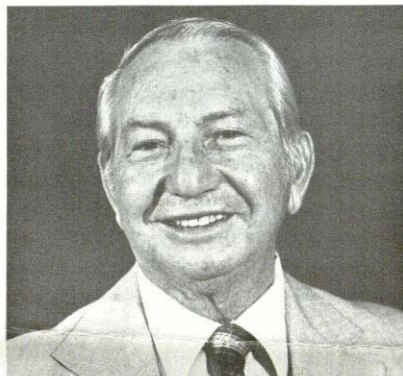
of heat, mass, and flow phenomena occurring in fluid particle systems. Most recently, he was a principal investigator in an artificial kidney project.

Dr. Bowman, head of Mechanical Engineering, managed most of the earlier F.I.T. contracts. He also serves as director of F.I.T.'s Center for Research on Energy Alternatives, and has developed solar cookers now being used in Egypt.

Samuel Foosaner joins Board

The election of Samuel J. Foosaner to the Board of Trustees has been announced by President Keuper.

"The university is pleased and honored that a man of Mr. Foosaner's leadership ability has joined our Board of Trustees," Dr. Keuper said of the election.



Samuel J. Foosaner

Foosaner is a graduate of the University of Pennsylvania and Rutgers Law School. He established his practice in New Jersey.

Now a Cocoa Beach resident and well known throughout Brevard County, Foosaner is noted nationally as a prolific writer on the subject of taxes. His expertise in tax law has been extended through service as a guest lecturer at colleges and universities in this country as well as in South America.

Foosaner is also founder and former chairman of the board and president of the Foundation Life Insurance Company of America.

Also an advisor to members of Congress since 1943, Foosaner is a member of the American Bar, Inter-American Bar, International Bar, as well as a member of the bar in Essex County, N.J., and in the State of New Jersey.

Campus Notes

F.I.T. participation in the recent 45th annual meeting of the Florida Academy of Sciences was the largest ever for the university, with 38 people attending. F.I.T. offered the session 12 percent of all papers delivered to the meeting, held at the John Young Center in Orlando on April 30, May 1 and 2.

Officers at the meeting included several from F.I.T. Dr. **Richard Turner** of Biological Sciences served as program chairman. Dr. **Richard Pierce** of Oceanography and Ocean Engineering became chair this year of the Environmental Chemistry section. Dr. **Dean Norris** of the same department became chair of the Atmospheric and Oceanographic Science section. And Dr. **E. F. Strother** of Physics and Space Sciences became presidentelect for the '82-'83 term.

The Department of Biological Sciences offered seven papers describing the results of research. Presenting the papers were Dr. **William S. Alevizon**, Dr. Glenn M. Cohen, and Dr. Gary N. Wells. Assisting with the papers were students **D. Colton**, **W. A. Estabrooks**, **P. V. Gelzinis**, **W. S. Hersing**, and **R. F. Osgood**.

Oceanography and Ocean Engineering offered 12 papers at the meeting. The presentations were by Don Anne', **Elizabeth Cantrell**, **James Clausner**, **L. S. Friedersdorff**, **Mark Hansen**, **F.L. Hushla**, **Robert Johnson**, **David Meyer**, **L.E. Parson**, **Muk Peterson**, **Frank Saksaa**, and **Charles Venuto**. Paper coauthors included Dr. J.E. Breeding, **R. Grant Gilmore**, Dr. Pierce, Dr. **Donald Stauble**, Dr. **John Trefry**, Dr. **Terrell Roberts**, Dr. **Norris**, **Brad Weichert**, and **Robert Trocine**.

The oceanography papers covered topics such as drilling fluids, beaches, dredging, herbicides, and metals in fish.



EARLY BIRDS at the monthly breakfast staged by the **Melbourne Area Chamber of Commerce** at F.I.T. include, from left, Dr. **Bury Fullerton**, **Tom Adams**, Florida **Lieutenant Governor Wayne Mixson**, and Melbourne **Mayor Harry Goode**. The **Lieutenant Governor** during his visit of the university encouraged both business people and **educators** to prepare for population growth in Florida that is inevitable.

Also presented at the meeting were two technical papers by Dr. Strother. One was coauthored with **J.A. Smith**, a former graduate student in the Physics and Space Sciences department, and the second with **J.J. Pasqua**, an undergraduate in Space Sciences. The papers dealt with the brightness of the twilight sky, and the effect of solar-lunar tidal forces on the atmosphere.



