



Education & Campus

SAMPE VP SELECTED FOR MASTER'S PROGRAM



SAMPE International Executive Vice President Susan Ruth, Engineering and Technology Group, Aerospace Corp. Programs Group, was selected to be one of the five participants in the company's two-year Systems Engineering Master's Degree Program. The participants will formally begin the program at USC in the fall semester.

The new program, developed jointly with USC, was established to strengthen the company's core expertise in systems engineering and to enhance the corporation's visibility as applied to space systems. A special part of the program will be two aerospace-taught courses in systems engineering strategies and processes as applied to aerospace issues.

"The company is making a major push to strengthen its capabilities in top-level systems engineering," said Dr. Bill Ailor, originator of the program concept. "We have designed this program to benefit the participants individually and the corporation as a whole."

Participants will work half-time but receive full salary, and will be required to maintain a 3.5 GPA and submit a publication to a recognized journal.

1993 BRIDGE BUILDING CONTEST

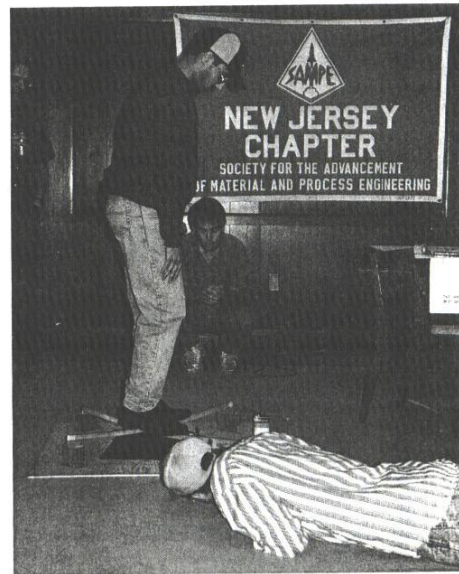
For the third year, the New Jersey SAMPE Chapter in partnership with the New Jersey Science Supervisors Association (NJSSA) sponsored a statewide bridge building contest. Student teams from high schools throughout the state competed for cash prizes and a Prince tennis racquet to build the lightest weight bridge out of composite materials supplied in kit form. Kit materials included fibers, fabrics, honeycomb and balsa cores, braids, resin, and an instructional video.

The general organization and conduct of the event remained unchanged from past years and has already been reported [see *SAMPE Journal*, 27, (5) 102 (1991)], but this year the bridge structure was different, and more challenging. In previous years, we asked students to build a bridge between two supports and test it by stacking 1 kilogram masses on the surface. This year the students had to stand on their own bridge.

The contest was to build a platform which would be supported by four blocks equally spaced on a 84 cm (33 inch) diameter circle. A student would then stand on the platform (and hopefully not break it). The platform with the highest efficiency ratio (student weight divided by platform weight) would win. A degree of suspense was added by letting each team test their bridge twice; in the second trial the student could add a backpack with an extra 20 kg and any other weights they could stuff into their pockets.



Phifer Middle School student, weighed down with knapsack, prepares to let go and test his honeycomb platform.



J.P. Stevens students load their X beam platform design. The wood structure had carbon fiber strand reinforcement and took second place.

The three cash prizes went to North Hunterdon High School [316 g (176 lbs)], J.P. Stevens High School [463 g (180 lbs)], and Bayonne High School [556 g (212 lbs)]. The most innova-



**CONNEAUT
INDUSTRIES
INCORPORATED**

P.O. BOX 1425 • 89 HOPKINS HILL ROAD • WEST GREENWICH R.I. 02816

INNOVATIVE COMPOSITE YARNS

PRECISION CUSTOM WINDING/TWISTING
FOR BRAIDED STRUCTURES

- EPOXY/POLYESTER COMPATIBLE FIBERGLASS YARN
- S-2 HIGH PERFORMANCE FIBERGLASS
- E-GLASS • POLYESTER • KEVLAR
- NOMEX • NYLON • TEFLON

Quality Wound Products

Contact JOHN P. SANTOS
(401) 392-1110 FAX (401) 397-2564

Circle No. 39 on Reader Service Card

tive bridge award, the Prince racquet, went to Phifer Middle School (our only non high school participant). Their platform used Nomex and aluminum honeycomb with glass fabric faces with fiber cleverly placed at a 45° angle. As in previous years, this contest also produced its surprises. Plainfield High School recruited the heaviest student in the school for their team. At 167 kg (367 lbs) they thought they had the system beat. Unfortunately, their bridge weighed 1,675 g, so the efficiency ratio was too low to win.

