Harassment Workshop

The LNS Committee on Harassment Issues sponsored a number of harassment awareness sessions during the week of June 20th. Thirty LNS and Bates supervisors received instruction in handling complaints from Jay Keyser, then the Associate Provost, of MIT during morning and afternoon workshops. About 100 employees attended five sessions run by Margaret Anne Gray of the MIT Personnel Department. These sessions included group discussion of the effects of harassment and examples of behavior that might be judged as harassment. The discussions were lively and instructive, as we learned what situations made some people feel uncomfortable and why. One main theme was that unreported harassment of any kind results in lowered morale for everyone.

Thanks to all who helped make these sessions a success. Committee members are Karen Dow, Mary Hogan, Jim Kelsey, Anne MacInnis, Wade Sapp and Dave Woodruff. These people are available to discuss harassment issues, and to help explain MIT's options for resolving a harassment complaint. If you have ideas for ways to educate LNS employees on harassment and its consequences, please contact a committee member.

By: Anne MacInnis

Holiday Reception

Please remember to RSVP to Heidi Stirling by November 18, 1994 for the Holiday reception on Sunday, December 4, 1994 from 3:00 to 6:00 p.m. at the 600 Club, Fenway Park.

BITNET Support to be Discontinued at LNS

The LNS Central Computer Facility plans to drop BITNET support after December 31, 1994. This step is being taken because of the high cost of maintaining this connection, the decreasing use of this network software throughout the world, and the limited availability of this product within the LNS computing facility. BITNET is only available on the MITLNS node. Most sites in the world have SMTP mail which is available cluster-wide at LNS.

For those LNS users who still are using BITNET, we would suggest that you consider using SMTP. To use SMTP simply substitute SMTP for BITNET in the address and add the additional letters MIT.EDU. An example would be

(bitnet format)
bitnet%"bruen@mitlns"

(smt男 format)
smt$%"bruen@mitlns.mit.edu"

Please inform your colleagues of the change in your e-mail address as soon as possible. For those users who still want to use BITNET mail after December 31, 1994, it will be available on the MITVMA machine. If you have any questions, please contact Bob Bruen at extension 3-6065.
1994-95 Institute Holidays

Here is the list of recognized Institute holidays for 1994-95 and the day on which they will be observed:

Columbus Day--Monday, October 10
Veterans Day--Friday, November 11
Thanksgiving Day--Thursday and Friday, November 24 and 25
Christmas Day--Monday, December 26
New Year’s Day--Monday, January 2, 1995
Martin Luther King Jr. Day--Monday, January 16
Presidents Day--Monday, February 20
Patriots Day--Monday, April 17
Memorial Day--Monday, May 29
Independence Day--Monday and Tuesday, July 3 and 4

The Mechanical Fish Makes a Big Splash

Scientists know more about the surface of Venus than about the ocean floor. MIT Graduate student David S. Barrett is attempting to change this fact with a mechanical fish that he has built. The robot fish, which was built in about three years, took its first plunge in July. The purpose of the fully assembled, deployed, and calibrated fish is to allow for a wide range of experimental exploration as well as the study of the fundamental physics of swimming.

The analytical effort to understand the physics will shape the future and help to determine if a system such as this can produce an autonomous underwater vehicle that is fast, efficient, and maneuverable. The "robotuna" is designed to resemble a bluefin tuna and is the first in a series of robofish.

What was not mentioned in the recent TechTalk article (September 21, 1994) is the role that the LNS Machine Shop played in making the parts for the fish. According to Barrett, over 7/8 of the 2,843 parts for this precision fish were made in the LNS Machine Shop. In Barrett's thesis there is a section called, "Detailed Blueprint Package." In that section there are 58 pages of intricate blueprint designs and instructions followed by LNS machinists. Part of the challenge for the LNS Machine Shop was that the design of the robotuna's body parallels that of the biological tuna.

In Barrett's thesis he explains the components of the robot fish. "The major structural component of the robot fish is a segmented backbone made up of 8 discrete rigid vertebra connected with low friction ball bearing joints. As in the biological fish this is the framework on which all the other subassemblies are mounted and the orientation of these vertebra with respect to each other defines the overall curvature of the fish's body.

These 8 vertebra are driven through an elaborate system of pulleys and cable tendons by 6 brushless DEC servo motors mounted outside the fish and above the waterline inside the carriage support structure. These tendon drives are the mechanical analog of the biological fish's muscles.

In between each discrete vertebra is strung a flexible spring steel spline element on which are mounted lightweight body ribs that define the overall shape of the outer hull. As the discrete vertebra move with respect to one another these spline-rib assemblies bend to provide smooth continuous structural support for the flexible outer hull, much as the real fish's ribs do. The robot fish's outer hull consists of a thin layer of flexible reticulated foam covered by a conformal Lycra sock. The foam acts as the analog of the biological fish's flesh, the Lycra sock as its skin, to provide a smooth continuous wrinkle free flexible outer hull.

