

Lure of deep-sea volcano draws F.I.T. research team into Atlantic

Some 3,000 miles out in the Atlantic Ocean, miles beneath the surface of the water, there exists a volcanic seam in the floor of the sea — evidence that two major portions of the earth's crust are slowly pulling away from each other.

It is suspected that heated, chemical-laden water escaping through the crack has created oases of sea life in the Atlantic that defy the deep-sea darkness — a phenomenon already documented by amazed scientists working in the Pacific Ocean.

A Florida Institute of Technology researcher now reports that a multi-university ocean expedition has turned up evidence to partially answer the scientific suspicions about the Atlantic. Centuries-old sediments being analyzed at the university over the next year will provide additional insights into ocean mysteries.

Recently returned from a month-long expedition to study 1,000 miles of the vast crack in the planet, Florida Institute of Technology's Dr. John Trefry reports that his team's pathfinding work "did find that the Mid-Atlantic Ridge is active... there is venting out there."

In the eyes of the multi-university team, "active" means there is hydrothermal venting along the Mid-Atlantic Ridge. That process involves the emergence of a hot chemical soup from beneath the Earth's crust into the near-freezing blackness of deep sea.

Less than ten years ago scientists were astonished to discover that the volcanic process has created unique communities of sea life in the Pacific Ocean. Where heated water enters the ocean, bacteria feast on hydrogen sulfide to start a many-created food chain that defies the lack of energy from the sun.

"It was the oceanographic find of the 20th century," explains Trefry, an associate professor at F.I.T. Though the vents are essentially underwater volcanoes, they offer

"more of a gurgle than a blast — with a rolling-out of magma (molten rock)." Some smokestack-like vents spew a constant stream of water and chemicals.

In addition to the interest in "the incredible biology associated with the vents," Trefry explained that the vents may also be the site of valuable mineral deposits.

Another reason for scientific interest is the likelihood that the waters of the world's oceans are being constantly cycled into and out of the earth's crust. Cold water pulled into the crust would emerge as hot water laden with chemicals.

"That would mean that the ridges are

playing a large part in the chemistry of the whole ocean," Trefry noted. It has been estimated, he said, that over a 10-million-year period a volume of water equal to the oceans could be cycled.

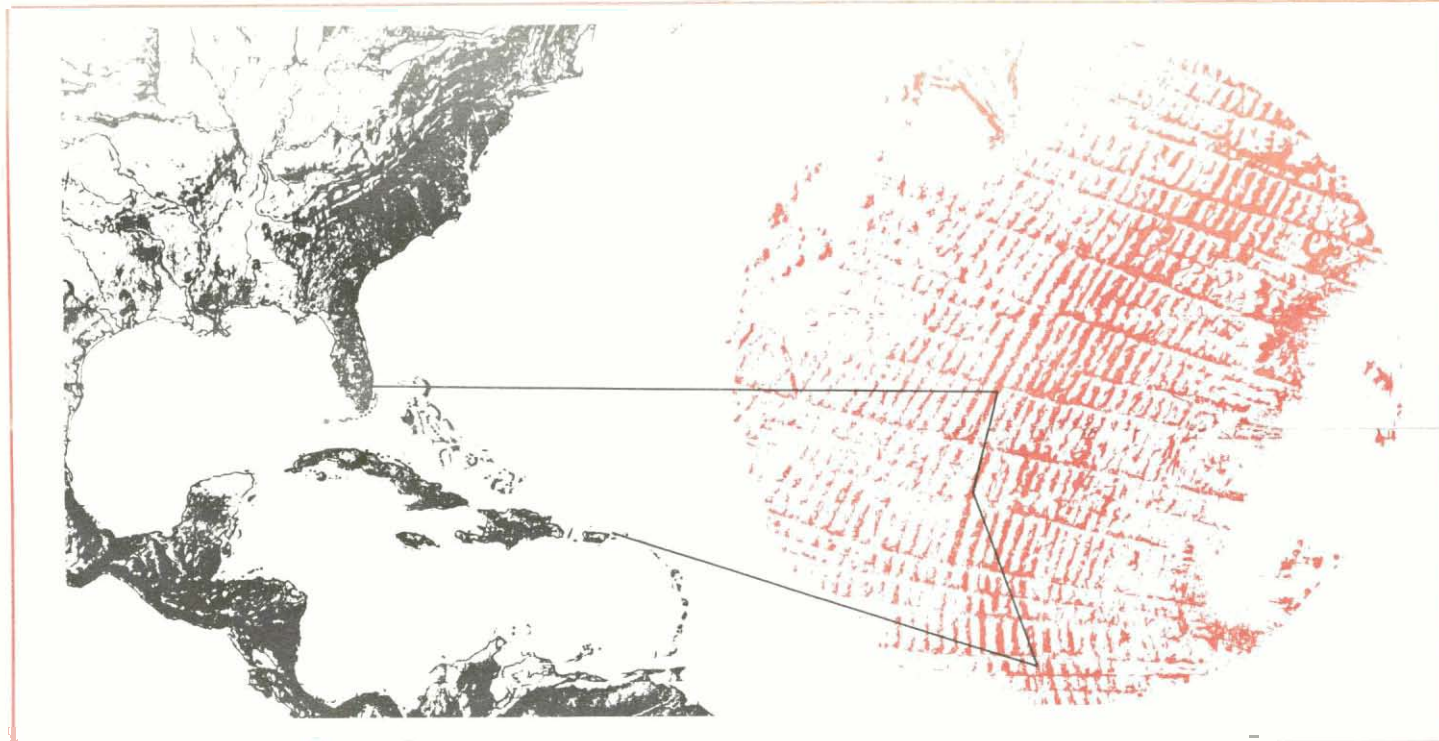
When the National Oceanic and Atmospheric Administration (NOAA) this year mounted the first effort to discover the same process in the Atlantic, Trefry was put on the team because of his reputation as a chemical oceanography researcher. He has been studying chemicals in the Mississippi River Delta for NOAA for several years.

Trefry, along with F.I.T. research associates Robert Trocine and Simone Metz,

Dr. John Trefry

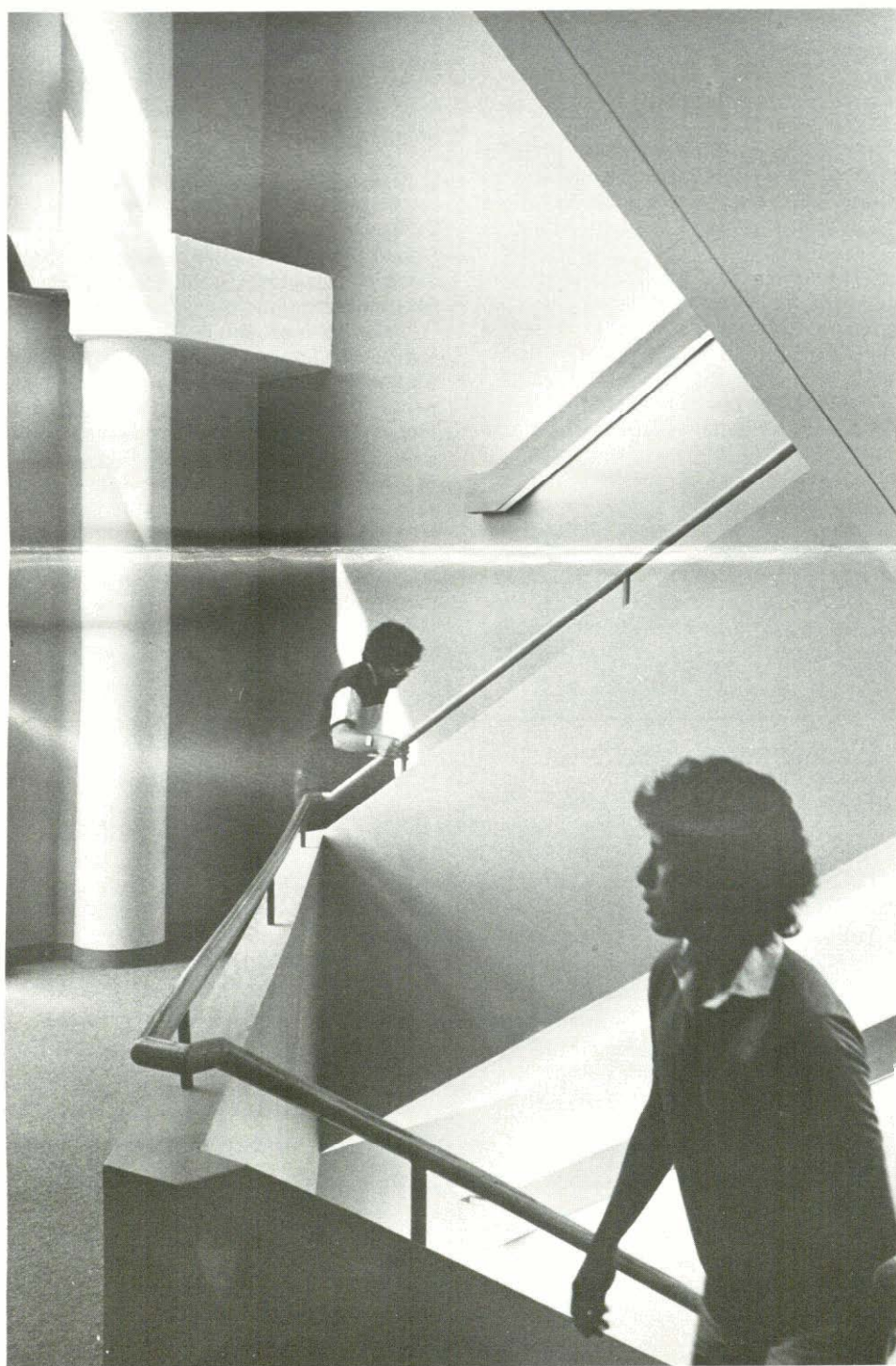


and graduate student Kevin Bull, joined other researchers aboard NOAA's 280-foot ship *Researcher*. Other scientists went from (Continued on Back Page)



Scientific hot spot

F.I.T. researchers joined a NOAA-backed expedition into the Atlantic Ocean that allowed inspection of volcanic activity along a 1,000-mile stretch of mid-ocean ridge. The cruise was the first to seek evidence of hydrothermal venting along the ridge.



