



# **SIGMA XI NEWSLETTER**

**Iowa State University  
January 2010**

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## **CALENDAR, WINTER 2010**

### **SIGMA XI NATIONAL LECTURER**

*America's Energy Future: Nuclear and Renewable Energy  
and Energy Efficiency for Urban Energy Sustainability*

Dr. Lawrence Papay  
CEO and Principal, PQR  
National Academy of Engineering

Thursday, February 25, 2010  
8:00 p.m., South Ballroom, Memorial Union

Lawrence Papay has a distinguished career in the energy sector, including business management, technology integration, nuclear and electrical power, and system planning. He is CEO and Principal of PQR, a management consulting firm for a variety of clients in electrical power and other energy areas. His previous positions include Sector Vice President for SAIC's Integrated Solutions Sector; Senior Vice President and General Manager of Bechtel Technology & Consulting; and Senior Vice President at Southern California Edison. Papay has served on the Department of Energy's Energy Research Advisory Board, the Department of Homeland Security's Science and Technology Advisory Committee as well as the President's Council of Advisors on Science and Technology. He holds a Sc. D. in nuclear engineering from MIT.

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**Early January, 2010:** The form for the nomination of Associate and Full Members and for the promotion of current Associate Members will be found at the end of the (current) January Newsletter. The form may be copied, but copies are also available from the Secretary-Treasurer. As may be noted, the nomination form is one downloaded from the Sigma Xi Website - in fact all Sigma Xi forms and National Newsletters are now available online. The Sigma Xi Website is at <http://www.sigmaxi.org.htm>. Either a PDF or MS Word version of the nomination form may be downloaded and printed. Also, however, the MS Word version is interactive, and may be filled out online and forwarded electronically to the Secretary-Treasurer ([hweiss@iastate.edu](mailto:hweiss@iastate.edu)). To access the nomination form, log on to [sigmaxi.org](http://www.sigmaxi.org). Click on *Members, Becoming a Member, Nomination Forms, MSWord or PDF*. Via campus mail, nominations are to be sent to the Secretary-Treasurer, Harry Weiss (1200 Howe Hall, 4-5666, 296-5051).  
The Secretary-Treasurer will be happy to answer procedural questions, relative to nominations, at any time. Nominations should be submitted by February 15, 2010 for timely review by the Committee on Membership. Current guidelines for nominations are given later in this Newsletter. **Please type or print when filling out the nomination form.**

**February 15, 2010 (Monday):** Nominations for Associate and Full Membership and for promotions to Full Membership are due, c/o Harry Weiss, Sigma Xi, 1200 Howe Hall, ISU.

**February 25, 2010:** National Sigma Xi Lecturer, Lawrence Papay, will deliver a lecture on Sustainable Energy (see page 1 of this Newsletter).

**March 1, 2010:** Invitations to membership to be sent to those whose nominations have been approved by the Committee on Membership

**March 22, 2010:** Deadline for receipt of acceptances from nominees for membership.

**Mid-March, 2010:** The Spring Newsletter will contain Initiation Banquet details, and a ballot for the election of members of the Executive, Membership and Nominating Committees. Let President Steven Kawaler or any other member of the Executive Committee have your suggestions for candidates (including yourself).

**April 12, 2010:** Deadline for receipt of ballots for election of committee members.

**April 29, 2010 (Thursday):** The Annual Initiation Banquet will be held in the Scheman Building. At this event, initiates (who are invited to attend as guests of the Chapter) formally become members of Sigma Xi; and the following awards are presented: the Zaffarano Prize for Graduate Student Research, the Karas Dissertation Award and the Lester Earls Award for Undergraduate Research Scholars. The formal proceedings conclude with the installation of the new President. We start with a social hour at 5:30, followed by dinner and the necessary initiation formalities. The evening will conclude with an address by the retiring President, Steven Kawaler, at 8:00 p.m., *One Astronomer's View of Why We Must Do Astronomy from Space..*

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## NOMINATIONS

This is the call for nominations for the promotion of Associate Members to Full Membership, and for the initiation of new Associate and Full Members. We urge you to recognize the achievements of colleagues, and of students who are well along in Ph.D. or M.S. programs, by nominating them for the appropriate membership level, or for promotion. We also encourage you to nominate qualified undergraduates to be recognized as Undergraduate Research Scholars and for initiation as either Associate or Full Members. Minimal qualifications for URS nomination are those required for Associate Membership (see Guidelines in this Newsletter) and, generally, a GPA greater than 3.50. Both nominators and students (graduate or undergraduate) should be aware that membership in Sigma Xi can be listed on the student transcript as recognition of the student's research accomplishments.

Sigma Xi is the only national honorary society which has research experience as a condition for membership. However, Sigma Xi does not confine its interests solely to science- or technological-related research; it addresses issues of concern to many outside the direct research community. For example, recent

colloquia sponsored by Sigma Xi include the following: 1996, *Science, Technology and the Global Society*; 1998, *International Cooperation in Science*, focusing on cooperative experiences in areas such as health science, space, the environment, education, atmospheric and ocean science, and international security; 1999, *Reshaping Undergraduate Science and Engineering Education: Tools for Better Learning*; 2000, *New Ethical Challenges in Science and Technology*; 2001, *Science, the Arts and the Humanities: Connections and Collisions*. The Forum topic, held in Los Angeles, CA in November, 2003, was devoted to *Science and Engineering: Keys to International Understanding*. Thus, Sigma Xi should have significant appeal not only to those directly involved in research, but also to those who are interested in solutions to science-related social, economic and/or educational problems - e.g., environmental issues, or the quality of science and mathematics education in the elementary and secondary schools. On a more personal level, each dues-paying member has a subscription to the *American Scientist* which carries articles covering a broad spectrum of topics.

