

# SIGMA XI

THE SCIENTIFIC RESEARCH HONOR SOCIETY



## Membership Guide

[sigmaxi.org](http://sigmaxi.org)

“The other societies I belong to are limited to one or two topics. They’re not as broad-based or interdisciplinary as Sigma Xi.”

LINDA MANTEL, SIGMA XI MEMBER



## The Value of Membership

Sigma Xi, The Scientific Research Honor Society is the world’s largest multidisciplinary research honor society. The Society is an international community of scientists and engineers dedicated to research excellence, promoting public engagement with science, and fostering the next generation of researchers. Through the recognition and honor of induction, Sigma Xi members join a distinguished community of researchers.

Members of Sigma Xi:

1. support interdisciplinary research,
2. encourage cooperation among researchers,
3. maintain integrity and honesty in all scientific activities, and
4. make research relevant to the public.

Sigma Xi membership is a competitive advantage that helps one position for success. Throughout this membership guide, you will find career development resources, opportunities to get involved, ideas about how to serve the research community, and information about how Sigma Xi will help you on your career path.



## About Sigma Xi

### Mission Statement

To enhance the health of the research enterprise, foster integrity in science and engineering, and promote the public's understanding of science for the purpose of improving the human condition.

### The Pledge

Do you hereby pledge yourself, in accordance with the purposes and objectives of Sigma Xi, The Scientific Research Honor Society, to encourage original investigations in science; to foster companionship and cooperation among scientists; to maintain honor, integrity, and honesty in all scientific activities; and to assume the other continuing responsibilities of membership?

### Our Culture

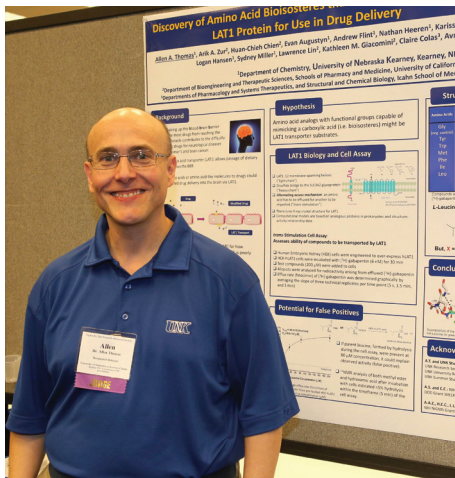
The Society is a diverse organization of members and chapters dedicated to companionship in science and engineering and to the advancement of knowledge through research, service, and teaching.

### Sigma Xi Motto

“Companions in Zealous Research” from the Greek *Spoudon Xynones*.

### Member Access

One account gives you active member-level access to the web-sites of Sigma Xi, *American Scientist*, and Sigma Xi Communities. To create an account or log in, go to [sigmaxi.org/login](http://sigmaxi.org/login). Use the email address that you provided to Sigma Xi. Click on “Forgot Your Password” to create or reset a password.



“What I really like about [Grants in Aid of Research] is the opportunity not only to see what sort of interesting science the students of today are up to, but also to fund and help them get the research done.”

PETER HARRIES, SIGMA XI MEMBER

## Programs

Leading the research enterprise, public understanding of science, and science education

### Annual Meeting

The Sigma Xi Annual Meeting is the premier gathering of the Society. It features professional development workshops, research presentations, science communication sessions, and symposia on a research-related theme. The meeting also features chapter development workshops for chapter leaders.

Active members of Sigma Xi receive a discount on registration costs to the Annual Meeting and Student Research Conference.

### Distinguished Lecturers

Since 1937, chapters have hosted Sigma Xi Distinguished Lecturers who convey their insights to researchers, students, and the public. Distinguished Lecturers are selected for outstanding achievements and communication skills. Visit the Sigma Xi website under “Programs” to view a list of lecturers and to learn how to nominate yourself or colleagues.



### Science Communication Laboratory

Members receive a discounted rate to work with a science communication coach for two one-hour virtual sessions as well as receive feedback on presentation slides or media, which will be critiqued prior to the first session. The virtual laboratory is ideal for any scientist needing help with preparing a presentation, presenting scientific information to public groups, defending a thesis, or honing new skills to lead a team.

## Prizes and Awards

Sigma Xi presents internationally recognized awards that honor outstanding research, innovation, communication, and service.