Path of knowledge

The expansive four-story Evans Library has opened at the heart of the Melbourne campus, with features ranging from a teaching auditorium to discussion rooms and a microcomputer center. The Individualized Learning Center is also located in the new library.

Florida Institute of Technology

F.I.T. Update

on education • research • alumni

November 1984 • Volume 2 • Number 4

Students aided through 'maze' of courses

Students bewildered by a maze of course work leading to engineering degrees will be getting some new and innovative counseling help from F.I.T. in a program made possible by Radio Shack.

What starts out as a student's reasonable desire to gain a degree in computer engineering or electrical engineering gets more complicated as the years of study go on, explained Dr. John Hadjiligiou, head of the 700-student department that teaches those two disciplines.

"The diversity between the students gets greater as time goes on," notes faculty member Walter Douglass. "They each have unique desires as to what they want to specialize in."

Freshmen and sophomores have many basic engineering and science classes in common, but juniors and seniors may not. Hadjiligiou explained that specializations in study can be critical when a student becomes an engineer looking for a job.

"The timing of a student's courses must be carefully considered," Douglass said. Each student must have completed a strictly-enforced study plan to become eligible for a diploma. For faculty and staff who must counsel students and schedule classes to meet demands, the loose ends can be myriad.

Large amounts of faculty work time have been devoted to routine record keeping, rather than to academic and career counseling. Registration periods are hectic as students have urgent needs for gobs of information. Alison Watkins, the department's student counselor, recalls the queries accompanying the most recent sign-up for classes. "For two solid weeks there was no break."

It was recognized that a computer would be perfectly suited to keeping tabs on the department's students, professors, courses, and curriculums. A properly prepared machine would also cough up needed information on demand.

However, the university's large computers have more pressing work that serves the entire institute. Troubling the big machines with departmental matters "would be like using a bus to take an individual to and from work," said Douglass.

Enter Radio Shack. Last spring the computer company announced a nationwide educational institution contest for the best new computer applications ideas. Douglass was given the lead role in preparing an entry. F.I.T.'s largest department proposed a remedy for a national academic headache for engineering departments. The idea is to utilize small computers to help assure that

(Continued on Back Page)

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William Roberson (BS-Space Sci.) lives in San Diego and is employed by General Dynamics, Convair Division.

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Rkhard Dragani (BS-Comp. Sci.) and his wife, Karen, are the proud parents of a baby boy, John Richard, born in October, 1983. Richard is a systems supervisor for James River Corporation in Norwalk, CT.

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Gary D. Skinner (MS-Math. Sci.) has been promoted to the rank of lieutenant colonel in the Air Force. Gary is the assistant chief of the Computational Division at Kirkland AFB, NM.

W.J. (Bill) Burdis (BS-Air Comm.), a U.S. Air DC-9 first officer, is a member of ASAP. (American Society of Aerospace Pilots). ASAP is a growing organization of professional pilots in training for Space Shuttle flights when the NASA program becomes part of the commercial sector. Bill is employed by U.S. Air, inc. in Pittsburgh. (Reprint in apology for error in last UPDATE.)

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Charles Messina (BS-Mech. Engr.) has just moved to New York with his wife Barb and their three children, Jeanine, Brienne and Steven. Charles is manager of Argon Applications with Union Carbide Corporation, Linde Division, in Tarrytown, NY.

Stuart Medelsohn (MS-OE/Env.) has just graduated from George Mason University School of Law with a J.D. degree. Stuart has also been elected president of Virginia Special Olympics, and lieutenant governor of Kiwanis International As department manager for Analysis and Technology, Inc., Stuart lives in McLean, VA.

75

Daryl Yee Litt (BS-Mgmt. Sci.) has left the Army with the rank of captain, and is now working for Aerosystems Engineering Inc. as the eastern sector marketing manager — including areas in the Far East, Middle East, Africa, Australia, and New Zealand. Daryl now resides in Fridley, MN.

George Staff (BS-Mgmt.) is Executive Director for St. Petersburg Development Corporation in St. Petersburg, FL.

David Robinson (BS-Mgmt. Sci.), a captain in the Army, has graduated from the Combined Arms and Services Staff School. David and his wife Ceceia will be stationed at Fort Knox, KY.

Kose John (MS-CS), associate professor in the Department of Finance, Graduate School of Business, New York University, has been awarded the Battery March Fellowship for 1983-84. Three such fellowships are awarded each year to promote academic research.

Birendra Sahjwani (BS-Elec. Engr.) has received an MBA from Widener University in Chester, Pennsylvania.

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Bill Hagan (BS-Air Comm.) has been recalled by United Airlines as a B-727 second officer. Bill is based at O'Hare International Airport in Chicago, and is a member of the American Society of Aerospace Pilots.

Michael Roland Fedock (BS-Mech. Engr.) and **Nancy Anne (Sullivan) Fedock (BS-Math.)** were married June 1983 and were expecting their first child this August. They are employed by Wagner Spray Tech Corp and Honeywell Inc., respectively. The couple now resides in Minnetonka, MN.

William Benson (BS-Bio.) has just completed his Ph.D. in toxicology at the University of Kentucky and has accepted a faculty position in toxicology at NE Louisiana University. He and wife Mary and their two sons will be moving to Louisiana in June.

Alan Wilson (MS-Prof. Mgmt.) has for the last 16 months been a member of a special task force charged with the management of

two major subordinate commands of the U.S. Army Materiel Development and Readiness Command (DARCOM). In September, Alan will return to the Management Directorate in AMCCOM as a senior management analyst. Alan currently resides in Bettendorf, IA.

Dr. Roy Finley (BS-Bio.) has completed residency in family medicine at the University of Cincinnati, and was to begin active duty with the Air Force at Homestead AFB in Florida in August. Roy's new address is 1433 Kitty Hawk, Homestead, FL 33033, and he would welcome letters from old friends.

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Joseph Shelby (BS-Air Comm.) was married April 25, 1981. He and wife Susan are kept busy by their twin, ten-month-old sons, and with restoring their turn-of-the-century house in West Orange, NJ. Joseph works for G.A.B. Business Services, Inc. as an aviation loss specialist.

Harvey Harmon (BS-OE) is currently on a leave of absence from Dhahran, Saudi

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Thomas Tanel (MBA) has been selected for promotion to major in the Army by the military traffic management command. Thomas also received the Logistics Engineers' Transportation Management Award for 1984.



Thomas Tanel

Jeanne Flanagan (BS-Ocean.) won a GOLD MEDAL in the 1984 SUMMER OLYMPICS at Los Angeles. She was a member of the first American women's crew team to

Janet (Taylor) Maksut (AS-MT) has married **William Maksut** a J.B.C. grad. They have one daughter, Rachael, who is two years old.

J. Douglas Foye (MS-Trans. Mgmt.) graduated from the Army Command and General Staff College in Fort Leavenworth, KS, in June. He is presently assigned as executive officer for the 105th S&T Battalion, Fort Polk, LA.

Jim Mueller (BS-Env. Sci.) is currently a zoo keeper at Coeur-D-Alene Zoo. Jim is also working on a book about elephants. He is married and has two children, and one on the way!

William Turner (MS-Cont. Mgmt.) is attending the Army War College at Carlisle Barracks, PA. The curriculum of this senior school prepares officers for top-level command positions with the armed forces throughout the world.

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Wayne General (Ph.D.-Psy) is now in private practice in Phoenix at the Arizona Family Learning and Communication Center. Most of the case load consists of marital and family therapy with a smattering of school evaluations and MR/DD evaluations and therapy.

Donald Zehr (BS-Air Comm.), after flying Cessna Citations for Air Niagara LTD in Toronto for two years, has now joined Zevest Development Corp. as a property manager. Donald was married in May, and is presently living in Kitchener, Ontario.

S. Brad Peale (BS-Air Comm.) is an Air Force pilot stationed in Korea. He dropped a line to let us know that he really enjoys the UPDATE and wanted us to extend his hello's to Larry M., Eric S., Mike L. and to tell Steve J. that he wishes he could be there with you!



Peale in flight

Randy Sheldon (BS-Bio./Env.) is a technical sales representative for Travenol Labs. His job entails selling and servicing of blood bank lab materials needed to collect blood and preserve it for transportation. Randy is currently living in Falls Church, VA.

John Meny (BS-Space Sci.) is a systems engineer for Martin Marietta in Denver doing concept definition studies for spacecraft. In September 1983, John married Robin Brooks. Robin works for Martin Marietta as an electrical engineer.

John Bester (MS-Trans. Mgmt.) was recently transferred to Ft. Hood from the military traffic management command's Bremerhaven terminal in West Germany. John is an Army captain.

Franklin Hindman, Jr. (MS-Cont. Mgmt.) has graduated from the Armed Forces Staff College, Norfolk, VA.

Alumni Directory Coming!

The first F.I.T. alumni directory is underway! It will include listings by alphabetical order, geographical location, class and business.

Thousands of listing in this 8" x 5", soft-cover, fully-bound book!

ORDER NOW and take advantage of pre-production price! \$15.00 on or before January 1, 1985. \$20.00 after January 1, 1985.

Pre-production sales price has been extended 2 months, so take advantage NOW!!

Name _____

Address _____

Yes! I would like to order _____ alumni directory(ies).

Enclosed is \$ _____ @ \$15.00 per directory.

Arabia, to pursue his MBA at University of Texas. He received an MS in engineering at University of Wisconsin in 1978. Harvey is employed by Fluor Ocean Services, Inc. as a senior structural engineer.

Gary Meagley (BS-OE) is now operations supervisor for Esso Exploration, Inc. in Singapore. He is presently on the Jim Cunningham rig off the coast of China, drilling for oil.

John Sosnowski (MS-Log. Mgmt.) is a lieutenant colonel in the Army and is presently attending the Army War College at Carlisle Barracks, PA.

George Nebeling (MS-Contract Mgmt.), a major in the Army, has just graduated from the Armed Forces Staff College in Norfolk, VA.

Peter Cuviallo (MS-Cont. Mgmt.), a newly promoted lieutenant colonel in the Army, has assumed command of the 57th Signal Battalion at Fort Hood, TX.

Brent Laurence (MS-Log. Mgmt.) is a lieutenant colonel in the Army and has been stationed for duty at Fort Knox, KY.

