



# Education & Campus

## SUPER LIGHT WEIGHT BRIDGE BUILDING CONTEST

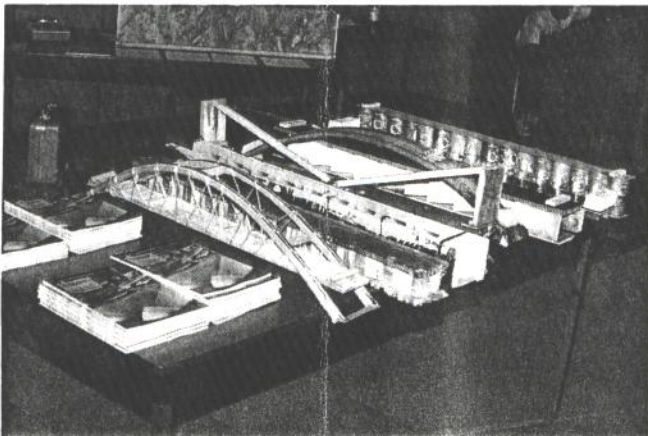
Howard Kliger, SAMPE New Jersey Chapter  
Michael Kaplan, NJSSA

For the second year in a row, SAMPE New Jersey Chapter and the New Jersey Science Supervisors Association (NJSSA) co-sponsored a statewide high school science contest to design and build a light weight, advanced materials bridge. The contest had, as a primary objective, the introduction of composite materials to science and engineering oriented high school students. Student teams from approximately 35 high schools competed to produce the lightest weight bridge which would span 1 meter and support 30 kilograms without failing or deflecting more than 12 mm.

As in the contest last year, the NJSSA provided the infrastructure to publicize the contest and coordinate the school activities with regard to permission and liability waiver slips, student travel, teacher support, etc. SAMPE New Jersey provided technical support including all kit materials, contest definition, judging, etc. Also, SAMPE New Jersey provided cash prizes for winners.

Approximately 40 kits were assembled and distributed to participating high schools across the state. The kits contained materials to be used in building the bridges, including carbon, glass and aramid fibers and fabrics, balsa wood, aluminum and Nomex honeycomb and epoxy resin. Also included was a video tape showing how to mix resin, make a laminate and some ideas on building bridges.

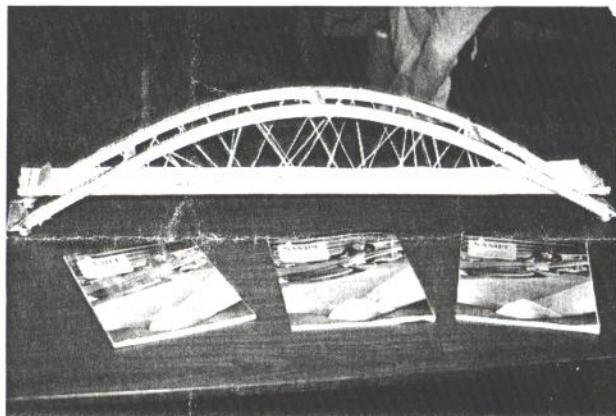
Contributors of materials included Allied Signal, Amoco Performance Products, Atkins and Pearce, Baltek, BASF Celion Fibers, Dow Chemical, DuPont, Hexcel, Mutual Industries, Owens Corning Fiberglass, Plascore, and Sunkyong Industries.



A number of bridges on display. Note the one in the foreground is the "most innovative designer" winner, and at the other end is one which used soda cans as the core material.

The contest finals were held on May 14th. First place went to Paul DeMello and Kyung Kim of Bayonne High School (198.0 grams). Second place was John Moody and Richard Sheerin of Carteret High School (227.4 grams). Third place was Eric Uhrhane of Parsippany Hills High School (265.4 grams), and fourth place was Scott Rosande of Scotch Plains High School (265.5 grams). All received cash prizes from SAMPE New Jersey and fishing rod combos courtesy of Abu Garcia Co.

Finally, Eric Uhrhane also captured the "most innovative bridge" design award for the second year in a row – another graphite tennis racquet donated by Prince Manufacturing. Next year Eric won't be eligible; we understand he's going to be majoring in computer sciences at Cal Tech.



Most innovative bridge, (shown here unloaded), used hollow arches made of laminates of balsa and carbon fiber epoxy. The loading deck was supported by dry Kevlar<sup>®</sup> yarn interlaced from one end to the other.

## ADHESION SOCIETY FINANCIAL SUPPORT

The Adhesion Society, Inc. will provide partial support for deserving graduate students to attend its 1993 Annual Meeting as well as its Annual Short Course on Adhesion at that meeting. Contact Professor F. J. Boerio, president, The Adhesion Society, Inc., Department of Materials Science and Engineering (ML 12) University of Cincinnati, Cincinnati, OH 45211.

## PETROLEUM & CHEMICAL PROCESSING CATALYSTS CORE OF CO-OP VENTURE

Microfluidics Corporation and Worcester Polytechnic Institute have agreed to participate in a cooperative venture to be known as WPMF Technology Licensing Company. The new company has been created to patent and commercialize certain manufacturing processes invented at WPI which rely upon Microfluidics' patented and proprietary Microfluidizer<sup>®</sup> processing systems.