OFFICERS of the F.I.T. Club of **Sigma Xi scientific research fraternity** recently installed included, from left, Dr. **Richard Turner**, treasurer; Dr. **Donald Mason**, past president; Dr. **Anne Rowe**, president, and Dr. **Arvind Dhople**, presidentelect. Not pictured is Dr. **Alan Rice**, secretary.

Drs. **Arvind M. Dhople** and **Eleanor E. Storrs** of the Medical Research Institute, and former staff member Dr. **H.P. Burchfield**, were invited speakers at the sixteenth annual meeting of the Mexican Society of Leprology.

The meeting and symposium on clinical diagnosis, bacteriology and histology of leprosy attended was held May 4-6 in Culiacan, Sinaloa, Mexico.

Dr. Dhople's paper was entitled "**Basics** for investigating the physiology and cultivation of *Mycobacterium leprae*." The **Storrs-Burchfield** paper, "First demonstration of **Koch's** postulates for *M. leprae* infections," was published in full in two installations in the "Sinaloa Sun," the leading newspaper of Culiacan. There are about **2,200** registered cases of leprosy in the state of Sinaloa.

At a **symposium** on the **epidemiology** and control of leprosy, **Ma. Eug. Amezcua de Bernes** presented a paper on the tentative diagnosis of leprosy in wild armadillos captured west of Mexico City.

Tissues were taken by Dr. Burchfield to the Center for Disease Control in Atlanta, and to MRI. Drs. Dhople, **Joseph Ziegler** and **Storrs** found that they contained small numbers of acid fast bacilli which grew like *M. leprae* in the **foot** pads of mice.

Dr. **Amezcua** cautioned that more work **must** be done before it can be concluded that armadillos in Mexico are naturally infected with leprosy.

Prior to the Mexico meeting, Drs. **Storrs** and **Burchfield** visited **George Gaylord Simpson**, Professor Emeritus at the University of Arizona, Tucson, to discuss the evolution and taxonomy of armadillos in connection with publications they are now preparing.

Simpson is the leading vertebrate paleontologist in America, discovered a prehistoric armadillo, "**Dasybus bellus Simpson**" in Florida and is author of a recent book, "Splendid Isolation."

Vocational and career testing and counseling is available throughout the summer to all students, faculty, staff and dependents. For further information, contact the Center for Student Development, extension 337. Director of the center is Dr. **Thomas H. Harrell**.

Notes

Dr. **Anthony Cook** of the New University of Ulster, Northern Ireland, is spending several months as a visiting investigator in the Biological Sciences, working in Dr. **Kerry B. Clark's** laboratory.

Dr. Cook, who received his **Ph.D.** at **Cambridge University**, is a specialist in the study of molluscs. He has been studying Florida **slugs**, relatives of snails, during his stay at F.I.T.

Dr. **John C. Hozier**, associate professor of Biological Sciences, has received an additional \$26,000 from the Environmental **Protection Agency** in support of his research on chromosomes.

Pam Hohson recently attended the annual membership meeting of the Southeastern Library Network in Atlanta. The session focused on topics including **automation** of libraries.

The Library circulation staff has a new member. Jane **Shatto**, who will work in the place of Diane **Shahroozi** (who began maternity leave in May).

Joanna Hanson, formerly a member of the Security Office staff, is now secretary to the Purchasing Department. She replaces Gloria Lynch, who recently resigned.

The Canaveral Section of the American Society of Mechanical Engineers (**ASME**) recently featured as guest speaker **Thomas Alexiou**, a mechanical engineering senior. He presented a talk given to the **ASME Regional Student Conference** in April.

At the same **meeting** a certificate from **ASME** was presented to **Kenneth Revay**, mechanical engineering junior, recognizing him as the "Outstanding Member" of **F.I.T.'s** student section of the organization.

Sylvan Chasen of Lockheed-Georgia Corp. visited F.I.T. recently to offer a **presentation** on computer-aided design for the Mechanical Engineering Graduate Seminar.

F.I.T. recently hosted a group of participants in an international seminar on non-conventional energy, being held in Miami at the time. Dr. **Marcelo Alonso**, director of **F.I.T. Research and Engineering Inc.**, was one of the leaders of the conference and arranged the visit. Dr. Tom Bowman told visitors of current activities and past accomplishments by the university in the field of **non-conventional energy**.