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Albert Blaho (MBA) has been promoted to the rank of lieutenant colonel in the Air Force. Albert is an advanced systems acquisition manager at Peterson AFB, CO.

Deborah (McCormick) Conner (BS-Chem. Engr.) is a lieutenant (geophysics officer) stationed in Pearl Harbor, HI.

Charles Westrip, Jr. (MS-Acq. Mgmt.) is currently attending the Naval War College at Newport, RI. Charles is a major in the Army, now residing in Middletown, RI.

Dorell Chambers (BS-Air Comm.) is a first officer on a B-727 for IASCO in Vandeiia, OH.

Brian Crawford (BS-Ocean.) has just returned to the U.S. after six years abroad with the Peace Corps as a fisheries volunteer. He will now be attending the University of Rhode Island to work on his master's in marine affairs.

Stanley Akins (MBA), a major in the Army, has graduated from the Armed Forces Staff College, Norfolk, VA. The five-month program provides intensive education in national and international security.

Steven Squires (MS-Cont. Mgmt.), a major in the Army, has graduated from the Armed Forces Staff College in Norfolk, VA.

Charles Seland (MS-Trans. Mgmt.), an Army major, has arrived for duty in Giessen, West Germany. Charles is director of industrial operations.

capture a gold medal, participating in the eight-with-coxswain crew event. She became the first F.I.T. grad to earn the title of Olympic champion

Nassr Akhtar Danesh (MS-Env. Sci.) is presently the supervisor of medical and industrial toxicology labs in the Industrial Health Center at the Isfahan Steel Plant in Isfahan, Iran.

Thomas Rogers (BS-Air Comm.) has just graduated from the FAA Mike Moroney Center and will be working in the Albuquerque Air Route Traffic Control Center in Albuquerque, NM.

Fernando Calderon (BS-Ocean. Tech.) is doing post-graduate work in marine geotechnics at the University of North Wales in the United Kingdom.

Wayne Sula (BS-Ocean. Tech.) is an ASW marketing engineer with Hazeltine Corporation in Braintree, MA.

John Wysocki (MS-Int'l Bus.) is currently living in Belgium. John is the manager of budgets and systems development for Estee Lauder.

Cruise set for year-end

Join the F.I.T. Alumni Association in a **Gala Seven-Night New Year's Eve Cruise!** The cruise will leave Port Canaveral and sail to Salt Cay, Bahamas; Ocho Rios, Jamaica; Grand Cayman, and Cozumel, Mexico.

Cruise is open to all F.I.T. alumni, family & friends, as well as F.I.T. staff, administration, and seniors graduating December 1984!

Rates are: \$1,104 for inside cabin w/2 lower beds,
\$1,188 for outside cabin w/2 lower beds
\$353 each for 3rd and 4th person in same cabin.

For reservations: complete below and send with \$350 deposit per person to:

YVONNE'S TRAWL
ATTN: F.I.T. Alumni Association
1520 S. Babcock St.
Melbourne, FL 32901

Name _____ Phone _____

Address _____

Inside Cabin _____ Outside Cabin _____ Roommate _____

Please find me a roommate _____ Smoking Non-Smoking _____

Dining: 1st seating _____ 2nd seating _____

update

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"Alumni Notes" are provided by the Office of Alumni Affairs.

Edward Valickus (AS-Fit. Tech) has been Selected as instructor pilot of the month for the 95th Flying Training Squadron. Edward is a first lieutenant in the Air Force, and is stationed at Williams AFB, AZ.

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Joseph Carbon (BS-Chem. Ocean) is currently a commander at Fort Drum, NY, for an Army bomb disposal unit. Joseph has been married for a year now. He and wife **Jennifer**, a registered nurse for public health services, are expecting their first child in January.

Susan Bogden (BS-Bio.) is marrying **George Fraser**, an electronics specialist in the Canadian Air Force, on June 22. They will be honeymooning in Greece. Susan is currently a portrait artist during the day and a duty supervisor with the Canadian Air Force at night. Susan and George will live in Baden Soilingen, West Germany.

Ronald Veirs (BS-Air Comm.) will be married on December 8 in San Antonio, TX. Ron is currently flying F/A-18's at the Naval Air Station in Lemoore, CA.

Edward Stone (MS-Log. Mgmt.) was recently promoted and reassigned after completing three years as a logistics instructor at the Army Logistics Management Center at Fort Lee, VA. Edward will now be at Fort Lewis, WA.

Rebecca Rose (BS-Mar. Bio.) is employed as a forensic chemist analyzing evidence for controlled drugs for the New Hampshire State Police in Concord, NH.

Keith Veren (BS-Bio.) is currently working with Dr. Robert Gallo's group on "Human T-cell leukemia/lymphoma virus." Keith is wing in McLean, VA.

Natalya Ovsianico-Koulikowsky (BS-Mar. Bio.) is working on experimental crustacean mariculture in Matthewtown, Inagua, the Bahamas.

David London (MS-Contract Mgmt.) has just been decorated with the Air Force Achievement Medal at Edwards Air Force Base, CA. David is a captain in the Air Force and is a project engineer with the 1859th Aerospace Test Group.

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Jeffrey Pounds (BS-Air Comm.) has graduated from the Air Force Pilot Training Program. He received his silver wings at Vance Air Force Base, OK.

Dave Thompson (AS-Petro. Tech.) is completing his BS in geology at University of South Florida in Tampa.

David Asherman (MS-Coastal Mgmt.) has recently returned to Maine after years of living and working in California with an environmental consulting firm. David and his wife Cindy are now living in Yarmouth, ME. David is working as a planner with the E.C. Jordan Co., an engineering firm.

Edward Moore (BS-Air Comm.) has graduated from the Air Force Pilot Training Program and has received his silver wings at Vane Air Force Base, OK. Edward will now serve at Clark Air Force Base in the Philippines.

David Stephen Matthews (BS-Air Comm.) is currently working as an engineer in Houston. He is a controls instructor responsible for training America's astronauts on the systems of the Space Shuttle.

Charles Martin (BS-Air Comm.) has graduated from the Air Force Pilot Training Program at Columbus Air Force Base, MS. He was a distinguished graduate of the course. Charles will now serve at Andrews Air Force Base, MD.

William Layman (MBA) has been reassigned to Yuma Proving Ground, AZ. William is an Army captain with Headquarters Company.

Sukhdev Kapur (MS-EE, MS-CS) is presently living in Santa Clara, CA. Sukhdev is a senior software engineer with Fairchild ATE.

Edward Walsh, Jr. (BS-Air Comm.) has graduated from the Air Force Pilot Training Program at Laughlin Air Force Base, TX. Edward will now serve at Westover Air Force Base, MA.

Pam (Smith) Winegar (Tech. Comm.) and **Richard Winegar (Molec. Bio.)** are presently living in Oak Ridge, TN. Richard is working on his Ph.D. at the University of Tennessee, studying the effects of radiation on chromosomes, and how it pertains to birth defects. Pam is working part-time at the university as well.

83

Jerald Heinz (MBA) recently took over command at the Coast Guard Air Station, El-

ington AFB, Houston. He has had a very distinguished career in the Coast Guard and assumed command from Commander Billy Cunningham.

Brian Tenny (BS Space Sci.) is currently living in Pico Rivera, CA. He is an engineer with Northrop.

Louise Jenkins (MBA) has moved to Gainesville, FL with her son Keith. She has been promoted to operations manager with Bear Archery Co.

Frank Thomas (MBA) is presently employed at Johnson & Johnson Home Health Care Inc. in Tampa. He and wife Donna live in Lutz, FL.

James McGee (MS-Trans. Mgmt.) is a transportation officer with the Army. James and wife Linda live in Newport News, VA.

Otis Lee Haislip (MBA) and wife Phyllis are currently residing in Yorktown, VA.

Michael Guthrie (MBA) works for the Army as a transportation system manager. He and wife Judith live in Newport News, VA.

Donald Johnson (BS-Eng) presently resides in Orlando, and is a general engineer for PM Training Devices at the Naval Training Center.

Thomas Brown, Jr. (MS-Trans. Mgmt.) works for the Army at Fort Eustis in VA.

Richard Henry (BS-Engr.) is currently living in Marlborough, CT. He is an engineer with General Dynamics, Electric Boat Division.

Michael Sexton (BS-Air Comm.) has been in 22 states in eight months, working for charter service Hawthorne Aviation, and flying twin engine turboprops. Michael lives in Sandston, VA.

Jeff Miller (BS-Air Comm.) has just been employed by PBA as an assistant operations supervisor. He will be living in Naples, FL.

Charles Mittelstadt, Jr. (BS-Air Comm.) is working with Avilquipo Inc., a division of

Lear-Siegler. He is a customer service representative in Lyndhurst, NJ. Charles is to be married on February 9 to **Brenna Maureen Wall** of Palm Bay.

Thomas Braski (BS-Elec. Engr.) is presently working in the test engineering department on the space telescope for Lockheed (LMSG) in Sunnyvale, CA.

Andre LaRoche (MBA) is executive director at the Gables at Old Farms Forest in Farmington, CT and presently resides in West Hartford, CT.

Ricardo Nunez (BS-Avi. Mgmt.) was married May 11 to **Jacqueline Valladares** and they are expecting their first child. They live in Caribe Dpto. Vargas, Venezuela. Ricardo is a flight engineer on a B-727 for Avensa.

Diego Marquez (BS-Air Comm.) was promoted to co-pilot on Convair 580. Diego flies for Avensa in Caracas, Venezuela.

Kenneth Perry (BS-Math.) has earned his wings as a navigator and will report to Kadena AFB in Japan. There he will fly KC135's.

Paul Siers (BS-Air Comm.) is studying law at the Urye Universiteit in Amsterdam.

Khalid A. Alali (MS-Bio.) is working as an instructor in the zoology department at the University of Qatar. He is also the supervisor for the cytogenetic section in the laboratory department of Hamad General Hospital.

Glen Wattman (BS-Avi. Mgmt.) has been commissioned a second lieutenant in the Air Force. Glen will be assigned to Mather AFB, CA.

84

Thomas Murray (BS-OE) has taken a job in Palm Beach, FL, with Pratt & Whitney Aircraft. Thomas currently resides in Palm Springs, FL.

