1. Packard Initiative Pilot Activities

On Thursday, June 7, 2001, the NIST Chapter of Sigma Xi and the Guest Researcher Association (GRA, a 213-member organization at NIST), co-hosted a reception and seminar entitled "SIGMA XI Packard Initiative for International Scientific Networking", featuring Christine Piggee, Sigma Xi International Program Coordinator of Research Triangle Park, North Carolina.

Dr. Piggee's talk was focused on the Packard Initiative, a new program funded by a three-year grant from the David and Lucile Packard Foundation and aimed at promoting international science networking opportunities with a focus on researchers in developing countries. The Packard Initiative for International Scientific Networking is designed to create networks of scientists and engineers in developing countries and to foster long-term partnerships between those communities, established Sigma Xi chapters, and scientists and engineers throughout the world.

Robert Fletcher, the president of the Chapter, also gave a short presentation "Sigma Xi? Why a NIST Chapter? What does the Chapter Accomplish?".

The event was attended by more than 30 NIST employees and guest researchers and was followed with some refreshments.

NIST currently has 379 foreign guest researchers from 65 different countries, and therefore is an ideal ground for promoting the Packard Initiative. Dr. Piggee has informed us that she has already received contacts in Argentina from an Argentinean Physicist at NIST.

Nadine Guillaume, the treasurer of GRA and guest researcher at EEEL,has this to say about the presentation: "It was really interesting and I really believe that such presentations help in creating relations between associations. I am sure that foreign guest researchers, who are usually not aware of these types of supportive research organizations will be interested in joining Sigma-Xi."

From left to right: Bert Coursey, President-elect, Christine Piggee, Sigma Xi International Program Coordinator, and Robert Flectcher, President.

Participants listening attentively to Dr. Piggee's presentation.

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2. Colloquium Series

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This year the Chapter hosted the following public lectures:

Nov. 9, 2000, **A New Model for Coronary Restenosis Following Balloon Angioplasty,** Robert Schwartz, Mayo Clinic

Dec. 12, 2000, **Plutonium in the Arctic Environment**, Peter Mitchell, National University of Ireland

Jan. 25, 2001, **Modeling of Alloy Solidification Using Coupled Cahn-Hilliard/Cahn-Allen Equations,** Bill Boettinger, NIST

Feb. 15, 2001, **8th Annual Postdoc Poster Presentation**

Mar.22, 2001, **Trapping of Cold Molecules and Atoms**, John Doyle, Harvard University

Apr. 25, 2001, **A Retrospective of Greg Poirier's Scientific Work at NIST**, Mike Tarlov and Richard Cavicchi,NIST

May 7, 2001, **Application of Chemistry to Examination of Works of Art,** Suzanne Lomax, National Gallery of Art, Washington DC

The April 25 lecture was scheduled to be given by the 2000 Young Scientist Award recipient, Greg Poirier. In stead, Mike Tarlov, Greg's Group Leader, and Richard Cavicchi,his Division Chief, gave a moving lecture (see right) about him.

A Retrospective of Greg Poirier's Scientific Work at NIST

NIST lost one of its brightest young stars, Gregory E. Poirier, who passed away in September at the age of 39. During Greg's brief career at NIST he made many noteworthy contributions in the areas of surface science and chemical sensing. While Greg was recognized primarily for his rigorous STM studies of alkanethiol monolayers on gold, he also was active in projects ranging from micromachined devices to detection of explosives.

The lecture reviewed some of the highlights of Greg's STM work and also touched on some of his lesser-known contributions while a member of the Process Sensing Group at NIST.

Feb. 20, 2001 issue of Langmuir cover featuring Greg Poirier's work on STM studies of alkanethiol monolayers on gold.

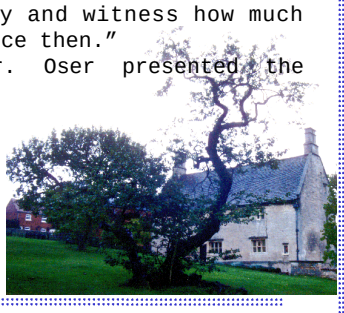
3. Twenty-fifth Anniversary Banquet

On the beautiful spring evening of May 7, 2001, the NIST Sigma Xi Chapter celebrated its 25th anniversary at the annual banquet with 75 members and guests. It started with a social hour with a view of a rolling golf course and award winning posters from High School Student Science Fair projects and from Postdoctoral Poster Presentation, followed by dinner and the evening program including: remarks by the Chapter's first president, Hans Oser and introduction of current and new officers and new members (we have 10 this year!). Then it was presentation of awards: Outstanding Teacher, High School Science Fairs, Outstanding Post-doctoral Presentation, Young Scientist for Excellence in Scientific Research, Outstanding Service in Support of Research Scientists, and Outstanding Service to the NIST Sigma Xi Chapter. The evening ended with a lecture by Suzanne Quillen Lomax. Below are some highlights.

