

Sigma Xi Today

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Sigma Xi 1998 Forum

International Cooperation in Science and Technology

November 12-13, 1998 • Hyatt Regency • Vancouver, British Columbia

The Society's annual meeting will be held in conjunction with the forum, November 13-15. Stanford University chemist Carl Djerassi, widely known for his contributions to synthetic organic chemistry and development of the first oral contraceptive, will receive the Procter Prize for Scientific Achievement and address the delegates. Additionally, the first recipient of the Sigma Xi Young Investigator Award, John Gillaspay, a physicist at the National Institute of Standards and Technology, will present a talk, *Little Ions with a Big Charge*. The annual meeting program also features workshops on issues and programs of importance to Sigma Xi, including mentoring, ethics, international scientific cooperation, science education and science advocacy.

Updates, details and registration information for both the forum and annual meeting appear on the Sigma Xi Web site, <www.sigmaxi.org>.

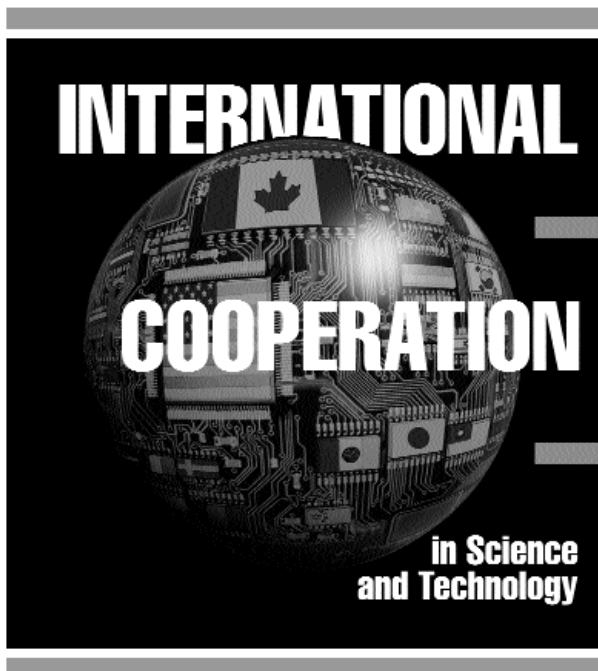
Thursday, November 12

8:30-9:15 a.m. Plenary Session

■ *International Cooperation in Science and Technology*
Henry Friesen, President, Canadian Medical Research Council (invited)

9:15-10:00 a.m. Plenary Session

■ *Efforts to Assist in the Safety and Closure of Chornobyl*
The nuclear power plant accident at Chornobyl represents one of the greatest environmental challenges ever.



Laurin Dodd, Senior Program Manager, Pacific Northwest National Laboratory; **Constantin Rudya**, Special Advisor to the Minister, Ministry for Environmental Protection and Nuclear Safety of Ukraine

10:30 a.m.-12:00 p.m.
Concurrent Sessions

■ *Mapping the Human Genome*

Developments in human genetics have prompted a host of societal and ethical challenges that must be faced by all countries. Panelists will address both the science and its widespread implications for the international community.

C. Thomas Caskey, Senior Vice President, Human Genetics & Vaccines Discovery,

Merck & Co. Inc.; **Michael Smith**, University Killam Professor, Peter Wall Distinguished Professor and Nobel Laureate, University of British Columbia (UBC)

■ *International Cooperation in Technology Development*

As multinational corporations dramatically affect the location and pace of technology innovation around the world, the opportunities for and consequences of international collaboration have become key considerations in many industries.

Richard J. Brody, Technology Policy Analyst, Technology Administration, U.S. Department of Commerce; **Robert Eagan**, Vice President, Physical Sciences & Components, Sandia National Laboratories; **A.J. Tien**, Environmental Biotechnology Section, Savannah River Technology Center

(continued on next page)

■ *Severe Local Storms: Impacts and Predictions*

The study and prediction of severe weather has always been of intense local interest. This session will chronicle new developments and address the societal and scientific impacts of these developments that now cross international boundaries.