Patrick Davis (MBA) is a captain in the

Army, assigned to Aberdeen Proving Ground, MD.

Robert East (MS-Log. Mgmt.) is a captain in the Army, currently stationed in Vicenza, Italy.

Robert Gibbs (MS-Human Res. Mgmt.) is a manager for Proctor & Gamble in Huntsville, AL.

Joel Moshe Klein (MS-Cont. Mgmt.) is a research physicist for the research division of CRDC at the Aberdeen Proving Ground, MD.

Ali Nazemi (MS-EE, MS-EM, MBA) and his wife Dawn welcomed a baby boy named **Ali Nazemi, Jr. (A.J.)** on March 31, 1984. Ali is director of Professional Development at F.I.T.

Stan Long (MBA) is department manager for Computer Science Corp. in Prince George, VA.

Robert Schmid II (BS-Env./Aqua.) is working on commercial dolphin culture for Harbor Branch Institute in Ft. Pierce, FL.

Eric Zillmer (Ph.D.-Psy.) has accepted a postdoctoral fellowship in neuropsychology at the University of Virginia Medical School in Charlottesville, VA.

Ralph Perry (BS-Math. Sci.) has graduated from the Air Force Pilot Training Program at Mather Air Force Base, CA. He will now serve at Kadena Air Base, Okinawa, Japan.

Michael Franck (MBA) is a technical publications writer with the U.S. Tank-Automotive Command in Warren, MI.

Nell Cramer (MS-Sys. Mgmt.) is now residing in Newton, NJ, and is a project management engineer for the Army in Dover, NJ.

Karen Williams (BS-Mar. Bio.) is working for a pharmaceutical firm in Fort Lauderdale, FL.

Mary Moore (BS-Mar. Bio.) is in graduate school in Fairbanks, AK, studying marine biology.

William Jeffrey Miller (BS-Bio. Oman) is now working as a dive master in the Cayman Islands in the British West Indies. He recently received his PADI instructor certification.

Dear Alumni:

I hope your summer was relaxing and prosperous! Ours was pretty quiet here in Alumni Affairs; summer vacation program ran smoothly and we've been planning, planning, planning!!!

I think you'll find lots of interesting information and opportunities in this issue, so read carefully and get involved in the fun!!

I'll be visiting several areas this fall and have many alumni interested in starting alumni clubs. If you are interested in getting involved, please let me know. We'll be organizing in the following areas:

- Philadelphia, PA
- Southern CT - General Dynamics/Electric Boat
- Northern NJ and surrounding areas
- Dallas, TX
- Hartford, CT

The first-ever F.I.T. alumni directory is coming and we still sorely need employer data. Also, we need to find correct addresses if some of you still have correspondence going to your parent's address. So please help!! We'd like to make the directory as perfect as possible.

Keep in touch!

Judi Marino

P.S. SPECIAL CONGRATULATIONS TO: **Jeanne Flanagan (B.S. Oceanography, '79)**, Gold medal winner — Summer Olympics in Crew Race (Women's Eight)

ALSO TO: **Casey (B.S.-O.E. '79)** and **Glenn Bunting (B.S.-O./Bio. '74)** for providing F.I.T. with National Exposure on the cover of *U.S. News and World Report*, August 13 issue.

WE'RE VERY PROUD OF YOU!

Visitors happy

For four consecutive weeks this summer, alumni visited the Melbourne Campus at F.I.T. and were housed in our Southgate Apartments. Although attendance was only slightly higher than last year, alumni stayed longer and had fewer surprises concerning housing arrangements.

Alumni came from many cities to take in our Florida attractions and sunshine. Many

see the Melbourne campus, and many mid-westerners saw the ocean for the first time!

Monday evening ice-breaker receptions provided alumni association board members the opportunity to meet some alumni, and Friday morning breakfasts gave alumni a chance to converse with Dr. Keuper and several other F.I.T. administrators.

We have found the summer vacation program can be profitable as well as beneficial to alumni relations. The alumni association looks forward to hosting this event again in Summer 1985 and hope to see you there!

Campus news capsules

• **Dr. George C. Webster**, professor and head of Biological Sciences, has been awarded a \$19,000 grant by the American Federation for Aging Research. The grant will support his investigation of "the control of gene expression as a factor in senescence." The research will use genetic engineering techniques to study the possible participation of a gene in triggering the aging process.

• **Dr. John Trefry**, associate professor Oceanography and Ocean Engineering, was an invited speaker at the International Council for the Exploration of the Sea symposium, held recently in Nantes, France. His well-received paper, entitled "trace metal fluxes through the Mississippi Delta system," was co-authored by research associates Robert Trocine and Simone Metz, and graduate student Thomas Vetter.

Dr. Trefry has received third-year funding of \$80,000 for project P-PRIME (Pollutant-Particle Reactions in the Marine

Environment). The program is studying the geochemistry of several trace metals in the Mississippi River and the Gulf of Mexico.

■ **Jack Schwalbe**, associate professor of civil engineering, was a speaker at the recent Seminar of Wind Engineering, sponsored by the Cape Canaveral Branch of American Society of Civil Engineers. He spoke on "Wind Damage to Structures." Some professionals from around the state were in attendance.

• **Edward Ford**, adjunct professor of weapons acquisition management at the Picatinny graduate study center, was selected by Honeywell to be the government representative lecturer at Honeywell Aerospace and Defense Management Center in Minneapolis in October. He lectured on, "Latest trends and management emphasis in the SOS material acquisition process."

• The university was well represented at the recent Central Brevard Triathlon, held at Rockledge. The event consisted of swimming, bike riding and running. **Steward Holm**, a graduate student in chemical oceanography, finished in first place with a time of 1:41:21, several minutes ahead of the competition. **Dr. Tom Belanger**, associate professor for Environmental Science, took top honors for the 30-39 age group. His time of 1:52:38 also put him in 8th place in overall scoring.

• A \$30,000 "topping grant" from the William G. Selby and Marie Selby Foundation is to help in the purchase of a new central computer to support academic programs at the Jensen Beach campus. The foundation, a perpetual trust established in 1955, provides scholarships for Florida residents and supports higher education in the state, as well as many social services, cultural and youth programs.

Aviation training is real

The "Summer '84 Training with Industry" (TWI) program administered by the School of Aeronautics was one of the largest ever. Some 20 aero students trained with the aviation industry, both overseas and in the U.S.

One student was placed with **Swedair** in Stockholm, another with **Nigeria Airways**, and a third interned at Munich International Airport.

In this country, the interns' employers included the Ft. Lauderdale Executive Airport; Mall Airways in Albany, NY; **Midnight Express** in Atlanta; the **Aircraft Owners & Pilots Association**, Washiiton, D.C.; Lyon Aviation at **Pittsfield, MA**, and Union Carbide Flight Department at **Danbury, CT**.

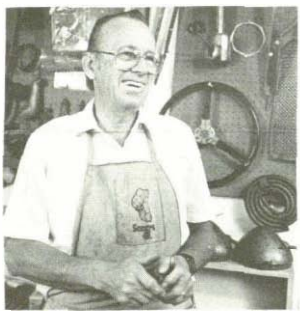
The TWI program has grown steadily under the guidance of Jim Constantine, a 13-year faculty member for Aeronautics. He works with students to identify a suitable aviation enterprise where the student can undergo management training.

Normally the student participates in TWI in the 11 weeks prior to his or her final quarter at F.I.T. The internship experience is then the subject of a report presented in a briefing for students preparing for the TWI experience.

Often, the TWI student is offered permanent employment at the internship site after graduation.



Jim Constantine



Summer news

Activities catching the eye of the press during the summer ranged from President Keuper's hobby of restoring MG automobiles, loan international visitor at Summer Commencement. Dr. Keuper is pictured in his home auto workshop. At graduation ceremonies, Dr. James Lyons, Chairman of the F.I.T. Board of Trustees, presented an honorary doctor of science degree to General Wei-yuan Chaw, Chairman of the Republic of China's Vocational Assistance Commission for Retired Servicemen. The general took the reins of the Commission after a highly distinguished career in his nation's army.



Car burns the "press," impresses researchers

For Markus Bowman, the phrase "power of the press" — or, more precisely, the power of newspapers — has taken on new meaning.

And it has nothing to do with the lofty jargon of media critics.

For the past six months, Bowman, an 18-year-old Melbourne resident, has been running his 1976 Fiat with a mixture of gasoline and liquid partially derived from, of all things, shredded newspapers.

Bowman's car is a guinea pig of sorts.

The sleek, black sports car is being used by two of Melbourne's Florida Institute of Technology professors trying to develop an efficient liquid fuel additive made from materials with a high cellulose content. Newspapers fit the bill.

So far, the professors say, their results are encouraging.

Bowman agrees. Just recently his car churned out 34 miles per gallon using the shredded newspaper mixture. With only unleaded gasoline in the tank, the Fiat gets about 27 miles to the gallon, according to Bowman. (He is the son of Dr. Tom Bowman, head of Mechanical Engineering and Dean of the Graduate School.)

But John Thomas and Ronald Barile, the two F.I.T. minds behind the project, admit they are two to three years from perfecting their fuel.

"We don't think we have the ideal agent yet," says Thomas, "but we think there's a good chance we might come up with one."

For the past two years, Thomas and Barile have been experimenting with different biomass materials derived from living



Dr. John Thomas



Dr. Ronald Barile

things to produce a fuel additive to one day replace ethanol.

Newspapers, sawdust, sugar or other products with a high cellulose content can be used in the process, but Thomas says newspapers seem the best bet.

"It's cheap," he explains, "and we don't have to use materials that compete with food supplies. Nobody is eating newspapers these days."

Ethanol, on the other hand, usually is made from corn. It tends to corrode engines and only can be used in small quantities (about a 10 to 20 percent mix with gasoline) before engine adjustments must be made, says Thomas.

The F.I.T. researchers believe their newspaper-based additive can be produced more cheaply than ethanol and will be a more efficient fuel.

The process to make the substance is relatively simple. A mixture of hydrochloric acid and shredded newspapers is placed in an autoclave, which provides steam under pressure. The end result, after some additional steps, is levulinic acid — the key component. The acid is chemically converted to the fuel additive.