Dr. Bowman recently attended the Southeastern Mechanical Engineering Department Heads committee meeting in Asheville, N.C. He was elected to a three-year term as the organization's Chairman of the Region XI.

Dr. **Ed Strother** of Physics and Space Sciences was recently the featured speaker before the Central Florida Astronomy Society, Meeting at the John Young **Science Center** in **Orlando**, approximately 75 society members and guests heard Dr. **Strother** speak on "Future Planetary Conjunctions, Oppositions, and Alignments."



READY to roll with F.I.T.'s "mini-baja" vehicle are, from left, Larry Bedwell, Ken Revay and Rick Henry.

All-terrain vehicle concocted

By **Doug MacCullagh**

For the first time in the university's history, an F.I.T. team recently made a run at winning the 1981 Mini **Baja** East competition for all-terrain vehicles emerging from engineering schools.

The respectable showing that resulted caused team members to heap praise on members of the F.I.T. community who helped in the effort that culminated in competition at Tennessee **Tech**. Also thanked were businesses who aided the project.

Sent kudos by the vehicle team were the university and individual supporters including Dr. Anne Rowe, Palmer **Stiles**, Dr. Thadeus Czyewski, Dick **Enstice**, Jack Burgess, Dr. Harry Weber, Dr. Tom Bowman, Brenda **Hill**, and collectively the Mechanical Engineering Department, Machine Shop and Maintenance.

Businesses thanked included Economy Tractor Supply, **J&F Industries** and Honeywell Corp.

Doing the thanking were team members Ken Revay, Larry **Bedwell**, Rick Henry, **Bruce Ebersole**, Don **McGreggor**, Paul Hrabrovsky, and Mary Eliote.

The car was built from steel tubing, plywood, and fiberglass. "The car was a group project rather than a class project. We used it to try to get people interested in **ASME**," Revay explained, referring to the student chapter of **the American Society of Mechanical Engineers**.

The car stood up to the Tennessee test. "We were in the top five cars at the end of the **first day**," Henry stated. That included placing second in the load pulling.

A loose wire in the engine caused some stalling problems on the second day of competition.

The F.I.T. team managed to finish twelfth over-all, out of 29 competitors.

"We'll know what to **look** for next year," Revay noted.

Hello Colombia!

President Keuper headed the Florida delegation to Colombia, South America, June 14-20, for the XVI Annual Partnership Conference at Melgar, Colombia.

Other members of the F.I.T. family who participated were Dr. John E. Miller, executive vice president and vice president for academic affairs; Dr. Arthur A. Kimball, alumni director; O.A. **Holzer**, M.D., director of the Student Health Center; Joy Dickens, director of international student affairs; Lois B. Sigler of the Library staff; Dr. **Marcelo Alonso**, director of F.I.T. Research Engineering; presidential administrative assistant Anna Galvin and her husband Joseph, and John Derrick's (School of Aeronautics) son Carl.

One highlight was a visit to the Jerome P. Keuper School in Bogota, where Dr. Keuper announced that through the generosity of the Victoria and Albert **Gildred Foundation** in cooperation with the Florida-Colombia Partners, the children's playground will be paved. Victoria **Gildred** is an F.I.T. Trustee and Vice President of Florida-Colombia Partners.

Florida-Colombia Partners was founded in 1963 by then Florida Secretary of State Tom Adams, now F.I.T. Vice President for **Public Affairs**. It is the oldest of 50 such partnerships now federated under Partners of the Americas.

It has been headquartered at F.I.T. since 1970. As far as it is known, Dr. **Keuper**, who now is president of the organization, is the **only individual** who has attended all 16 of the annual conferences.

Published By **F.I.T.**
Public Relations Department



RICHARD SMITH, Director of KSC, addresses breakfast meeting as Dr. James Lyons, F.I.T. Trustees chairman, looks on.



EDWARD J. DeBARTOLO is congratulated by President **Keuper** and Dr. John Miller on receipt of the honorary doctor of science degree.



KENNETH McLAUGHLIN, Founder and Resident Emeritus of Hawthorne College, talks with Dr. Miller and Dr. Harry Weber prior to commencement.