### Gold Key Award

The highest honor from Sigma Xi, bestowed to a member who has made extraordinary contributions to his or her profession and fostered critical innovations



### William Procter Prize for Scientific Achievement

For outstanding contributions to scientific research and a demonstrated ability to communicate this research to scientists in other disciplines



### John P. McGovern Science and Society Award

For outstanding contributions to science and society



### Walston Chubb Award for Innovation

To honor and promote creativity in science and engineering



### Young Investigator Award

To recognize early-career researchers for scientific accomplishment, relevance of research, and an ability to communicate to the public



### Evan Ferguson Award

To recognize outstanding service to Sigma Xi and its mission



### George Bugliarello Prize

To honor an essay, review of research, or analytical article published in *American Scientist*

## Honorary Members

Honorary membership is for those who have made outstanding contributions to science or to Sigma Xi, but who may not be eligible for membership. Past inductees include journalists, political leaders, and advocates for science. Go to [sigmaxi.org](http://sigmaxi.org) and look in the Programs section to learn how to submit nominations for prizes and awards.



“Everyone was so nice and supportive of us as students. It was a truly fantastic experience that I wouldn’t hesitate to attend again.”

STUDENT RESEARCH CONFERENCE PARTICIPANT

## Student Programs

Supporting the next generation of researchers

### Student Research Showcase

This science communication competition challenges high school, undergraduate, and graduate students to present their research online.



Student Research  
SHOWCASE

### Student Research Conference

High school, undergraduate, and graduate students attend this event in person to present a research poster and compete for presentation awards.

### Grants in Aid of Research

Since 1922, the Grants in Aid of Research program has helped more than 30,000 students. The program awards up to \$1,000 to graduate and undergraduate students in all areas of science and engineering. Designated funds from the National Academy of Sciences allow for up to \$5,000 awards in astronomy and \$2,500 in



GRANTS IN AID  
OF RESEARCH  
SIGMA XI

vision research. Designated funds from Sigma Xi are available to members and students whose primary advisors are members. The applications are submitted online two times per year.

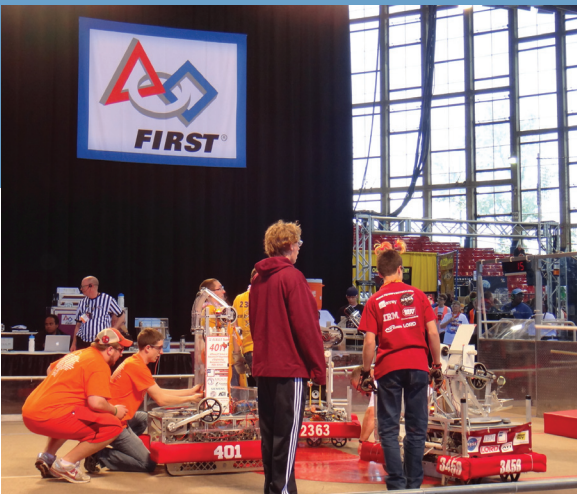
## STEM Partnerships

Sigma Xi partners with regional, national, and international organizations by providing representatives, awards, sponsorship, and/or judges. For a full list of STEM partners, see the Programs section of [sigmaxi.org](http://sigmaxi.org).

### Intel International Science and Engineering Fair

The Intel International Science and Engineering Fair (Intel ISEF) is the world’s largest pre-college celebra-





tion of science. Intel ISEF brings together students from around the world to compete for scholarships, tuition grants, internships, and scientific field trips. Sigma Xi is proud to support students and encourage them to pursue STEM careers by awarding the best demonstration of team science and multidisciplinary research.

### **Conrad Challenge**

As a partner of the Conrad Challenge, Sigma Xi offers its chapters and members the extraordinary opportunity to judge secondary school student teams to foster science innovation and entrepreneurship.

### **North Carolina *FIRST* Robotics**

Sigma Xi is proud to sponsor North Carolina *FIRST* Robotics and its mission to inspire young people to be science and technology leaders. *FIRST* competitions are held worldwide to engage students in mentor-based programs that build science, engineering, and technology skills, inspire innovation, and foster self-confidence, communication, and leadership.

### **Science and Human Rights Coalition**

Sigma Xi has joined the Science and Human Rights Coalition, a network of scientific and engineering membership organizations, to help facilitate communication and partnerships on human rights within and across the scientific community, and between the scientific and human rights communities.