Reflections by the chapter's first president

The first president, Hans Oser, gave a talk on "How the ΣΞ Chapter at NBS came into being". The NIST Chapter was founded in 1976 (then NBS) as a Sigma Xi Club, signing up about 85 NBS members (a number that dwarfed most of the academic clubs and chapters in the DC area at the time). Two years later the Chapterhood was established. Dr. Oser said, "It is a pleasure to be with you today and witness how much the chapter has flourished since then."

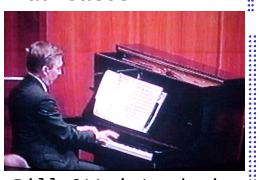
As we pondered history, Dr. Oser presented the Chapter President a piece of the original descendants of Newton's apple tree imported by NBS and planted in 1957 at the old NBS site, together with a picture of the tree that presently stands at Woolsthorpe Manor (right photo).



Outstanding support to scientist award

-- One of the two recipients was William R. (Bill) Ott, Past President of the Chapter. The citation goes: "For the past eight years, Bill has organized the bi-weekly NIST Staff Colloquium Series, ... More than 140 colloquia have been presented..., spanning a range from the "Amazing Randi", who debunks magic tricks such as spoon bending, to seven Nobel laureates.

On one memorable occasion, when the lecture was about temperature measurements, instead of his usual meticulously prepared introduction Bill sat down at a piano in the Green Auditorium and played a ten-minute medley of songs having a theme related to temperature!"



Bill Ott introducing a speaker.

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Area high school measurement science award

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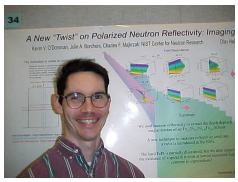
"Influence of the Mass of a Golf Ball on the Putting Distance" by Jamie Shenk, Wootton HS was one of the three projects receiving the Measurement Science Award. At the awards ceremony, Dr. Dale Newbury remarked: "In commending Mr. Shenk on his project, I would especially like to note that upon making a detailed analysis of his experimental data, he found a null result that did not support his hypothesis. He demonstrated honesty and real courage by presenting that null result, and avoiding the all too common urge, as Newton told his publisher, to 'mend the numbers.' In fact two of the saddest episodes in recent scientific history, specifically the 1980s cold fusion debacle and the early 1990s Nature paper on homeopathy, were caused by scientists failing to accept a null result and looking for any excuse to exclude negative results as mistakes, thus biasing their results."

Most outstanding poster of the 8th Annual PPP

This year the Postdoc Poster Presentation featured 38 posters on the research topics covering Biotechnology, Chemistry, Engineering, Material Science, and Physics. The posters were evaluated by judges from EEEL, CSTL, PL, BFRL, MSEL, and the NIST Program Office.



The winning smile of Kevin O'Donovan

The winner is: "A New 'Twist' on Polarized Neutron Reflectivity: Imaging Exchange-Spring Magnets" by Kevin V. O'Donovan from MSEL's Center for Neutron Research. The two "runners-up" are: Archie Smith from MSEL's Polymers Division, for "Combinatorial Study of Surface Pattern Formation in Thin Diblock Co-Polymer Films", and Robert Dimeo, also from MSEL's Center for Neutron Research, for "The Dynamics of Free and Confined Tops".

Poster presentation hallway. Event held on February 15, 2001, in the NIST Hall of States from 11 am to 3 pm.

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Keynote Lecture: Science and Works of Art

The banquet attendees were treated to a fascinating lecture given by Dr. Suzanne Quillen Lomax of the Scientific Research Department of the National Gallery of Art, Washington DC.

Scientists have been associated with museum conservation laboratories for many years. Only recently, however, have art curators and conservators begun to appreciate these efforts. At present, about a dozen museums in the United States have conservation science departments. Dr. Lomax presented the application of various techniques to the examination of paintings and sculpture with examples from the collection of the National Gallery of Art.

Suzanne Lomax

Contact: Robert Fletcher (robert.fletcher@Nist.gov)

Cosme Tura, Modonna and Child in a Garden, Samuel H. Kress Collection, Photograph © 2001 Board of Trustees, National gallery of Art, Washington DC.