Charles A. Doswell, III, Meteorologist, National Severe Storms Laboratory, National Oceanic and Atmospheric Administration (NOAA) and Sigma Xi Distinguished Lecturer; **Robert H. Johns**, Science and Operations Officer, Storm Prediction Center, National Weather Service; **Patrick McCarthy**, Severe Weather Program Manager, Environment Canada

2:00-2:45 p.m. Plenary Session

■ *International Space Station: Enabling World Class Science*

Kathryn I. Clark, International Space Station Chief Scientist, NASA Headquarters

3:15-4:45 p.m. Concurrent Sessions

■ *Using Information Technology for International Collaboration*

Rapidly-evolving information and communications technologies are facilitating international collaboration in such areas as earthquake research, the migration of sea mammals and Internet control of telescopes.

Gregory van der Vink, Director of Planning, Incorporated Research Institutions for Seismology (IRIS); **J. Michael Williamson**, Associate Professor, Wheelock College / Whalenet; **Thom H. Dunning, Jr.**, Battelle Fellow, William R. Wiley Environmental and Molecular Sciences Laboratory, Pacific Northwest National Laboratory

■ *International Space Station: Some Assembly Required*

Space Station scientists and administrators will discuss the ISS as a large-scale engineering project and the research opportunities it presents. A variety of programmatic, policy and research perspectives will be presented.

Kathryn I. Clark, International Space Station Chief Scientist, NASA Headquarters; **Yoshinori Fujimori**, Special Advisor to the President, National Space Development Agency of Japan; **Bjarni V. Tryggvason**, Payload Specialist & Astronaut, Canadian Space Agency (invited)

■ *The Use and Misuse of Science in Fisheries Management*

Science, economics and politics often clash on the high seas, where fishing issues are the focus of many international disputes. Can scientists, politicians and stakeholders work toward sustainable "scientific management" of ocean resources?

Leah Gerber, Washington Cooperative Fish and Wildlife Research Unit, University of Washington; **Donald Ludwig**, Professor Emeritus, Mathematics and Zoology, UBC; **Donald Pauly**, Professor, University of British Columbia Fisheries Centre; **Carl J. Walters**, Professor, Zoology, UBC

5:00-5:45 p.m. Plenary Session

■ *A Host of Challenges, a World of Opportunities: Strategies for Science and Engineering Education in Canada*

Claudine Simson, Vice President of Global Research and Development, Nortel

Friday, November 13

8:30-9:15 a.m. Plenary Session

■ *Red Tides and Other Harmful Algal Blooms: A Growing Global Problem?*

Max Taylor, Professor of Biological Oceanography, UBC

9:15-10:00 a.m. Plenary Session

■ *Some Thoughts on Knowledge as the New Societal Leitmotiv and How it Affects the Research Enterprise*

George Bugliarello, Chancellor, Polytechnic University

10:30 a.m.-12:00 p.m. Concurrent Sessions

■ *The International Impact of Emerging and Re-emerging Diseases*

Halting the spread of emerging and re-emerging diseases in our highly mobile world is one of our greatest challenges. This panel will discuss the scientific, ethical, political and technological issues.

F.A. Dombrose, Executive Director, Consortium for Plasma Science, LLC; **Alexandra Levitt**, Visiting Scientist, National Center for Infectious Diseases, U.S. Centers for Disease Control and Prevention; **Dyann Wirth**, Professor of Tropical Public Health, Department of Immunology and Infectious Diseases, Harvard School of Public Health

■ *Weapons of Mass Destruction: the Technology and Politics of Verification*

Weapons verification as well as design and enforcement of nonproliferation treaties are challenging tasks, both technically and politically. The development of the science and problems of verification will be the focus.

Jay Davis, Director of Defense Threat Reduction Agency, U.S. Department of Defense; **William H. Dunlop**, Nonproliferation, Arms Control and International Security Directorate, Lawrence Livermore National Laboratory; **Paul Jackson**, Technical Staff Member and Group Leader, Life Sciences Division, Los Alamos National Laboratory

■ *The Science and Politics of Large-Scale International Collaboration*

This session will review case studies of successful and unsuccessful projects and explore the implications for current and future international collaborations in such areas as high energy physics, fusion energy and global climate change.