Commencement observed

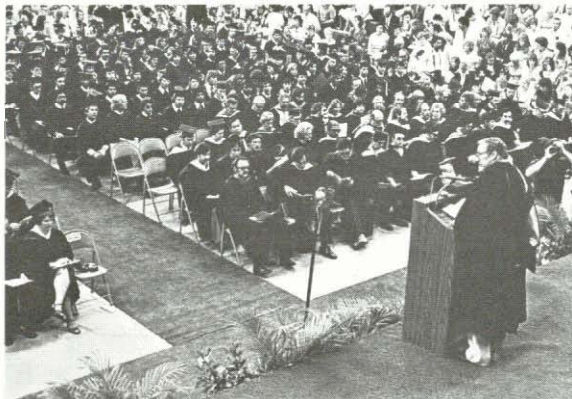
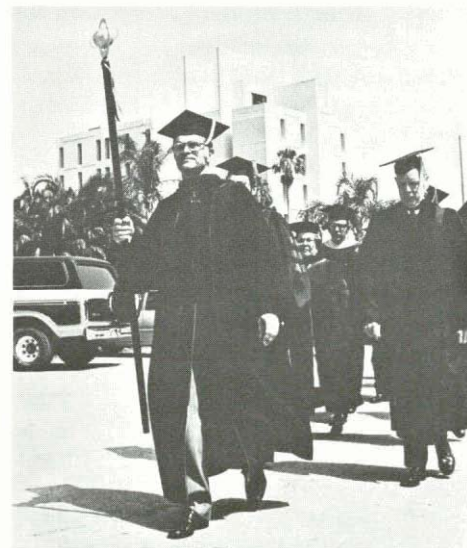
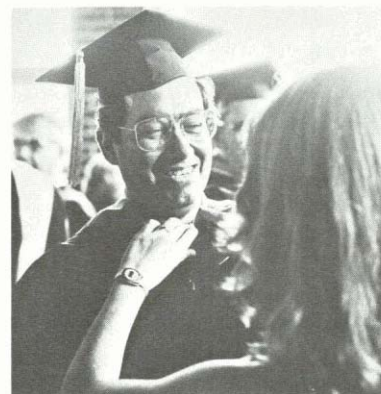
Spring commencement ceremonies at Melbourne marked the award of some 350 degrees, including three honorary doctor of science awards to distinguished friends of F.I.T.

At Jensen Beach, 95 degrees were awarded at the end of the Spring Semester. Martin County Commission Chairwoman **Maggie Hurchalla** was speaker for commencement exercises there.

At Melbourne, Kennedy Space Center Director **Richard G. Smith** addressed students completing degree work. He also was awarded the honorary doctorate, along with a citation noting his outstanding service to America's space program.

Also receiving the honorary doctor of science degree was **Edward J. DeBartolo**, chairman of the board and chief executive officer of the **Edward J. DeBartolo Corporation**. He was cited for being a leader for U.S. business and as exemplifying the opportunity for success still available in America.

Also receiving the honorary doctorate was Judge **Kenneth F. McLaughlin**, Founder and President Emeritus of Hawthorne College at **Antrim, N.H.** Judge **McLaughlin** was cited for his service as a district court judge in New Hampshire, for volunteer service to the state and to the U.S. Government, and as an educator.



John Simmons assumes NCMA post

"They're there to advise, exhort, inspire, cajole, console, watch over, listen -- act on your behalf." That is what members of the National Contract Management Association are told to expect from the organization's regional vice presidents. And in the Southeast, the expectations are focused on John Simmons for 1981-82.

Simmons and other regional VPs accept duties including service on the Association's Executive Council, responsible for running the organization's affairs. About the new officer for the Southeast, NCMA reported in its magazine "Contract Management:"

Before assuming his national duties with NCMA, John Simmons has had a long history of NCMA service at the



John Simmons

chapter level. He is a charter member of the Cape Canaveral Chapter of NCMA, which was chartered in 1963.

Since then he has served as vice president, president for two separate

terms and national director. He is a CPCM and Fellow member of NCMA.

Simmons graduated from the Kansas State University with bachelor degrees in mechanical engineering and business administration.

His career in business spans a 32 year period. He has spent four years with the U.S. Air Force at the Air Force Missile Development Center, five years as a licensed professional engineer; 12 years with Radiation, Inc. and 11 years with Florida Institute of Technology as vice president of fiscal affairs, a position he holds today.

In addition he is a member of the Boards of Directors of University Enterprises Inc., F.I.T. Aviation Inc., and National Printing Inc.