Thomas believes, however, that the process probably is too costly and cumbersome for individuals to convert their newspapers.

Once the product is perfected, the biggest stumbling block to getting the material on the market probably will be the government, according to Thomas.

Obtaining Environmental Protection Agency approval will be a difficult process, he says.

Reprinted from TODAY Newspaper

Reef changes captured on film

A scientist at the Florida Institute of Technology is conducting a pioneering study to determine the long-term effects of increasing human activity and subtle environmental changes on Florida's fragile coral reef ecology.

"One of the major questions of reef ecology is what are the inherent long-term changes in coral reefs," said marine ecologist William Alevizon. "Are the fishes stable over hundreds of years, thousands of years or are there natural cycles of fluctuations?"

"Nobody knows that. We're just at the point now where people are starting to get good enough quality data to start to assess changes or non-changes over long periods of time."

In 1974, Alevizon first visited Key Largo Dry Rocks and Grecian Rocks, two reef sanctuaries protected by the National Oceanic and Atmospheric Administration. He made 72 underwater films of the reefs that were analyzed to obtain relative fish populations.

But he realized the 2½-minute films contained much more information than just fish populations. By comparing those films with video tapes made 10 years later, Alevizon would have a clear indication of how the reef environment changed over time.

"What we're going to do is compare the changes, if any, take a look at the fish populations 10 years later, the percent of live to dead coral and the changes in some of the other animals that grow on the reef," he said.

"By having a permanent record and doing this in a set way you really are better able to assess changes."

In June, Alevizon and two assistants returned to the reefs and made 72 more films under a \$9,300 grant from NOAA. The result was an overlapping series of views of the delicate underwater tableau and its teeming life.

Alevizon said the tapes will be used to analyze the populations of 40 representative fish species, non-reef-building and reef-building corals

"We're choosing representative groups to serve as what we call indicator species," he said. "You figure that if the indicator species haven't changed there's a good probability that most of the reef is fairly healthy."

"The original samples were taken strictly for the purpose of analyzing fish and we thought about it later and said, look, we've got a lot more information on these films than fish. Why don't we try to use some of it?"



Dr. William Alevizon

The two reefs under study are just a few miles away from Molasses Reef, where a freighter ran aground Aug. 4, causing extensive damage.

Alevizon said studies like his will help ecologists better assess such damage if a similar incident occurs again.

But that is an isolated example. Alevizon said the general effects of increasing human activity are what concern him. While spear fishing is prohibited in the sanctuary, hook-and-line fishing and lobstering are allowed.

"Hook-and-line fishing removes the top line carnivores, groupers, snappers, the things that eat other fish," he said. "So we have a situation where we have a protected sanctuary where it's still legal to remove the top of the food chain."

Reprinted from the Orlando Sentinel

Dean Revay gets IEEE honor



Dean Andrew Revay Jr. receives Centennial Medal from IEEE representative Art Greene.

National IEEE President James B. Owens cited the F.I.T. professor and administrator for "loyal and dedicated service to the Institute and to the profession."

The award was presented in a special ceremony by Art Greene, representing the 1100-member Canaveral Chapter of the IEEE. Dr. Revay is one of 1,984 IEEE members across the nation who are being given special recognition in the organization's IEEE Centennial Year celebration.

Dr. Revay received his Ph.D. in electrical engineering from the University of Pittsburgh. The dean is a professor of electrical engineering and a registered professional engineer.

He joined F.I.T. in 1967, and at the university has been active in research work including a study of the effects of lightning on electronic systems for the Federal Aviation Administration.

Chancellor named for Jensen Beach

Dr. Marion Rice has been appointed Chancellor of F.I.T. at Jensen Beach. It has been announced by President Keuper.

"Dr. Rice was selected for the position following a nationwide search for a qualified and professional individual to operate our Jensen Beach campus," Dr. Keuper explained.

He added that F.I.T. is extremely pleased to have obtained the services of the new chancellor, whose background includes the position of Provost at the Auburn Hills (Mich.) campus of Oakland Community College.

In her new role she will oversee all activities at the Jensen Beach campus including the College of Applied Technology and the Evinrude School of Marine Technology.

Dr. Rice will report to Dr. John E. Miller, executive vice president and vice president of academic affairs.

"I am quite pleased with the selection made by our search committee. Dr. Rice is truly a well qualified and knowledgeable individual whose background and expertise

should be a great asset to the programs being conducted at our Jensen Beach campus," Dr. Miller said.

The new chancellor has served as provost of the Michigan college since 1974. She is a graduate of Wayne State University with a bachelor's degree in sociology as well as a master's degree in education. Her doctorate is in higher education, from Michigan State University.

Dr. Rice served as department chairperson of counseling at Oakland Community College from 1969 to 1971. She was a guidance counselor at the school from 1966 to 1974.

She is a member of the North Central Association of Colleges and Schools Commission on Institutions of Higher Education and has served as team chairperson of that organization since 1981. Rice is also a member and vice president of the Council for Occupational Education of American Association of Community and Junior Colleges.

PLEASE TAKE NOTE!

F.I.T. PHONE

NUMBER CHANGE

New Number: (305) 768-8000

Alumni Affairs: (305) 768-8029

ALUMNI WEEKEND 1985

April 13 - 15, 1985

Look forward to great events and further information!

Alumni survey reveals interesting facts

Below are responses to some pertinent questions asked on our survey conducted last year. Included are only those questions that I felt you would be interested in knowing about. For complete results, please contact the Alumni Office.

Number of surveys received: 1200
Response rate: 15%

1. Alumni working in major 81%
2. Income range:
 - 0-5K 3%
 - 5-15K 5%
 - 15-25K 17%
 - 25-50K 66%
 - Over 50K 7%
3. Comments on F.I.T. Experience:
 - Favorable 41%
 - Unfavorable 2%
 - No comments 57%
4. "Update" articles of interest:
 - Alumni notes 16%
 - Campus news 13%
 - Research news 12%
 - Articles on research 11%
 - All others under 10%

5. Alumni who have attended Alumni Weekend 10%
6. What factors prevent alumni from attending:
 - Cost of transportation 25%
 - Shortness of time 22%
 - Time of year 21%
 - Cost of lodging 13%
 - Other 10%
 - Wouldn't want to come 6%
 - Cost of weekend events 3%
7. Time of year alumni prefer for Alumni Weekend:
 - April 18%
 - February 16%
 - May 13%
 - March 13%
 - All others under 10%

*Alumni Weekend will be April 13-15.

8. Have you ever made a donation to F.I.T.
 - No 67%
 - Yes 33%
9. If you have not donated, why not:
 - I didn't have funds 34%

- No one asked me to give 14%
 - I didn't feel the obligation 9%
 - I don't know why 9%
 - All others under 9%
10. Do you plan to donate in the future:
 - Yes 53%
 - Don't know 40%
 - No 7%
- Preferences for areas of giving:
 - Particular department or school 34%
 - Scholarships 21%
 - Library 19%
 - Athletics 8%
 - All others under 8%
- Survey also identified:
- Over 200 alumni willing to assist in admissions recruiting.
 - Over 100 alumni willing to assist in placement efforts.
 - Over 100 alumni willing to assist in Co-op education efforts.
 - Over 100 alumni willing to assist in organizing alumni clubs in their areas.

Recruiters looking for you!

We encourage all alumni in the following areas to drop by and meet our F.I.T. representatives on the mat. This is an opportunity for you to see the changes in F.I.T. as well as talk to some alumni who work at the respective campuses.

NOVEMBER 1984

11/14-11/15 - Cleveland National Fair, Convention Center, Bob Rowe (MLB), Aubin (JBC)

11/28-11/29 - Milwaukee National Fair, Downtown Civic Center, Patti Larson (MLB), Faith Aubin (JBC)

ALUMNI WEEKEND 1985

April 13 - 15, 1985

Look forward to great events and further information!

Annual Report summary

ANNUAL GIVING:

	1982-83	1983-84
	\$3,000.00	\$14,171.30

BREAKDOWN:	1982-83	1983-84
Buy a Book Donations	\$5,354.80	
Athletic Donations	5,000.00	
Miscellaneous Donations	3,817.50	
		\$14,172.30

Increase in Annual Giving almost 400%.

- ALUMNI CLUBS:**
- EXISTING:** Pascagoula, MS
Taipei, Taiwan
Crew Alumni Club
Huntsville, AL
- BEING ORGANIZED:** Philadelphia, PA
BEC Club
- IN PLANNING:** Northern New Jersey
Dallas, TX

ALUMNI ADDRESSES:

	1982-83	1983-84
Valid Addresses	4000	9000
Alumni Lost	4000	2000
Alumni w/Employers	100	2600

SUMMER VACATION PROGRAM:

	1982-83	1983-84
Profits	\$223.38	\$1,415.61
Attendance	35	40

ALUMNI WEEKEND:

	1982-83	1983-84
Attendance	100	150
Profits	(\$300)	\$300

ALUMNI/ADMISSIONS RECRUITMENT:

	1982-83	1983-84
Alumni/Admissions Volunteers	Less than 10	50
Volunteers utilized to date	Less than 10	*15

(*still in progress)

NEW AND EXISTING ACTIVITIES:

- Job Search Assistance
- Job Search Networking
- Alumni Job Referral Service
- Pre-graduation Congratulations Gatherings
- Alumni Travel Program

Publications: Alumni Volunteer Admissions Training Manual
Alumni Club Organization Manual
UPDATE



Wedding belle & beau

Lawfully wedded FIT alumni now include Sally Harrington (B.S./Mgt. Sci. '80) and Joe Eckelman (B.S./E.E.-79), both former crew members. Eckelman serves as an Alumni Association board member and president of Crew Alumni. The gathering of alums included (back row, left to right) Mark Wagner, Mike LeBlanc, Bob Maxson, Keith H. Howard, Rivenburg, Bill McGovern, Tom Breeden, Barb (Reed) Vega, Dave Fuerst, Andrea Bagdigian, Missy (Blaska) Maxson, Tom Baxter, and Alumni Director Judi Marino. Also attending were (front row, left to right) Val Barber, Doug Engler, the groom, the bride, Beth (Brindisi) Feaster, and Jeff Kormanec.