### **USA Science & Engineering Festival**

Sigma Xi is an exhibitor and sponsor of the country's national science festival that takes place in the Washington, DC, area.

“To address the complex issues that we have facing science today, we need an interdisciplinary, multidisciplinary, transdisciplinary approach to affect the best solutions.”

WILLIAM KOCH, SIGMA XI MEMBER

## Publications

### **American Scientist**

This award-winning magazine, published by Sigma Xi, showcases cutting-edge scientific research from scientists and engineers around the globe and across all disciplines. These articles are written by researchers and lavishly illustrated with custom graphics. Active members receive a print or digital subscription. You can mark your preference on your annual dues renewal form or by calling headquarters at 800-243-6534.



### **American Scientist Website**

With single-sign-on, logging in to either [sigmaxi.org](http://sigmaxi.org) or [americanscientist.org](http://americanscientist.org) provides searchable access at *American Scientist's* site to all magazine content plus additional multimedia available exclusively online, including digital features, blogs, videos, slideshows, podcasts, infographics, and reviews. Included with membership:

- a searchable archive of magazine articles from 2008 forward;
- automated bibliographic linking with scholarly magazines and journals through CrossRef;
- free PDF downloads of feature articles and columns; and
- priority processing of permission requests for classroom use of articles.

Those who choose a digital subscription also receive:

- full digital-edition archive access (PDF versions back to 2009); and
- browser- or iPad-app-based access to an interactive version of the magazine (from mid-2017 forward).





### **American Scientist Podcast**

The podcast features interviews with scientists and authors as well as stories about research and hypotheses. Find us on Apple's iTunes and subscribe.



### **Newsletters**

Sigma Xi provides several e-newsletters to keep members, as well as the public, informed on the latest news about research and the Society.

- The *Sigma Xi Newsletter* is sent by email and contains updates from the leadership team, news about chapters and members, meeting announcements, and science news.
- *Sigma Xi SmartBrief* provides a concise summary of science and technology news stories from the mainstream media. Subscribe for free at [smartbrief.com/sigmaxi](http://smartbrief.com/sigmaxi).

### **Chronicle of The New Researcher**

Sigma Xi publishes high school research in its online, open access, and refereed journal, *Chronicle of The New Researcher*. The journal gives high school students an opportunity to become published researchers, and gives them experience with the peer-review process. Learn more at [sigmaxi.org/ctnr](http://sigmaxi.org/ctnr).



The continued health and success of Sigma Xi depends on members nominating others to membership for their research achievements.

## Membership Categories

Induction into Sigma Xi is recognized by colleagues, administrators, and employers as a milestone in one's research career, signifying a level of research accomplishment or potential.

**Full Membership:** An individual who has shown noteworthy achievement as an original investigator in a field of pure or applied science is eligible for election to full membership.

- This noteworthy achievement must be evidenced by publication as the primary author (defined in the manner appropriate to the discipline) on at least two different articles published in a refereed journal, patents, or refereed monographs.
- Dissertations and theses alone are not considered sufficient for demonstration of this achievement and must be accompanied by at least two other publications.

**Associate Membership:** An individual who has conducted an independent investigation and has written a report concerning his or her research is eligible for election to associate membership. Associate membership is offered to encourage young investigators with promise to continue careers in research.

**Promotion to Full Membership:** Associate members may be promoted to full membership once they satisfy the full membership qualifications. Promotion review will follow the same procedure as elections.

Full and associate members may nominate other candidates to the Society and vote in the Assembly of Delegates. Active full members are eligible to serve on Sigma Xi committees and take office on the board of directors.





## Membership Dues

Discounted dues rates are available for student, transitional, and emeritus members. Members can pay dues or update their address and chapter affiliation on the [sigmaxi.org](http://sigmaxi.org).

## Sigma Xi Chapters

The Society promotes the interests of its members through its network of more than 500 chapters around the world at colleges and universities, government and military laboratories, and private sector research centers. Visit [sigmaxi.org/chapters](http://sigmaxi.org/chapters) to locate a chapter near you.

## Chapter Programs

Make sure to join your local Sigma Xi chapter to connect with members in your area and engage with the following programs, or propose new ideas:

- promoting the public understanding of science,
- recognition and professional development,
- STEM outreach, and
- STEM education.

