



# SIGMA XI Newsletter Iowa State University

March 2009  
Calendar Spring 2009

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## Initiation Banquet

Thursday, April 30, 2009      Scheman Continuing Education Building  
5:30 p.m., Social Hour      6:20 p.m., Dinner, Initiation  
Zaffarano Prize   Karas Award   Lester Earls Award

8:00 p.m., Retiring President's Address

Professor William Simpkins''''  
Geological & Atmospheric Sciences  
Iowa State University

The Future of the Ames Aquifer Through  
the Eyes of Computer Modeling

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The above gives details of the highlight of our year, the Annual Initiation Banquet. All events will take place in the same rooms of the Scheman Building. See later in this Newsletter for details on Banquet costs and reservation procedures.

## The Future of the Ames Aquifer Through the Eyes of Computer Modeling

*The Ames aquifer, a combined alluvial and buried valley aquifer, provides drinking water for the residents of Ames and Iowa State University, and treated water industry, golf courses, lawn watering, and a rural water district. In 2008, nearly 2.2 billion gallons of water were pumped from the aquifer. Although the city has continually expanded its well fields and water treatment facilities through the years to meet the demands of a growing population, water demands exceeding 10 million gallons per day have occurred during recent summer months. Because the current treatment plant can only provide 12 million gallons per day, the city has been examining water use, water treatment capacity, and the ability of the aquifer to meet future needs. A re-investigation of the hydrogeology of Ames aquifer was initiated in 2005. The results of that study suggest that the Ames aquifer can provide as much water as we need in the future under the present climate. However, this optimism is tempered by a number of factors. Future drought may strain our ability to supply water up to the projected 22 million gallons per day by 2063, particularly if additional industry and municipalities become interested in tapping certain parts of the aquifer. Reducing conditions in the aquifer mandate that well maintenance and rehabilitation will be needed to maintain production levels. In addition, the fast recycle time of water in the aquifer suggests that contaminants, particularly those entering the aquifer from the Skunk River and Squaw Creek due to pumping, may eventually pose a threat to water quality. The 3-D groundwater model provides a state-of-the-art view of how the aquifer works and a mechanism to protect this valuable water resource into the future.*

**Committee Members** for 2009-10, as elected via the ballot on page 3 of this Newsletter, will be introduced at the Banquet. William Simpkins will step down as President and Steven Kawaler will assume the office of President. Steve Martin has agreed to become President Elect (and, thus, will also serve as Program Chairman) for 2009-10. William Simpkins and Ruth MacDonald will be retiring from the Executive Committee. Thus, in this election we will elect two new members to the Executive Committee as the ballot indicates. In addition, we will be electing two members to the Membership Committee to replace retiring members Chris Minion and Allen Trenkle; and a new three-member Nominating Committee is elected each year. The ballot strives to retain a balance among disciplines on the various committees.

**Banquet Details:** Initiates are guests of the Chapter; for all others, cost is \$30.00 per person. The dinner entrée is a turkey or chicken dish, with a vegetarian entrée as an alternative, if requested with the reservation. Page 5 of this Newsletter has a reservation form, with a deadline for receipt of reservations of Monday noon, April 27 (please return reservations sooner, if at all possible). Last minute reservations or changes can be made by phone to Harry Weiss (294-5666, 296-5051). Checks, made out to **ISU Sigma Xi**, should be sent to Harry Weiss, Aero Engr Department, 1200 Howe Hall, ISU, before the Banquet.

**Golden Anniversary Members:** Each year we recognize and invite as our guests to the Banquet, those who have been active members of Sigma Xi for 50 years. This year, we have three Golden Anniversary Members, Marshall Luban, Thomas Weber and David Wilder. However, we will also be

pleased to welcome other previously recognized Golden Anniversary Members to the Banquet.

**Annual Meeting:** The 2008 Sigma Xi Annual Meeting was held in Washington, DC on November 20-23, 2008. It included a well attended and highly successful Student Research Conference, at which delegates served as judges. One of the main themes of the Meeting was Water Quality. The ISU Chapter was represented at the Meeting by our President, William Simpkins.