R. Layne Dubose	'61, '63
Richard Pulley	'62, '65
George Radford	'64
James Plumb	'64, '67
Donald Merritt	'66
Phillip Maxwell	'67
Frederick Burgett	'68
Douglas Lipscomb	'68
Ira Cottrell	'69
Robert Copeland	'69
Donald Paul	'69
William Sandusky	'69
Bernard Fuchs	'70
David Greenfield	'70
John Kingsley	'70
Ralph McKee	'70
William Willmott	'70
Nicholas Rodopoulos	'70
Edward Beattie	'70
Joseph Fields	'71
John Danilson	'71
Robert Mathewson	'71
Carlos Cueto	'71
Peter Tozzi	'71
David Kreigman	'72
Vernon Ausherman	'72
Michael Damron	'72
Edward Sidkowsky Jr.	'72
David Beall	'72, '75
John Vincent	'72
Paul Joyal	'72
George Morstatt	'72
Terrence Applebee	'73
Gary Busko	'73
Thomas Waters	'73
A. Vito Kamiskas	'73
Paul Phillips	'73
Arthur Murphy	'73
	'74, '75
Robert Schmelzer	'74, '75
Roy Highberg	'74
Dallas Biehoff	'74
Gerald White	'74
Victoria York	'74
William Dietz Jr.	'74
Jeffrey Bass	'74
Henry Biscardi	'74, '75
Robert Heidinger	'74
Betty Preece	'74
Hugh Wilson	'74
Roy Amende	'74
Carl Rizzo	'74
Robert Phebus	'74
Manuel Figueroa	'74, '75, '81
Paul Bernhard	'75
Marc Michalovsky	'75
Fred Komoroski Jr.	'75
Thomas Stewart III	'75
David Robinson	'75
Carl Wagner	'75, '76
Bruce Limber	'75
Judith Milnikoff	'76
David Hardee	'76
Allyn Saunders	'76, '80, '83
Rebecca Bass	'76
John Ounembo	'76
Leonel Enriquez	'76
Richard Ankener	'76
Evan Futterman	'76, '78
Charles Wortz	'76
Joan Schramm	'77
Robert Houston Hill	'77
Graig Calabrese	'77

Mark Lewis	'77
Daniel Moyer	'77
Richard Nunn	'78
Kim Jablonski	'78
Bruce Carskadon	'78
Robert Saskissian	'78
Richard Wright	'78
Marta Janauxhek	'78
Robert Choiniere	'78
Joseph Ellis	'78
Leslie Sivak	'78
William Sharples	'78
Samuel Setzer	'78
Harold Shappell Jr.	'78
Minerva Figueroa	'79
Ken Haizlip	'79
Michael Kimel	'79
Gregory Pifat	'79
Charles Polson	'79
Thomas Hewitt	'79
Martin Dipper Jr.	'79
Michael Borga	'79
Judi Marino	'79
Witworth Cotten	'79
James Mueller	'79
Deborah Pinkston	'79
Wayne General	'80
Stephen Bailey	'80
James Dahmann	'80
Thomas Kunhart	'80
Thomas J. Williams	'80
Stephen Noble	'80
Joseph Fields	'80
John Allis	'80
James Fairall	'80
Rudy Frahm	'80
Maria Rondon	'80
John DalSanto	'81
Philip Spender	'81
Daniel Kelleher	'81
Mary Osborne	'81
Jeffrey Fore	'81
Andrew Barron	'81
Carol Philpot	'81
Greg Ulsh	'81
Mark Achenbach	'81, '82
Jonathan Plavnick	'81
Peter Gibbs	'82
John Higgins	'82
Mark Michon	'82
Antonio Gala	'82
Christopher Bacius	'82
Cindy Ulsh	'82
Evelyn Wolf	'82
Willard Johnson Jr.	'82
Johnnie Steuber	'82
Ilka Williams	'82
Donald Lusk	'82
Kenneth Ingram	'82
Susan Wahl	'83
Anne Diebel	'83
Jefferson Hart	'83
Patrick Knewko	'83
William Braun	'83
Keith Sturgess	'83
Steve Morgan	'83
George DeRoek	'83
Ralph Johns	'83
John London III	'83
John Jenkins	'83
Cy Lynch	'83
Donald Thibeault	'83
Sharon Atkinson	'83

CAMPUS NOTES

FLORIDA INSTITUTE OF TECHNOLOGY

OCTOBER/NOVEMBER 1984

Dr. Lata Mehta, head of the anatomy department, Grant Medical College, at Bombay, India, recently visited Dr. Arvind Dhople, head of the Medical Research Institute's infectious diseases division. The primary purpose of her visit was to begin a collaborative program in leprosy research. The main thrust of the program will be the study of nerves from armadillos infected with leprosy, as well as endothelial cell culture. The two researchers also discussed the prospect of starting another collaborative project in India under the Indo-U.S. Science and Technology Program, aimed at developing new methods for detecting drug resistance in leprosy.

Also visiting M.R.I. was Dr. Jindrich Kazda, head of the microbial biology division of the Borstel Research Institute, West Germany. He is coordinator of a collaborative program in the in vitro cultivation of leprosy bacillus. That program includes Dr. Dhople and Dr. L. Kato of Catherine Booth Hospital Center in Montreal. Drs. Kazda and Dhople reviewed progress in the work over the past six months, and planned future work.

Dr. James A. Rigney, professor of chemistry at University of Prince Edward Island, Canada, is a visiting professor at Chemistry for the Fall Quarter. He is currently on sabbatical leave, and is pursuing interests in the chemistry of marine plants, and completing a series of articles on exercises in undergraduate biochemistry laboratories.

Dr. Donald Stauble, professor in Oceanography and Ocean Engineering, presented a paper at the 19th International Coastal Engineering Conference in Houston. The paper, entitled, "An assessment of beach nourishment sediment characteristics," reviewed ongoing research in beach nourishment technology. The conference is held every two years to allow coastal engineers from around the world to share information.

Dr. Stauble and graduate student Jeff Hoel attended the annual meeting of the Florida Shore and Beach Preservation Association, held at Captiva Island, Florida. The association is composed of coastal engineers, scientists, managers, and local and state officials who are concerned with erosion control and other coastal management problems.



Hungry humanists?

The Faculty Reception provided an opportunity for back-to-campus conversations and — for three Humanities professors — snacks worthy of enthusiasm. Hamming for the occasion are (from left) Drs. Horst Freyhofer, Gordon Patterson, and Rudolph Stoeckel.

Dr. Randall L. Alford, Director of the Language Institute, has been invited to be guest lecturer at the Toronto Institute of Linguistics on the campus of Victoria University in Toronto.

Dr. Alford has also been invited by the Who's Who Board of Advisors for a biographical inclusion in the 19th edition of Who's Who in the South and Southwest, a regional reference guide and companion extension of *Who's Who in America*. He has also been selected for a profile in the 1985 editions of *Personalities of the South*, and *The Directory of Distinguished Americans*.

Grace R. Wylie, assistant professor for the Language Institute, spent four weeks during the summer studying the Japanese language and culture at a branch of Showa University in Fiyiyoshida. On the main campus of Showa in Tokyo is one of Asia's foremost teaching hospitals.

Dr. Bruce Rafert of Physics and Space Sciences presented a talk on "observation of the W-serpentis stars" to the Department of Astronomy at the University of Florida, serving as colloquium speaker. His preliminary work on the binary stars has also been published in the journal of International Amateur-Professional Photoelectric Photometry, and will appear as a chapter in *Microcomputers in Astronomy II*. Support for his research totalling \$70,000 has been announced by the National Science Foundation, Research Corporation, and the American Astronomical Society.

Susan Downey has joined the Public Affairs Department as chief of graphic arts. She received her B.S. in design from Briarcliff College. Originally from Fairfield, CT, she worked for Bookmakers, Inc., in Connecticut as a designer of educational books for Reader's Digest and McGraw Hill, and of history books for Allyn & Bacon of Boston. In Melbourne she was art director for National Printing.

Residents of the Eau Gallie area of Melbourne for three years, she and husband Rob — a professional photographer — are avid windsurfers. They have won several local and statewide regattas.

Warren Woodrow became a fulltime faculty member for Aeronautics with the start of the Fall Quarter. He is a graduate of the Naval Academy with his degree in aeronautical engineering, and attended the Naval Post Graduate School. He is completing work at F.I.T. on the M.S. degree in science education, with a computer science option. He is a pilot and airborne navigator with 5500 hours, and has extensive experience in aircraft maintenance and data processing. He and wife Mary are Palm Bay residents.

Amanda Mykoo, an F.I.T. honors graduate in air commerce/flight technology, has become an adjunct faculty member for Aeronautics. Now an MBA candidate, she is a flight instructor, and an air frame and

power plant mechanic. She has passed her Boeing 727 flight engineer written exam, and flight dispatcher written and practical exams. She will be teaching the flight dispatcher course, and federal aviation regulations.

Mark Ramsower will be teaching air navigation for Aeronautics. His B.S. degree in aeronautical operations is from California State University, and he holds an associate degree in mathematics. He has been a Boeing 727 pilot for Pan American World Airways, and flew four-engine aircraft for the Air



Visitors from afar

A group of officials from the People's Republic of China made F.I.T. one of their stops during a journey to gather information about coastal processes. Drs. Dean Norris and Don Stauble of Oceanography and Ocean Engineering were hosts. Pictured with delegation member Tang Zhao is Stauble and Dr. Diana Barile, adjunct faculty member.

Force. He also piloted the Air Force's supersonic T-38 Talon fighter aircraft. His three-child family lives in Melbourne Beach.

Ralph Johnson, Director of Development, has announced the naming of F.I.T. in a \$70,000 tax avoidance trust. The trust will provide income for two of the donor's relatives while they live, then assets will become available to the university. The use of the tax avoidance technique was stressed in a nationwide teleconference in which Johnson participated. Individuals creating trusts qualify for a charitable gift deduction. Questions about the plan should be directed to extension 8036.

Lt. Cmdr. Marty Heule, who is completing his MBA in logistics in the F.I.T. off-campus program at Selfridge ANG Base, Michigan, has received the Chief of Naval Operations Aviation Supply Excellence Award that honors the Navy's best supply department in support of P-3 Orion anti-submarine aircraft squadrons. F.I.T. center director Ernie French points out that the two supply officers preceding Heule also earned the MBA.