Visit the Chapters section of [sigmaxi.org](http://sigmaxi.org) to learn about chapter model programs.

## At-Large Members

Members may be elected as, or change their membership affiliation to, “at-large.” At-large members are not affiliated with a chapter and stay connected through online communities at [community.sigmaxi.org](http://community.sigmaxi.org).

## International Partners

Researchers in developing countries have the option of membership through Sigma Xi International Partners. These groups set annual dues in their local currency, allowing non-U.S. researchers to receive the honor and benefits of membership at an affordable level.

“I applied and became a student member and when I saw that they had this *Chronicle of The New Researcher*, then I thought that would be a really great opportunity.”

THORSEN WEHR, SIGMA XI MEMBER

## Membership Perks

### Publications and Communications

All active (dues-paying or life) members receive:

- a subscription to *American Scientist* with your choice of a print or digital format;
- *Sigma Xi Newsletter*;
- access to online communities, where you can connect with members in, and outside of, your Sigma Xi chapter.

### Career Development

- Find or post a job in the Sigma Xi Career Center [jobs.sigmaxi.org](http://jobs.sigmaxi.org)
- Search internship opportunities [internships.sigmaxi.org](http://internships.sigmaxi.org)
- Create a profile on the Mentoring Center to find a mentor or mentee [mentorboard.careerwebsite.com/sigmaxi](http://mentorboard.careerwebsite.com/sigmaxi)
- Member-level access to the Member Directory [sigmaxi.org/members/member-directory](http://sigmaxi.org/members/member-directory)

### Subscription and Services Discounts

Active members may access codes and more detailed information in the Members Only section of the Sigma Xi website. Discounts include:

**Publication discounts** including 25 percent off current or back volumes of journals from Annual Reviews.

**American Scientist gift subscription** discounts. Members may also give site licenses as gifts.

**Sigma Xi Expeditions** offer journeys of discovery to outstanding locations worldwide. Travel with fellow Sigma Xi members and scientific experts who share a love of learning and adventure. As you travel with local guides you will have an exciting, educational, once-in-a-lifetime adventure!

For details and a list of other available discounts, visit [sigmaxi.org/benefits](http://sigmaxi.org/benefits).

### Science Education Grants

Sigma Xi Science, Math, and Engineering Education grants provide up to \$2,000 of “seed” money to develop innovative education programs.



## Sigma Xi Merchandise

Jewelry pieces that feature the Sigma Xi key are available in a variety of styles and prices. For jewelry, graduation cords, and branded merchandise, go to [sigmaxi.org/merchandise](http://sigmaxi.org/merchandise).



## Affiliate Circle

Those who do not qualify for Sigma Xi membership but who make important contributions to scientific research, both inside and outside the laboratory, may join the Sigma Xi Affiliate Circle. We welcome those who support our mission—including teachers, technicians, clinicians, students, and science enthusiasts. Members are encouraged to invite students who don't yet qualify for associate membership to the Affiliate Circle as the first step in their professional career. For more information on the Affiliate Circle, please visit [sigmaxi.org/affiliate](http://sigmaxi.org/affiliate).



## Sigma Xi Explorers and Clubs

Students in grades K–12 are invited to become Sigma Xi Explorers. Explorers are high school students looking to take their research to the next level, middle school students seeking knowledge beyond the classroom, and students in grades K–5 with a passion for science, technology, engineering, and mathematics. Students are eligible if they have participated at a science fair and submit an enrollment form with a letter of recommendation from a science or math teacher. Explorers may form Sigma Xi Clubs under the guidance and mentorship of an active full or associate Sigma Xi member at a local chapter.



“I think particularly the emphasis on ethics is very important—for students to learn about ethics in science.”

MILLICENT GOLDSCHMIDT, SIGMA XI MEMBER

## Supporting Sigma Xi



Much of the work that Sigma Xi does on behalf of the science and engineering community would not be possible without the additional support of its members and friends. Philanthropic gifts to Sigma Xi are tax-deductible in the United States and, as a 501(c)

(3) philanthropic organization, the Society qualifies for most corporate employee matching gift programs. The Society has several categories of giving—from adding donations to your dues payment to creating a Grants in Aid of Research endowment to including Sigma Xi in your will. The Society is available to members and their families to assist in the creation of annual and planned charitable gifts that benefit both the donor and the Society's goals.