**Dues Structure:** National and local dues for the coming year were noted in the January 2009 Newsletter, but the information bears repeating. Each year the dues structure of the Society is 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). Based on this formula, delegates at the 2008 Annual Meeting approved the following dues structure for 2009-10: Dues for new (and continuing) Full and Associate Members (non full-time students) are \$95.00; full-time student dues are \$25.00; initiation fee is \$15.00; promotion fee is \$25.00. Due to increasing local costs, the Executive Committee of the ISU Chapter has set the local dues, effective with the 2009-10 fiscal year at \$11.00. As is customary, local dues are waived for initiates and those being promoted. And, of course, each initiate/promotee is invited as a guest of the Chapter at the Initiation Banquet.

**Headquarters Address:** For inquiries to the National Office, use the following address:  
Sigma Xi  
3106 East N.C. Highway 54  
Research Triangle Park, NC 27709

## OFFICERS OF THE CHAPTER (2008-2009)

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

### Executive Committee

Harry J. Weiss	1992 -
William Simpkins	2006-09
Ruth MacDonald	2006-09
P. Jeffrey Berger	2007-10
Steven Kawaler	2007-10
Harry Horner	2008-11
Steve Martin	2008-111

### Committee On Membership

Mark Gleason	2008-11
Chris Minion	2006-09
Allen Trenkle	2006-09
Jeanne Stewart	2007-10
Patricia Thiel	2007-10
Carol Vleck	2008-11

### Nominating Committee (elected yearly)

Amy Bix  
Cinzia Cervato  
Nick Christians

Please use the following form to make reservations for the Sigma Xi Initiation Banquet. The deadline for receipt of reservations is Monday noon, April 27. Tickets will be mailed, or they can be picked up at the Banquet. Reservations which might not make it in the mail and late cancellations can be made by phone, 294-5666 (Aero Engr Department) or 296-5051 (leave a message, if necessary). A check, made out to **Sigma Xi**, should be enclosed with the reservation form, and both sent to

**H. J. Weiss, Sigma Xi  
Aerospace Engineering  
1200 Howe Hall  
Iowa State University  
Ames, IA 50011-2271**

**SIGMA XI BANQUET**, Thursday. April 30, 2009, rooms 220-230 Scheman Building

Name \_\_\_\_\_ No. of tickets \_\_\_\_\_

Address \_\_\_\_\_

**Cost:** Initiates are guests of the Chapter. The cost to others is **\$30.00 per ticket**. Initiates who made guest reservations with their acceptance and who have paid for a guest (or guests) should not return this form. If you prefer a vegetarian rather than a chicken/turkey entree, please so indicate.

Vegetarian? \_\_\_\_\_ Signature \_\_\_\_\_

**ELECTION BALLOT**  
**Iowa State University, Sigma Xi**  
**Spring, 2009**

**Executive Committee**

*2009-2012 term*

**Vote for Two**

- Diane Birt – Food Science & Human Nutrition
- Frederic Janzen – EEOB-Ag
- Kyoung-Jin Yoon – Veterinary Medicine

**Membership Committee**

*2009- 2012 terms*

**Vote for Two**

- Amy Bix – History
- Cinzia Cervato – Geo/Atmospheric Sciences
- Nick Christians – Horticulture
- Thomas Sauer – Soil Tilth Laboratory

**Nominating Committee**

*One year terms*

**Vote for Three**

- Bonnie Bowen – EEOB-LAS
- Rolf Koford – NREM
- Kirk Moloney – EEOB-LAS
- Curtis Struck – Physics & Astronomy

Please return this ballot by Monday, April 13, 2009, if at all possible. Return to **H. J. Weiss, Aerospace Engineering, 1200 Howe Hall, Iowa State University, Ames, IA 50011-2271**. Page may be folded and stapled or taped for mailing (address is on reverse).