In addition to the workshops and lectures by eminent researchers at the Annual Meetings, the Society also sponsors Student Research Conferences at these Meetings, where high school and undergraduate students can present juried poster sessions, and graduate students can make 10-minute presentations to a panel of judges. At the 2007 Meeting in Orlando, FL on November 2-4, the ISU Chapter and the Graduate College were pleased to sponsor a presentation by a History graduate student, Jenny Barker-Devine. Ms. Barker-Devine had previously received a Zaffarano Prize Honorable Mention at the 2006 Annual Initiation Banquet, and was initiated then as a Full Member.

The nomination form is part of this newsletter. Photocopies are completely acceptable, or copies may be obtained from the Secretary-Treasurer, downloaded and printed from the Sigma Xi Website (see page 1), or completed online and sent electronically to the Secretary-Treasurer. Two nominators are required for a nomination; the Secretary-Treasurer will be happy to serve as a second nominator; self nominations for promotion will be accepted and considered from Associate Members who may have difficulty obtaining two nominators. **Please print or type information on the nomination form.**

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## NEWS FROM NATIONAL

Each year, the dues structure of the Society is normally evaluated based on a formula tied to the Higher Education Price Index (HEPI), which is comparable to but not the same as the Consumer Price Index (CPI). This year, however, delegates to the Annual Meeting in Washington, DC on November 20 – 23, 2008, were apprised of an increasing financial emergency facing the Society. Briefly, the salient points highlighting the need for a greater than normal dues increase are 1) membership in the Society has decreased from nearly 120,000 in 1982 to less than 60,000 members in 2008; 2) operating expenses have exceeded revenues for more than a decade – the budget has been balanced by drawing funds from the Society's endowment to the point where there is the risk of exhausting the unrestricted portion of the endowment within two years; and 3) debt service and maintenance on the Society's new building have increased the annual deficit. Selling the building would not erase the annual deficit, the Society would probably lose whatever equity there is in the building, and the Society would then have to rent office space.

To contain costs, National has reduced its staff by a third over the past four years and suspended raises to staff members. It is actively seeking new sources of funding through strategic alliances and partnerships. It is placing more emphasis on development and fundraising activities. It is exploring several options with regard to servicing the debt on the Sigma Xi Center.

At the 2008 Annual Meeting, the delegates were asked to approve a dues increase for 2009-10 of \$21.00 for Full and Associate Members, which would raise the annual dues from \$74.00 to \$95.00. The delegates approved the increase. Student dues would remain at \$25.00, initiation and promotion fee would remain at \$15.00 and \$25.00, respectively. Because the dues increase for 2009-10 was considerably greater than that specified by formula, there will be no national dues increase for 2010-11

## GENERAL COMMENTS

As you will have noticed, in order to contain costs, this Newsletter has been sent to you electronically. Future Newsletters will reach you in the same way.

The Newsletters are sent to all active (dues-paid) members who were affiliated with the ISU Chapter last year. Inactive members are encouraged to pay current dues and become active members (only current dues need be paid to reactivate membership); active members with non-ISU affiliations are encouraged to join the ISU Chapter. Transfer of affiliation to the ISU Chapter is easily accomplished via a telephone call request to the Secretary-Treasurer, or a direct call to National, 1-800-243-6534 (ask for *Membership*). A return to active status requires a note to the Secretary-Treasurer with the member's name and the address to which *American Scientist* is to be sent, with a check for \$106.00 – current National and local dues (\$36.00 for a full-time student).

Annual dues are used in part to fund Grants-in-Aid of Research. These are small grants of up to, but usually less than, \$1,000, available from Sigma Xi in all fields of scientific investigation. Guidelines: applicants need not be members of Sigma Xi; priority is given to applicants in the early stages of their careers. Closing dates for receipt of applications and supporting documentation are October 15 and March 15 annually. Information and applications may be obtained from the Sigma Xi Website.

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QUESTIONS, COMMENTS, CONCERNS? Call Harry Weiss, Sec.-Treas., 1200 Howe Hall,  
294-5666, 296-5051, hweiss@iastate.edu

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### OFFICERS OF THE CHAPTER

President	Steven Kawaler
President Elect	Steve Martin
Secretary-Treasurer	Harry J. Weiss
President Emeritus	William Simpkins

### Executive Committee

P. Jeffrey Berger	2007-10
Steven Kawaler	2007-10
Harry Horner	2008-11
Steve Martin	2008-11
Diane Birt	2009-12
Frederic Janzen	2009-12
William Simpkins	2009-10
Harry Weiss	1992-

### COMMITTEE on MEMBERSHIP

Jeanne Stewart	2007-10
Patricia Thiel	2007-10
Mark Gleason	2008-11
Carol Vleck	2008-11
Amy Bix	2009-12
Nick Christians	2008-1

### NOMINATING COMMITTEE (one-year terms)

Bonnie Bowen	Rolf Koford
Curtis Struck	