As in previous years, the contest was announced in December in a NJSSA mailing and approximately 25 kits were shipped to responding schools in March. Fifteen schools and 75 people attended the final judging on May 20. In the past three years, approximately 40 different schools and almost 200 students have participated. Financial support for the contest came from New Jersey SAMPE and NJSSA. But the real support comes from the SAMPE members and their companies who graciously donate materials for this effort. Contributing companies include: Allied Signal, Atkins and Pearce, Baltek, BASF Structural Materials, Dow Chemical, Hexcel, JPS Glass Fabrics, Mutual Industries, Sunkyong Industries, Plascore, and Utility Development Corp.—by Howard Kliger, SAMPE New Jersey Chapter and Michael Kaplan, NJSSA

MSU JOINS FORCES WITH COMPOSITES CENTER

Michigan State University has acquired a state of the art composite research laboratory. The transfer to MSU of the Polymer Composites Laboratory (PCL), a major lab owned by the Midland-based Michigan Molecular Institute (MMI), was approved by the MSU Board of Trustees. The PCL will now

DISTINGUISH YOURSELF WITH THE SOCIETY FOR THE ADVANCEMENT OF MATERIAL AND PROCESS ENGINEERING MASTERCARD®

Reward yourself with the credit card that gives you the recognition of being a member of SAMPE. Accepted at 10 million locations worldwide, the SAMPE Gold MasterCard® is one of the best credit cards available today because it gives you unmatched security, value and an edge in facing financial challenges.

Enjoy the advantages of the SAMPE Gold MasterCard without risk ... it is issued absolutely free of an annual fee for one full year*. Other distinct features include a line of credit up to \$50,000, immediate cash availability and Premium Buyer's Protection.

Extensive travel benefits and services provided at no extra cost, include*:

- Up to \$1,000,000 Common Carrier Travel Accident Insurance
- Supplemental Auto Rental Collision/Loss Damage Insurance
- Up to \$3,000 Supplemental Lost Checked Luggage Protection
- Emergency Cash & Airline Tickets

MBNA America® is one of the world's leading issuers of credit cards. Committed to servicing our members' needs, MBNA America® offers cardholders 24-hour-year-round Customer Satisfaction, one hour processing for credit line increase requests, a lost card registration service and an emergency replacement card service.



CALL NOW TO APPLY!

24 hours a day, 7 days a week

1-800-847-7378, ext. 5000

Be sure to use the priority code when calling: **LGJG**.

11.9% Annual Percentage Rate. \$40 Annual Fee for the Gold MasterCard and \$20 for the Silver MasterCard waived the first year. Transaction Fee For Bank and ATM Cash Advances: 2% of each Cash Advance (\$2 Minimum, \$25 Maximum). Transaction Fee For Premium Access Checks* and Preferred Access Checks* Cash Advances: 1% of each Cash Advance (\$2 Minimum, \$10 Maximum). Late Payment Fee: \$15. Over-the-Credit-Limit-Fee: \$15. *Certain restrictions apply to these benefits. The summary of credit card benefits accompanying the credit card Premium Access Checks* and Preferred Access Checks* describes coverage terms, conditions and limitations. MBNA America® and Premium Access Checks® are federally registered Service Marks of MBNA America Bank, N.A. The account is issued and administered by MBNA America Bank, N.A. MasterCard® is a federally registered Service Mark of MasterCard International, Inc., used pursuant to license. The information about the cost of the card described above is accurate as of 7/93, to find out what may have changed call 1-800-847-7378 ext. 5000.

Circle No. 40 on Reader Service Card

SAMPE Journal, Vol. 29, No. 5, September/October 1993