Mar) Hannon, a senior in Business Communication, was presented a key to the City of Melbourne and a plaque signed by Mayor Harry Goode at a ceremony recognizing her outstanding work as an intern during the summer.

Dr. Charles D. Beach has joined Electrical and Computer Engineering as associate professor. He has extensive industrial experience, and for seven years was director of research and development at the Florida Solar Energy Center at Cape Canaveral. He earned his M.S. in electrical engineering at New York University, and his Ph.D. in that discipline at the University of Colorado. His research interests are in non-linear systems, adaptive systems, and signal processing.

Kent Hathaway has received a \$750 grant from the Gulf Coast Association of Geological Societies financial aid to students committee to aid in his thesis research. Hathaway is in the physical oceanography Ph.D. program. His research involves studying the relationship between microseismic activity and ocean waves.

Microseisms, the continuous background noise recorded by seismometers, are often associated with ocean wave activity. In some areas the correlation is surprisingly high; Oregon State University has used seismometers as land based "wavemeters."

During WW II microseisms were used to track storm centers in the North Atlantic. However, the system was not very reliable due to the complex nature of the phenomena. Hathaway's study will provide insight into the generation and propagation of microseisms.

He plans to study the microseisms production on the Gulf Coast of Florida, at F.I.T.'s Vero Beach facility, and on the coast of northern California. The study is being conducted with the assistance of Anita Wooldridge, an M.S. candidate under the direction of Dr. Steven Costa. The grant will help cover transportation costs, electronics, and supplies needed for the research.

Dr. John C. Hozier, Holtzer-Lequear Associate of Biological Sciences, has been awarded a \$295,000 research contract by the Environmental Protection Agency for molecular and cytogenetic studies on oncogenes in lung cancer. Oncogenes are thought to be cellular genes that normally control growth. However, under some circumstances, an oncogene is switched on, resulting in the uncontrolled growth that is cancer.

Former graduate student C.A. Blazejowski, now at the University of South Florida Medical School, and Dr. George C. Webster of Biological Sciences are the authors of an article, "Effect of age on peptide chain initiation and elongation in preparations from brain, liver, kidney and skeletal muscle of the C57B1/6J mouse." in *Mechanisms of Aging and Development*.

A field workshop to evaluate the relative accuracies and efficiencies of various methods of visually assessing reef fish populations was held this summer at the Looe Key National Marine Sanctuary, about 30 miles from Key West. The workshop was coordinated by Dr. William S. Alevizon of Biological Sciences, with major funding provided by Florida Sea Grant. Additional sponsoring agencies included The Sanctuary Program Division of NOAA, National Marine Fisheries Service (NOAA), and Sea Grant offices of other southeastern states and California.

Participants included several graduate students from F.I.T., and reef fish workers from the southeast, California and Puerto Rico. Several hundred dives were logged during the 11-day effort, which should yield valuable information on the advantages and disadvantages of the various methodologies the researchers tested.

Campus notes

Dr. Jerald Linsley has joined F.I.T. as associate professor for Chemical Engineering. A native Texan, he received a B.S. from Texas Tech University, and a Ph.D. from Rice University. Both degrees are in chemical engineering. Dr. Linsley has 14 years of industrial experience and three years of university teaching experience.

He was an assistant professor of chemical engineering at Prairie View A&M University in Texas. Other teaching experience includes a two-year stint as assistant professor of chemical engineering at McNeese State University, Louisiana, and part-time instructor at the University of Houston.

Most of Dr. Linsley's varied industrial experience has been in the field of computer-aided process design (he has been programming FORTRAN longer than his students have been alive).

Dr. Michael W. Babich of Chemistry was recently awarded a \$15,000 grant from the Petroleum Research Fund to support the work of he and his students on solid-state deaquation-anation reactions of transition metal complexes. Funds were provided for the support of four research students and the purchase of an IBM-PC-XT computer to be used for data analysis in these studies.

Under a grant from the National Oceanic and Atmospheric Administration (NOAA), F.I.T.'s newly created Center for Academic Publications organized and conducted the Fifth International Ocean Disposal Symposium in September at the LeSells Stewart Conference Center on the campus of Oregon State University in Corvallis.

Professor Iver W. Duedall, of Oceanography and Ocean Engineering, and Mary Ann Nelson, research associate and technical editor at the Center, managed the symposium at Oregon State.

The symposium gathered nearly 200 scientists from 16 countries to hear research papers on how, where, and whether the world's ocean should be used as dumping grounds.

Manuscripts of the talks given at the symposium are being processed and sent out for peer-review by the F.I.T. Center. Papers found acceptable by outside reviewers will be edited by Center staff and then assembled in the form of a technical book to be published by Krieger Publishing Co., Melbourne.

The winning entry in the identify-a-photo contest in the last edition of "Campus Notes" was submitted by Dr. Steven L. Costa of Oceanography and Ocean Engineering. He correctly described student Don Selby working in the vertical spray chamber of a Claude-Isaacs Condensator built as a marine field project during the summer at the university's marine research facility at Vero Beach. (The good-try award goes to Larry Pollock of Environmental Engineering who suspected the photo showed "an overhead shot of a lady construction worker in a ventilation shaft or elevator shaft.")

Dr. Geoffrey W. Swain has joined Oceanography and Ocean Engineering. He previously worked in Aberdeen, Scotland, carrying out research on fouling and corrosion on off-shore oil structures in the North Sea. Dr. Swain received his B.S. from the University of London in 1971 and his M.S. and Ph.D. from the University of Southampton. In addition to teaching courses in the ocean engineering program, he will be conducting research on corrosion processes including biological fouling, and on materials for corrosion and fouling prevention.

In June, Nenad Iricanin graduate student in Oceanography and Ocean Engineering joined American and Russian scientists on the historic Second US-USSR Joint Research Expedition in the Bering Sea.

The expedition began from Dutch Harbor, Alaska, and lasted 32 days. The research vessel was the Akademik Korolyov, named after Sergei Korolyov the Soviet designer of the first artificial satellite and piloted spaceship. A total of 26 oceanographic stations were sampled. At each station samples were collected for a large number of oceanographic parameters and geochemical properties of the Bering Sea.

Additionally, observations of densities of sea birds and mammals were made. All



Nenad Iricanin on Russian vessel

data was analyzed on-board and exchanged between the Soviet and American scientists. Also, a protocol was signed calling for a Third Joint Research Expedition sometime in 1986. Dr. John Trefry in Oceanography and Ocean Engineering is Iricanin's major professor.

Paul F. Arvis has joined the fulltime faculty as assistant professor of management and chairman of management programs at the Fort Lee graduate study center. He has been an F.I.T. adjunct professor in acquisition and contracts management at Fort Lee for 10 years. He was director of the Army Procurement Research Office, where he authored or co-authored more than 20 research reports. Before that he was assistant dean of the School of Acquisition Management, Army Logistics Management Center. He received his M.A. and Ph.D. from American University. He also holds an M.A. from Marshall University, and a B.A. from Concord College. He is a fellow in the National Contract Management Association and a certified professional contracts manager. He is married to Cleo Arvis, and they have two grown children.

F.I.T. hosted the Sixth Southeastern Phycological Colloquy in October. The colloquy is devoted to the presentation of research efforts on algae, seagrasses and algae associated with aquatic weeds. This year, 31 papers were presented on marine and freshwater algae and seagrasses. Biology graduate student, David Tomaski, presented a paper titled "Seasonal variations in carbon fixation and carbon budget partitioning in *Halodule wrightii* aschers."

Nearly 50 scientists from as far away as New York and Texas were in attendance. Dr. John Ryther, Director of the Center for Marine Biotechnology at Harbor Branch Institution, Ft. Pierce, was the banquet speaker. Dr. Dean Norris of Oceanography and Ocean Engineering was the local coordinator with the assistance of graduate students Jeff Bomber, Peter Pendoley, Luis Mitchell, and Tomasko.

John Halkias has joined Civil Engineering as an assistant professor of civil engineering. His areas of expertise include highway and traffic engineering, with an emphasis on traffic safety. He is presently completing requirements for a Ph.D. at West Virginia University and expects to receive his degree in December.

Amy Mazurek (former Amy Henshey), F.I.T. class of 1984, was selected as the Outstanding Civil Engineering Student by the Florida Section of the American Society of Civil Engineers. The announcement was made at the annual meeting of the Florida Section. She will receive an award of \$125 from the Florida Section.

Dr. Terry Oswalt of Physics and Space Sciences recently received a \$1500 research grant from NASA and The American Astronomical Society to purchase computing equipment for the F.I.T. observatory. This equipment will be used with a recently obtained photoelectric photometer for asteroid occultations, variable star observations, and student instruction in basic photometric techniques.

Palmer Stiles of Mechanical Engineering, accompanied students Mike Weaver, Gil Woods and Steve Lynch to the American Society of Mechanical Engineers regional student leadership conference in Atlanta at the end of September. The group flew in one of F.I.T.'s Piper Warriors, with Weaver as pilot. Professor Stiles addressed the conference as chairman of the ASME's national

student sections committee. (He also served as copilot.)

Dr. Armand DiIpare of Mechanical Engineering attended the 18th Mechanisms Conference in Cambridge, Massachusetts. He presented a paper entitled, "Mechanism case study - Why did the saw blade fly off the arbor?" The conference was attended by about 100 of the country's foremost kinematicians and robotists.

Drs. Oswalt, Rakrt, and Edwin Strother, have announced plans for a cooperative expedition involving the F.I.T. Department of Physics and Space Sciences and the Massachusetts Institute of Technology Department of Earth, Atmospheric and Planetary Sciences, to observe the Nov. 13

occultation of the star BD+8° 471 by the asteroid Ceres.

An occultation occurs when a minor body of the solar system passes between the earth and a distant star, creating a miniature eclipse. The shadow of Ceres will pass through Florida, the Caribbean and Gulf of Mexico, requiring placement of F.I.T. and M.I.T. observers at four sites between the Florida Keys and the Bahamas.

NASA's plans for future asteroid fly-by missions depend heavily on precise timing of such occultations because they are the only current means of accurately determining the size and density of asteroids which are too small to image directly with telescopes. This event is particularly attractive to scientists because it is the only one in which Ceres, the largest known asteroid, will be involved until the 1990's.