### The Sigma Xi Fund

Show that you care about research, education, and the betterment of society by donating to Sigma Xi over and above your annual dues. Each year, the Sigma Xi Fund is your opportunity to invest in the future of your Society. Almost all of Sigma Xi's educational, program, and leadership development funding comes not from member dues, but rather from tax-deductible donations.

### Grants in Aid of Research Centennial Campaign

Help continue Sigma Xi's proud tradition of supporting young, promising students at the outset of their research careers. By supporting the Grants in Aid of Research Centennial Campaign, you can help shape tomorrow's scientists and engineers.

### Make Sigma Xi a Part of Your Legacy

**Planned Giving** – Members include the Society in their wills or estate planning to create a legacy that honors a life's work. In 2009, the Record Society was established to recognize those members and friends who share the enthusiasm for Sigma Xi exemplified by the late LeRoy E. Record, whose legacy gift furthers Sigma Xi's mission to advance science and engineering. To be inducted into the Record Society, a donor makes a one-time gift of \$10,000 or more, or makes a planned gift in excess of \$25,000 anytime during a given fiscal year.

# Sigma Xi Nobel Laureates

SIGMA XI RECOGNIZES MORE THAN 200 MEMBERS  
WHO HAVE WON THE NOBEL PRIZE.

## 1900s

Albert A. Michelson

## 1910s

Alexis Carrel

## 1920s

August Krogh

Albert Einstein

Archibald V. Hill

Otto Meyerhof

Robert A. Millikan

James Franck

The Svedberg

Arthur H. Compton

## 1930s

Irving Langmuir

Thomas H. Morgan

George R. Minot

William P. Murphy

Harold C. Urey

George H. Whipple

Carl D. Anderson

Peter Debye

Otto Loewi

Clinton Davisson

Enrico Fermi

Ernest Lawrence

## 1940s

Henrik Dam

Edward A. Doisy

Otto Stern

Joseph Erlanger

Herbert S. Gasser

Isidor Isaac Rabi

Wolfgang Pauli

Percy W. Bridgman

Hermann J. Muller

John H. Northrop

James B. Sumner

Carl Cori

Gerty Cori

Arne Tiselius

William F. Giauque

## 1950s

Philip S. Hench

Edward C. Kendall

Edwin M. McMillan

Glenn T. Seaborg

Max Theiler

Felix Bloch

E. M. Purcell

Selman A. Waksman

Fritz Lipmann

John F. Enders

Linus Pauling

Frederick C. Robbins

Thomas H. Weller

Vincent du Vigneaud

Polykarp Kusch

Willis E. Lamb

John Bardeen

Walter H. Brattain

Dickinson W. Richards

William B. Shockley

Chen Ning Yang

George Beadle

Joshua Lederberg

Edward Tatum

Owen Chamberlain

Jaroslav Heyrovsky

Arthur Kornberg

Emilio Segrè

## 1960s

Donald A. Glaser

Willard F. Libby

Melvin Calvin

Robert Hofstadter

Georg von Békésy

Francis Crick

Linus Pauling

James Watson

Maria Goeppert-Mayer

Eugene Wigner

Konrad Bloch

Charles H. Townes

Richard P. Feynman

Julian Schwinger

Robert B. Woodward

Charles B. Huggins

Robert S. Mulliken

Peyton Rous

Hans Bethe

Haldan K. Hartline

George Wald

Luis Alvarez

Robert W. Holley

Marshall W. Nirenberg

Lars Onsager

Max Delbrück

Ragnar Frisch

Murray Gell-Mann

Alfred D. Hershey

Salvador E. Luria

## 1970s

Julius Axelrod

Norman Borlaug

Luis Leloir

Earl W. Sutherland, Jr.