James Decker, Deputy Director, Office of Energy Research, U.S. Department of Energy; **Rodney Nichols**, President and CEO, New York Academy of Sciences; **Richard Rowberg**, Senior Specialist in Science and Technology, Congressional Research Services, U.S. Library of Congress; **Maurice Strong**, Special Advisor to the U.N. Secretary General (to be confirmed)

2:00-2:45 p.m. Plenary Session

■ *Science Quests on the Deep Sea Floor*

Verena Tunnicliffe, Professor, School of Earth and Ocean Science, University of Victoria

Chapters Begin Science Policy Initiatives

Several Sigma Xi chapters have been inspired by the Michigan Science Advocacy Program, featured in the May-June issue of "Sigma Xi Today," to begin science policy initiatives of their own. For the past few years, a group of members representing various Michigan chapters have been meeting with their state Congressional delegates on a regular basis to talk about science policy issues before Congress.

The **Research Triangle Park Chapter** recently began working in an advisory capacity with the governmental North Carolina Science and Technology Board.

Meanwhile, in response to an invitation from the **Central Arkansas Chapter**, U.S. Rep. Vic Snyder was the keynote speaker at the chapter's annual banquet. Chapter president Syed Ali said this initial event was part of plans for an ongoing effort to become more involved in science policy discussions.

The **University of South Alabama Chapter** of Sigma Xi recently sent letters to members of their Congressional delegation volunteering their services as nonpartisan science and technology advisors.

"As an independent honor society representing all of science and engineering, Sigma Xi has some advantages on Capitol Hill," according to Sigma Xi Executive Director Peter Blair, former assistant director of the Congressional Office of Technology Assessment. "Sigma Xi is not a lobby group, but rather an advocate for science and technology. This appears to be a very effective way of stressing the importance of research."

For more information about the Michigan Science Advocacy Program and other chapter activities, visit the "Chapters" section of the Sigma Xi Web site at <www.sigmaxi.org>.

Sign Up for NASA Videoconference

Sigma Xi chapters are encouraged to participate in the National Aeronautics and Space Administration's (NASA) Sixth Annual International Space Station teleconference for technical audiences on February 25 (1-3 p.m., ET) by establishing satellite downlink sites for the teleconference.

For more information and a license form, consult Sigma Xi's home page at <www.sigmaxi.org>, where information on the teleconference is included under "News and Upcoming Events" or call 800-243-6534.

The NASA program, titled *International Space Station: Venture for Discovery*, offers a new format for audiences interested in the commercial research potential of the Space Station and will focus on the success stories of current research in life and microgravity science. The following individuals are invited to participate with questions and comments to a diverse panel of

NASA's top researchers, international investors and other experts: science and engineering students and faculty at universities and colleges; research and

development professionals; scientists affiliated with universities, hospitals, government agencies and commercial organizations; and business representatives with biomedical, pharmaceutical or agricultural interests.

The program is produced by NASA in association with WHRO Center for Public Telecommunications. Sigma Xi is helping to promote the program as part of National Engineering Week.



Plasma Science Grant Fund Established

The Consortium for Plasma Science has established a special fund within Sigma Xi's Grants-in-Aid of Research program to advance the safety of the world's blood supply through research and development of methods to inactivate non-enveloped viruses and prions in human blood.

The initial agreement calls for up to five Sigma Xi-Consortium for Plasma Science Research Grants annually, of up to \$5,000 each, to be awarded to graduate students and postdoctoral associates. Membership in Sigma Xi is not a requirement for either applicants or nominators.

This will be the first time in the recent history of the GIAR program that awards will be made to postdoctoral associates. All other Sigma Xi grants are limited to undergraduate and graduate students.

Based in Charlotte, North Carolina, the Consortium for Plasma Science is the collaborative effort of four plasma fractionation companies: Alpha Therapeutic Corporation, Baxter Healthcare Corporation, Bayer Corporation and Centeon.

Proposals should focus on "innovative research activities involving scalable methods and technologies for universal inactivation of non-enveloped viruses and prions from human blood plasma and plasma derivatives, with particular emphasis on the recovery of biofunctionality of the treated plasma."