Center for Student Development helps

The Center for Student Development is available to assist the F.I.T. community. The Center provides services to help students have a successful academic and personal experience at F.I.T. Faculty are encouraged to help students take advantage of the many services offered by the Center. Services include improving study skills, career counseling, stress management, and problems of a personal nature.

Currently, several groups are beginning at the Center. They include: Women's Support Group, Friday 5-6:30 p.m.; Stress Management Group, Monday 5:30-7 p.m.; How to Cope with Depression, Thursday 4-5:30 p.m., and Student Support Group, Thursday 7-8:15 p.m. If you have an additional topic that you feel would be of benefit to yourself or others, let the Center know. To make an appointment, contact the Center at 768-8050 or drop by. All services are also available to staff and faculty.



Out front

It was a surprise to Glenn Bunting, a 1979 graduate who now works at F.I.T. when he made the cover of the August "U.S. News and World Report" along with Casey Baker, a 1974 alumnus. The national exposure for F.I.T. and its rowing program was an indirect result of a 1983 visit by an ad agency to F.I.T. on behalf of Xerox. Bunting and Baker were among persons photographed in F.I.T. crew uniforms. A photo from that session made its way to the magazine.

Grad scores gold in Olympics

For the first F.I.T. alumnus to claim a gold medal in Olympic competition, there is special significance to her college years. She had not tried the sport of her success before arriving at the university. "I learned to row at F.I.T.," notes Jeanne Flanagan.

The 1979 graduate was a member of the American eight-with-coxswain crew that placed first in Summer Olympic Games in Los Angeles. That marked the first gold medals in that competition since the sport was added to the Olympic slate in 1976.

Flanagan was a graduate student in marine biology at the University of Massachusetts - Amherst, while training in Boston for the Olympics.

Her next goal is employment in the field of "corporate fitness." It is a discipline that is "still very much in its infancy," she explains.

By combining the science of exercise with the biology of sports, one can produce a program for corporate employees that increases productivity while boosting the well-being of the workers. "It really takes the hard sciences and applies them directly to sports," the Olympian said.

"It's a variation on the health club format," Flanagan explained. She expects to see the day when such exercise opportunities become an expected employee benefit.

Computer bargains abound

The following computer companies are offering discounts to bona fide students, members of faculty, and staff of the University.

		HARDWARE	SOFTWARE
IBM	PC, PCXT, PCAT	20%	20%
	Certain selected software		
Epson	QX10, RF80FT Printer	20%	
Zenith		35%	45%
Wang	Professional Computer & most accessories	37%	30%
	Wang Writer II	24%	
Apple		30%	30%
DEC Rainbow		35%	35%
Hewlett Packard	C.P.U., Printer, Plotters	25%	10%
Radio Shack	Model 4	22%	
	All other	20%	
Microsoft			50%
Lotus I, II, III			60%

It must be emphasized that these discounts are only available through the university. For further information, contact Purchasing Department.

Enstice promoted to VP position

The promotion of Richard E. Enstice to Assistant Vice President for Academic Administration for F.I.T. has been announced by Dr. John E. Miller, Executive Vice President and Vice President for Academic Affairs.

"This promotion for Mr. Enstice reflects his vital role in high-level management of the affairs of the university's academic operations," noted Miller.

"F.I.T. is still a developing institution, and our mission remains one of attaining the highest academic standards possible. That has necessitated changes in our administrative Structure.

"We are extremely fortunate to have in our ranks an experienced and very capable administrator who can shoulder expanded duties that reflect the maturation of our university," said Miller. "In the 15 years that Mr. Enstice has worked in behalf of F.I.T.,

Richard Enstice



he has handled a multitude of assignments, and he has handled them all very well."

Enstice had since 1979 served as Director of Academic Services at F.I.T. Prior to that he headed graduate admissions, continuing education, and off-campus graduate study programs for the university, and before that he was an instructor in the F.I.T. electrical engineering department. He has also worked as an engineer for Radiation Inc. and as a consultant to Harris Corp.

Enstice received his bachelor's and master's degree in electrical engineering from F.I.T. He is currently a doctoral candidate



Radio Shack assistance

Paul Hoagland (left), regional education coordinator for Radio Shack, goes over the attributes of equipment with computer

Engineering to allow development of improved student services. Sharing the information are (from left) Walter Douglass, Dr. Michael Valdez, and Sandy Won, Brevard County representative of the computer company.

Students are aided in planning

(Continued from Page One)

each student's academic needs are defined and met. F.I.T.'s grant application was a winner.

Radio Shack responded with its Model 16B computer and related equipment, in all providing more than \$9,000 worth of hardware. The small computer is to periodically siphon student information out of the university's main administrative computer, and use those records for departmental chores. A graduate student working with the guidance of Dr. Michael Valdez will produce programming needed for the project.

Watkins will oversee implementation of the program, and successes will be shared with other universities.

Paul Hoagland, regional education coordinator for Radio Shack, said F.I.T. received the grant only after the institute's proposal was judged against others from across the nation.

"The grant applications really go through a lot of rigorous screening, and it's exciting to have one of the recipients right here," Hoagland said.



AAUW honors grad

Along with claiming the F.I.T. Faculty Award for academic performance, Jana A. Johnson left the June commencement with a special salute from the American Association of University Women. The graduate in electrical engineering was presented with the Melbourne AAUW Academic Award for Excellence, presented annually. Melbourne AAUW president Cynthia Brubaker (pictured with the graduate) was on hand for the presentation, as was Florida AAUW president Linda Tisdale, and Joy Dickens, F.I.T. corporate representative. Names of AAUW award recipients will be displayed in the Evans Library.

Atlantic draws researchers to inspect volcanic seam

(Continued from Page One)

Cambridge University in England, Woods Hole Oceanographic Institute, Columbia University, and the University of Miami.

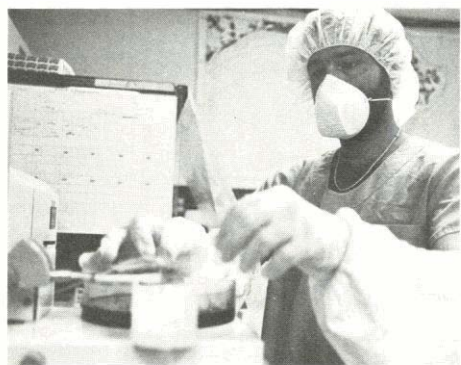
Trefry noted that joining the cruise from NOAA in Miami was chief scientist Dr. Peter Rona, a world expert on mid-ocean ridge geology and geophysics.

The undertaking benefited from a high-tech array of "incredible instruments" for examining the sea, and from the community of scientists it created. "It was the best cruise I have ever been on for scientific interaction," said Trefry. "everybody was anxious to share their work."

F.I.T. and Cambridge led the search for telltale chemicals in as much as three miles beneath the research ship, a process Trefry said amounts to "sniffing" for hydrothermal activity.

With very sensitive chemical sampling techniques, "you can detect a vent miles away," noted Trefry. While the Cambridge team looked for manganese dissolved in the water, F.I.T.'s group captured water samples to determine the manganese in particles suspended in the water.

Trefry explained that manganese put out



Research associate Robert Trocine analyzes sediments.

by vents stays in the water longer than other metals, which include iron, copper and zinc.

"We were trying to track mid-ocean ridge exhalations (of chemicals) by capturing these particles," Trefry said.

The existence of Atlantic vents was proven by chemical tests. "The chemistry was what showed us that there is venting going on out there. From that viewpoint it was highly successful."

No oasis of sea life was found in two weeks of investigations. "We did find some things that suggest it is possible," said

Trefry. In viewing some 40 hours of underwater color video scenes, one scientist believed he spotted evidence of a vent area which once hosted dams.

Another major task for the F.I.T. crew was the capturing of samples of sediments, which involved the tricky business of sending instrument packages and sampling tubes down guide lines that were up to three miles long.

Before leaving F.I.T., Trefry's team built a large refrigerated container to receive sediment samples for study aboard the research vessel. Non-scientific workers at the university made sure the sediment chamber worked. "The whole air-conditioning group really did a super job," Trefry noted.

The container keeps samples at 2-degrees Celsius, simulating temperatures at the sea bottom. Built-in gloves allow two investigators to handle sediments without contaminating the samples.

The samples of bottom mud were subjected to scrutiny ranging from x-ray to careful examination by the human eye and scientific description. Water was centrifuged to separate it from the sediment sample, and then

was filtered. Material captured in that process was brought back to F.I.T. for analysis.

Studying the sediments — some of the material 50,000 years old — told Trefry that the bottom materials along the ridge are unexpectedly devoid of organic materials that could be metabolized by bacteria. Little chemical reaction resulting from organisms consuming oxygen was occurring in the sediment.

"Out in this area the utilization of carbon in the sediment is incredibly low." What that implies, the scientist said, is that life forms in the water are capturing nearly all organic materials before they are buried in the bottom sediments.

"Whatever lives out in that area is very efficient as a scavenger," he concluded, since biological waste materials from upper ocean levels are not reaching the bottom.

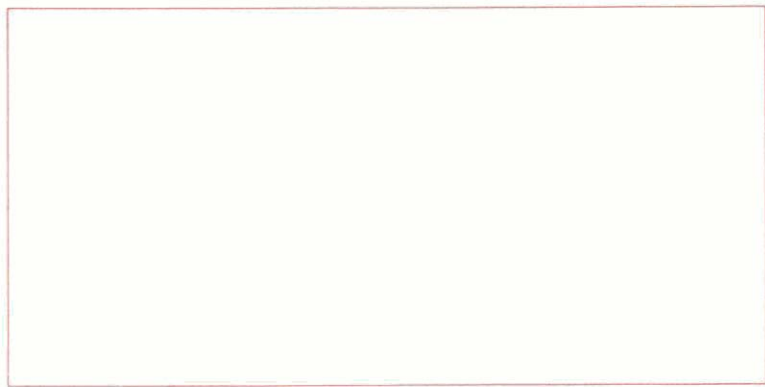
Trefry said that F.I.T. researchers will be studying materials collected during the voyage for the next six months to a year. Ocean chemistry reports from F.I.T. and Cambridge will be shared with the scientific community through reports in scientific journals. "Together, our results have more meaning," Trefry noted.

By Michael M

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