Christian Anfinsen

Kenneth J. Arrow

John Bardeen

Leon N. Cooper

Gerald M. Edelman

Stanford Moore

Robert Schrieffer

William H. Stein

Ivar Giaever

Geoffrey Wilkinson

Christian de Duve

Paul J. Flory

George E. Palade

David Baltimore

Ben R. Mottelson

James Rainwater

Howard M. Temin

D. Carleton Gajdusek

William Lipscomb

Burton Richter

Philip W. Anderson

Andrew V. Schally

John H. van Vleck

Rosalyn Yalow

Arno Penzias

Herbert A. Simon

Robert Woodrow

Wilson

Herbert C. Brown

Allan M. Cormack

Sheldon Glashow

## 1980s

Paul Berg

James Cronin

Val Fitch

Walter Gilbert

George D. Snell

Nicolaas Bloembergen

Roald Hoffmann

David H. Hubel

Arthur L. Schawlow

Roger W. Sperry

Kenneth G. Wilson

Subramanyan

Chandrasekhar

William A. Fowler

Barbara McClintock

Henry Taube

Bruce Merrifield

Herbert A. Hauptman

Jerome Karle

Stanley Cohen

Dudley R. Herschbach

Rita Levi-Montalcini

Donald J. Cram

Gertrude B. Elion

George H. Hitchings

Leon M. Lederman

Melvin Schwartz

Jack Steinberger

Sidney Altman

Hans G. Dehmelt

Norman F. Ramsey

## 1990s

Elias James Corey

Henry W. Kendall

Richard E. Taylor

Edmond H. Fischer

Edwin G. Krebs

Rudolph A. Marcus

Kary B. Mullis

Michael Smith

Joseph H. Taylor, Jr.

Alfred G. Gilman

John F. Nash, Jr.

George A. Olah

Clifford G. Shull

Mario J. Molina

Martin L. Perl

Frederick Reines

F. Sherwood Rowland

Robert F. Curl, Jr.

David M. Lee

Paul D. Boyer

Robert C. Merton

William D. Phillips

Myron S. Scholes

Robert F. Furchgott

Louis J. Ignarro

Walter Kohn

John Pople

Günter Blobel

Ahmed Zewail

## 2000s

Paul Greengard

Alan Heeger

Herbert Kroemer

Alan G. MacDiarmid

George A. Akerlof

William S. Knowles

Raymond Davis, Jr.

John B. Fenn

H. Robert Horvitz

Daniel Kahneman

Masatoshi Koshihata

Paul C. Lauterbur

Irwin Rose

Roy J. Glauber

John L. Hall

Theodor W. Hänsch

John C. Mather

George F. Smoot

Albert A. Gore, Jr.

Leonid Hurwicz

Oliver Smithies

Makoto Kobayashi

Osamu Shimomura

## 2010s

Richard F. Heck

Ei-ichi Negishi

Akira Suzuki

Peter A. Diamond

Adam G. Riess

Lloyd S. Shapley

David J. Wineland

William E. Moerner

William C. Campbell

Satoshi Ōmura

Tomas Lindahl

Jeffrey C. Hall

Rainer Weiss

Barry C. Barish

Kip S. Thorne

Arthur Ashkin

William D. Nordhaus



# SIGMA XI

THE SCIENTIFIC RESEARCH HONOR SOCIETY

## Contact Sigma Xi

Sigma Xi, The Scientific Research  
Honor Society  
P.O. Box 13975  
Research Triangle Park, NC 27709  
800-243-6534 • 919-549-4691  
Fax: 919-549-0090

## Executive Office

[executiveoffice@sigmaxi.org](mailto:executiveoffice@sigmaxi.org)

## Becoming a Member

[membership@sigmaxi.org](mailto:membership@sigmaxi.org)

## Membership, Dues, and Benefits

[memberinfo@sigmaxi.org](mailto:memberinfo@sigmaxi.org)

## American Scientist

[americanscientist.org/content/contact-us](http://americanscientist.org/content/contact-us)

## Chapter Services

[chapters@sigmaxi.org](mailto:chapters@sigmaxi.org)

## Annual Meeting & Student Research Conference

[meeting@sigmaxi.org](mailto:meeting@sigmaxi.org)

## Grants in Aid of Research

[gjar@sigmaxi.org](mailto:gjar@sigmaxi.org)

## Distinguished Lectureships

[lectureships@sigmaxi.org](mailto:lectureships@sigmaxi.org)

## Make a Gift to Sigma Xi

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## Connect with Sigma Xi



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[instagram.com/sigma\\_xi\\_society](https://instagram.com/sigma_xi_society)



[linkedin.com/company/sigma-xi-the-scientific-research-honor-society](https://linkedin.com/company/sigma-xi-the-scientific-research-honor-society)