For an application form and further guidelines, visit the Sigma Xi site on the Web at <www.sigmaxi.org> or contact the grants program at 800-243-6534 or by e-mail at gjar@sigmaxi.org.

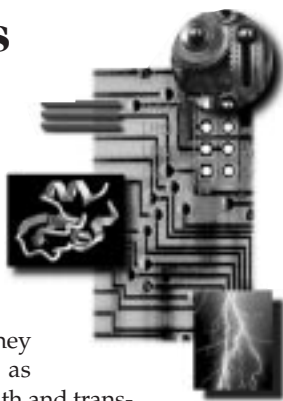
1997 Forum Proceedings are Available

A 267-page proceedings volume for the 1997 Sigma Xi Forum, *Trends in Industrial Innovation: Industry Perspectives and Policy Implications*, has been published and is available for \$10 a copy.

Held in Washington, D.C., the 1997 Forum examined industrial research trends and what they mean for the future of research in such areas as biotechnology, telecommunications, energy, health and transportation.

Containing the plenary addresses and many of the panel presentations, the proceedings volume is organized around the five major themes that emerged at the conference: new forces in industrial innovation, the evolving role of government, the future of the research university, globalization of industrial research and development, and the future of the national laboratories.

Forum sponsors included the Organization for Economic Cooperation and Development, the Burroughs Wellcome Fund and Cisco Systems Inc. Copies of the proceedings are available through the Forum Coordinator, Sigma Xi, P.O. Box 13975, Research Triangle Park, NC 27709.



FDA Forum Looks at Biotech Impact

The 1998 Food and Drug Administration (FDA) Science Forum on December 8-9 at the Washington Convention Center, in downtown Washington, D.C., will bring FDA research and review scientists together with representatives of industry, academia, government agencies, consumer groups and the public to discuss the impact of the enormous advances in biotechnology on product development and regulation.

The program will address bioengineered products, novel therapeutic and preventive approaches, diagnostics and detection methodologies, and safety and efficacy assessment. Regulatory issues related to standards and product quality and the impact of the Food and Drug Administration Modernization Act will also be addressed.

A poster session sponsored by the FDA Chapter of Sigma Xi will encompass all areas of FDA regulatory science. For more information, contact the FDA Office of Science at 301-827-3340, visit the FDA Chapter's Web site under the "Chapters" section at <www.sigmaxi.org> or access the program directly at <www.aaps.org/edumeet.html>.

American Scientist Forum Debuts

The Sigma Xi Committee on Programs joins Peter Blair, executive director of Sigma Xi and publisher of *American Scientist*, in inviting you to a discussion of recent topics treated in the pages of the magazine.

Launched this summer, the *American Scientist* Forum is part of the magazine's new and improved Web site <www.sigmaxi.org/amsci>, which contains abstracts from the current issue, related Internet resources, an archive of past issues, author guidelines, forms for subscribing and requesting permission to use *American Scientist* articles, plus a "search by key word" function for the archive.

The Web site is designed to provide a sample of the magazine's content for those unfamiliar with it, and to enrich the reader's experience by facilitating exploration and discussion of themes treated in the magazine.

Moderated by Stevan Harnad, professor of cognitive science in the depart-

ment of electronics and computer science at Southampton University, the September *American Scientist* Forum focused on "Free Internet Access to Traditional Journals," a provocative article by entomologist Thomas J. Walker in the September-October issue. Walker's article is available in full text with additional notes and an expanded bibliography of Web-accessible and printed material added.

Join the discussion at the *American Scientist* Forum page on the magazine's site or by sending the e-mail message "SUBSCRIBE SEPTEMBER-FORUM" to LISTSERV@AMSCI.ORG.

A new Forum discussion will begin every two months, focusing on an article in each new issue. You can also join in a discussion of science books by subscribing to the Bookshelf discussion group; follow links on the Forum or Bookshelf pages on the Web site or send the message "SUBSCRIBE BOOKSHELF-L" to LISTSERV@AMSCI.ORG.

American Scientist: The Perfect Gift

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