The body is propelled by a composite construction lunate caudal tail fin attached to the last vertebra in the backbone. This oscillating foil matches the biological tuna's tail as closely as construction methods and materials will allow."

With a project of this kind what one sees is the finished product of the scientist, but one often does not stop to think about the work that goes into the finished successful project. The craftsmen in the LNS machine shop are the support for many projects in the Laboratory for Nuclear Science and around the Institute. The quality of their work is outstanding and a significant contribution to science.

References:

Regule Performs in Artists Behind the Desk Concert Series

TEVA REGULE, a soprano, performed at noon October 28 in Killian Hall, Bldg. 14. Teva's program included music by American composers. She is the Computer Networks Manager for LNS. Teva received her Masters of Music degree in Vocal Performance from New England Conservatory of
Music where she studied with Donna Roll. She has performed leading roles with numerous local chamber opera groups and has sung in the chorus of the Opera Company of Boston and Opera New England. In addition, she has taught voice at the Great Woods Center for the Performing Arts Educational Forum (SMARTS) and at the Arlington Center for the Arts and is currently teaching in her private studio. Teva is presently also the Assistant Artistic Director of Longwood Opera. Teva recently performed at the Chiral Dynamics Workshop Banquet.

United Nations in recognition of the International Year of the Family, included a presentation by Eve Sullivan LNS CTP, founder of PARENTS FORUM Inc. and MIT support staff member. Her talk, "Key Questions for Family Dialogue," was part of the section on the Family as Primary Learning Environment. "It was a unique opportunity to share common concerns about family life issues with nearly 400 delegates from countries around the world," Sullivan said, "and I received wonderful encouragement for the PARENTS FORUM approach from many individuals representing service organizations and government agencies in other countries."

In May 1993 the MIT Entrepreneurs Club awarded PARENTS FORUM a 'Social Venturing Award' and the program received an Honorable Mention as Outstanding Service Program from the Massachusetts Volunteer Network in April 1994.

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### Parents Forum News

The United Way campaign beginning October 19 includes an option to donate to a specific agency and PARENTS FORUM Inc., founded by MIT's LNS support staff person Eve Sullivan, is eligible, as a recognized 501 (c) (3) non-profit organization, to receive contributions.

A recent October 12-15, 1994 conference in Montreal, "Today's Families: A Bridge to the Future," co-sponsored by the

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It is easy to fly into a passion -- anybody can do that. But to be angry with the right person to the right extent and at the right time and with the right object and in the way -- that is not so easy, and it is not everyone who can do it."

Aristotle ("Nicomachean Ethics")

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### Reprinted from the Department of Physics Newsletter Seventh Issue Summer 1994

### Sphicas Appointed to Career Development Chair

Dr. Paraskevas A. Sphicas, Assistant Professor of Physics in the Experimental Nuclear and Particle Physics Division, has been selected to be the next Cecil and Ida Green Career Development Professor, a three year appointment. He was recognized for his "leadership in the MIT research effort in the CDF Collaboration at Fermilab" that found evidence for the top quark and his "commitment to teaching and departmental educational affairs." Dr. Sphicas has been an exceptional lecturer in the freshman physics course 8.022, receiving student evaluations of 6.7 out of 7 and accolades such as "dynamic, organized, and very knowledgeable speaker, displaying great command of the material." According to those surveyed, Sphicas explains the material clearly, using many mathematical proof and "real-life situations" as effective examples.

In addition to the honor and prestige this award conveys, the appointment carries a scholarly allowance to be used for research and educational initiatives. Dr. Sphicas joined the Department in September of 1991.
We Welcome

Boris Broun, Admin. Programmer/Analyst
T. Vincent Cianciolo, Postdoctoral Associate
Joseph D'Ambrosio, Tech A (Mech)
Peter Fisher, Associate Professor
Robert Fisk, Sr. Technician Electronic
Eugene Foti, Bates Tech A (EM) Operation
Michael Gasper, Welding Specialist
Gretchen Guidess - Senior Secretary for EMI
Peter Kulinich, SRS Technical Staff
Robert Mattingly, Postdoctoral Associate, CDF at Fermi
Heidi Stirling, Administrative Assistant
Nagel F. Stone, Jr., Instrument Maker
John Wasik, Machinist A

Departures

Mario Aloisi
Robert Calileo
Marisa Greene
Heather Grove
Earl Haywood
Frederick Hobbs
Albert Libertini
Donna McNamara
Louise Morin
Evan Reidell
Milda Richardson
William Snow
David Williams

Recent Appointments and Promotions

Ignacio Diaz to Project Tech (Elec)
Robert Edgecomb to Project Tech (Mechanical)
Manouchehr Farkhondeh to Group Leader - Bates
Ronald Filosa to Mechanical Designer
Shalev Gilad to Principal Research Scientist
Anne Maloney to Senior Stock Clerk
Stephen Pate to Research Scientist
David Prentiss to Sr. Tech (E-M)