

# Conference Reports

## Annual Review of VPI's Center for Composites Materials and Structures

On 9-11 April 1984, the Center for Composite Materials and Structures at Virginia Polytechnic Institute and State University (VPI&SU), Blacksburg, VA, held the first annual review of that program. The Center for Composite Materials and Structures is a coordinating organization for research and education at VPI&SU, formed in 1982 to encourage and promote continued advances in composite materials and structures. Some 34 faculty members in the center conduct research in a wide variety of areas including design and analysis of composite materials and structures, chemistry of materials and surfaces, characterization of material properties, development of new material systems, and the relationships between damage and the response of composite materials and components.

Since the review was the first one for the center, a special effort was made to present information about nearly all major areas of activity. The presenters were associated with the disciplinary units of engineering science and mechanics, aerospace and ocean engineering, chemical engineering, materials engineering, electrical engineering, mechanical engineering, chemistry, and mathematics. The presentations provided general descriptions of the programs of activities and selected results from specific representative investigations. Topics ranged widely over the general areas of stress analysis, damage analysis, nondestructive testing, life prediction, fracture, fracture mechanics, thermal properties, surface chemistry, processing, structures, structural optimization, adhesion, viscoelasticity, and material synthesis.

On the second day of the conference, a special session featured distinguished alumni of the composites program at VPI&SU. Presentations were made by Walter B. Rosen, President of Materials Sciences Corporation, Joseph D. Walters, Assistant Director of Firestone Central Research Laboratories, and Martin N. Mikulas, Head of Structural Concepts Branch, NASA Langley Research Center. Rosen addressed "Practical Applications of the Mechanics of Composite Materials," Walters discussed the "Mechanics of Compliant Composites," and Mikulas described the "Construction of Large Space Structures with Emphasis on Space Stations." The afternoon session was followed by a reception and banquet. The featured speaker at the banquet was also an honored alumnus of the VPI&SU composites program, Alexander F. Giacco of Hercules International, Wilmington, DE. Giacco described the developing field of composite structures and applications of graphite as a reinforcing fiber.

A poster display featuring numerous details of a variety of the work at VPI&SU was a popular feature of the review. The display room also served as a discussion area between sessions. On the last day of the conference, an extensive series of laboratory tours was offered.

Among the events restricted to the Industrial Affiliates of the CCMS was the unveiling of the new on-line data base information system under development by the center, called COMPOSINET. The principal features of the data base, its operation, and the manner in which it is being developed, were discussed and a demonstration was given to the Affiliate representatives. The first connections of Affiliates to the system will be made later in 1984. The COMPOSINET system generated considerable enthusiasm and excitement among the group in attendance.

*K. L. Reifsnider  
Virginia Polytechnic Institute and State University  
Blacksburg, VA 24061*

## Failure Processes in Fibre Composites

On 3-4 May 1984, the Canadian Committee for Research on the Strength and Fracture of Materials sponsored a conference on "Failure Processes in Fibre Composites" at The Briars, Jackson's Point, Ontario. Some 40 participants took part in the conference, the third in a series of Canadian conferences on high-performance fiber composites, this one supported by a grant from the National Science and Engineering Research Council of Canada. Special attention was given to the relationship between the scientific community, industry, and the Canadian government. In particular, the need to increase composites research in the government laboratories, to increase funding for university research, and to increase composite product development were addressed. M. R. Piggott was the conference chairman. A proceedings volume was produced and can be obtained from Prof. Piggott (Department of Chemical Engineering and Applied Chemistry, University of Toronto, Toronto, Ontario M5S 1A4). The Enhanced Composites Group at the University of Toronto was a cosponsor of the conference.

Two features of the conference were particularly noteworthy. In a time when professional meetings seem to be growing larger, this conference benefited from an intimate atmosphere, enhanced by the conference surroundings, which made significant technical exchange between participants more likely. Second, the conference was attended by an excellent (albeit somewhat orchestrated) mix of individuals from universities, government labs, industries, and government. This added a special flavor to the discussions and provided a wide selection of perspectives.

*K. L. Reifsnider  
Virginia Polytechnic Institute and State University  
Blacksburg, VA 24061*

# Calendar on Composites

**9-11 Oct. 1984**

*16th National SAMPE Technical Conference*  
Four Seasons Motor Inn, Albuquerque, NM

**15-17 Oct. 1984**

*DOD/NASA Mechanics of Composites Review*  
Stouffer's, Dayton, OH

**15-17 Oct. 1984**

*21st Annual Meeting of the Society of Engineering Science*  
Virginia Polytechnic Institute and State University  
Blacksburg, VA

**15-17 Oct. 1984**

*DOD/NASA Mechanical of Composites Review Conference*  
Stouffer's Hotel, Dayton, OH

**17-19 Oct. 1984**

*7th DOD/NASA Conference on Fibrous Composites in Structural Design*  
Stouffer's Hotel, Dayton, OH

**24-25 Oct. 1984**

*ASTM Symposium on Composite Materials: Fatigue and Fracture*  
Dallas/Ft. Worth, TX

**5-8 Nov. 1984**

*ASTM Symposium on Instrumented Impact Testing of Plastics and Composite Materials*  
Hyatt Capital Square, Columbus, OH

**13-15 Nov. 1984**

*Processes for Metal and Ceramic Matrix Composites*  
Battelle Columbus Laboratories, Columbus, OH

**9-13 Dec. 1984**

*1984 ASME Annual Winter Meeting*  
New Orleans, LA

**28 Jan.-1 Feb. 1985**

*40th Annual Conference of The Society of the Plastics Industry*  
Atlanta, GA

**13-15 March 1985**

*ASTM Symposium on Toughened Composites*  
Hyatt Regency Hotel, Houston, TX

**18-19 March 1985**

*ASTM Symposium on Fatigue in Mechanically Fastened Composite and Metallic Joints*  
Sheraton-Charleston Hotel, Charleston, SC

**19-21 March 1985**

*30th National SAMPE Symposium and Exhibition*  
Disneyland Hotel, Anaheim, CA

**15-17 April 1985**

*AIAA/ASME/ASCE/AHS 26th Structures, Structural Dynamics, and Materials Conference*  
Sheraton-Twin Towers, Orlando, FL

**16-19 April 1985**

*SAE General Aviation Aircraft Meeting and Exposition, Session on Composites Design and Analysis*  
Century II, Wichita, KA

**May 1985**

*26th AIAA/ASME/AHS Conference on Structures, Structural Dynamics, and Materials*  
Orlando, FL

**28-30 May 1985**

*6th International SAMPE Conference*  
Scheveningen (The Hague), The Netherlands

**1-4 July 1985**

*IUTAM Symposium on Mechanics of Damage and Fatigue*  
Technion-Israel Institute of Technology, Haifa, Israel

**28 July-2 Aug. 1985**

*5th International Conference on Composite Materials*  
Towne and Country, San Diego, CA

**9-11 Sept. 1985**

*3rd International Conference on Composite Structures*  
Paisley College of Technology, Scotland

**9-11 Sept. 1985**

*19th Midwestern Mechanics Conference*  
Ohio State University  
Columbus, OH

**22-24 Oct. 1985**

*17th National SAMPE Technical Conference*  
Concord Hotel, Kiamesha Lake, NY

**17-21 Nov. 1985**

*ASME Winter Annual Meeting*  
Miami Beach, FL

**18-20 Nov. 1985**

*ASTM Symposium on Testing Technology of Metal Matrix Composites*  
Opryland Hotel, Nashville, TN



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