

## *Sigma Xi*

### The Scientific Research Honor Society

*Sigma Xi* was founded in 1886 by a group of Cornell students and a faculty member who believed the time had come to establish an honor society for scientists and engineers. The purpose of the society was to reward excellence in scientific research as well as to encourage a sense of companionship and cooperation among scientists in all fields. The University of Michigan Chapter was established as the 16th Chapter of *Sigma Xi* in 1903 when thirty-five faculty and students were granted a charter to establish a Chapter at Michigan. The first President of the local Chapter was Professor J. Playfair McMurrich.

Since 1886, *Sigma Xi* has grown to include more than 800 Chapters throughout the world. The Society now has approximately 90,000 Members and Associate Members. Chapters are found wherever scientific research is undertaken in nations throughout the world, in universities, colleges, industrial research facilities and government laboratories.

*Sigma Xi* Pledge: ***"I hereby pledge myself, 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."***

## 2021 Awards Ceremony, Annual Meeting and New Member Induction

### *Sigma Xi*



### The University of Michigan Chapter Virtual (Zoom) Meetings

April 14 and May 5, 2021

4:30 P.M.

## OFFICERS

### 2021 Science/Math Teacher of the Year Award

*Dr. Peter Woo is an organic chemist retired from pharmaceutical research and development at Pfizer Inc., which provides a significant portion of the funding for this award. Dr. Woo organizes and coordinates the choice of the Teacher(s) of the Year Awards; this year he will be presenting awards to the following winner of the award.*

	2020-2021	2021-2022 Slate of Officers
<b>President</b>	Henry A. Buchtel	Henry A. Buchtel
<b>Vice-President</b>	John Mansfield	Jack Cederquist
<b>Secretary</b>	Francine Dolins	Cynthia Marcelo
<b>Treasurer</b>	E. Margaret Evans	E. Margaret Evans
<b>Council Members</b>	Karen Adams	Apryl Brown
	Jack Cederquist	Francine Dolins
	George Graham	John Mansfield
	Cynthia Marcelo	Peter Woo
	Peter Woo	<i>Ex Officio</i>
	<i>Ex Officio</i>	Richard Robertson
	Apryl Brown	
	Richard Robertson	

### Brief Biography

**Mrs. Denise D. Dutcher** (Creekside Intermediate School, Dexter Community Schools). Mrs. Dutcher is a 6<sup>th</sup> Grade STEM teacher, 6<sup>th</sup> Grade Summit Math Department Head, and 6<sup>th</sup> Grade Summit Science Department Head. She is also a Quiz Bowl Advisor, Flex Coordinator, and the Beekeeping Club Advisor. When asked what being the beekeeping club advisor involves, she explained that this is a volunteer position that she started at Creekside Intermediate six years ago. Funding comes from the Educational Foundation of Dexter. She explained, "*I wanted students to become more 'in touch' with nature while providing an opportunity for kids to understand how our pollinators contribute to the foods we eat each and every day. Additionally, I wanted students to understand the impact we as humans have on our environment, from invasive species to pesticides to land use.*" Mrs. Dutcher earned her Bachelor of Arts Degree in Elementary Education and a Master's Degree in Educational Administration, both from Michigan State University. She started her teaching career in 1987 in Rochester Community Schools as a middle school math and science teacher. After moving to the Ann Arbor area in 1999, she started teaching in Dexter in 2002.

## Fifty-Year Members (1971-2021)

**David L Mills** (016: Elected by the University of Michigan Chapter). Dr. Mills earned his Ph.D. at the University of Michigan. While at Michigan, he helped develop the ARPA-sponsored Conversational Use of Computers (CONCOMP) project and developed hardware and software for the DEC PDP-8 computer. He was the first chairman of the Internet Architecture Task Force and invented the Network Time Protocol (1981). He was selected to the National Academy of Engineering (NAE) and received the IEEE Internet Award. He is currently emeritus professor at the University of Delaware. For more details see the Wikipedia page on Dr. Mills: [https://en.wikipedia.org/wiki/David\\_L.\\_Mills](https://en.wikipedia.org/wiki/David_L._Mills)

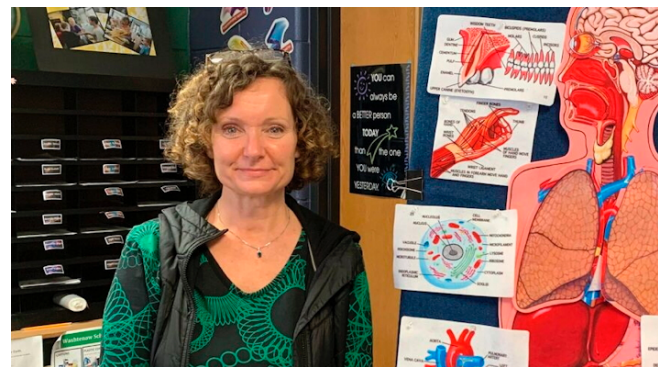
**Roger W. Pryor** (052: Elected by the Pennsylvania State University Chapter). Dr. Pryor received his B.S. (Physics) at WPI in 1968, then his M.S. (Physics) from Penn State in 1971, and finally his Ph.D. (Physics) at Penn State in 1972. He was a Member of Technical Staff at Bell Telephone Laboratories, (1972-1976), and worked at Pitney Bowes, Research and Technology, Staff and Management (1976-1984); Energy Conversion Devices, Research and Technology, Staff and Management (1984-1988). He was an Assoc. Prof. (Research) at Wayne State University (1988-1997), and Prof. (Research) Wayne State University (1997-2002). He is Principal at Pryor Knowledge Systems, Inc. (2002-Present) and author and consultant for Multiphysics Modeling.

**Ronald Rossmann** (016: Elected by the University of Michigan Chapter) Dr. Rosemann received his BS in 1966 in Geology from the University of Wisconsin-Milwaukee, his MS in 1968 in Oceanography at the University of Michigan, and his PhD in 1973 in Chemical Oceanography at the University of Michigan. His entire career was spent working on the chemistry of sediments, biota, and water in the North American Great Lakes, their connecting waterways, and their tributaries while at the University of Michigan Great Lakes and Marine Waters Center between 1966-1971 and 1974-1991; United States Protection Agency 1991-2010; and as a Visiting Scientist after retirement at USEPA 2010-2017. He has over 150 publications and reports and over 50 presentations spanning the years 1967 through 2018. He enjoys being in the out-of-doors, traveling, singing in choirs, and enjoying the benefits of retirement.

**Frederick L. Shippey** (016: Elected by the University of Michigan Chapter). Fred Shippey was a chemical engineer. After receiving his master's degree, he was hired as a photographic engineer at Eastman Kodak Company. While at Kodak, he worked with the Kodak Research Labs and Time magazine on a prototype digital still camera and he participated on teams that were developing several early electronic imaging products and programs. He served as the group leader of a software development group working on digital image processing algorithms. He also furnished technical applications support to marketing and customers and assisted marketing with the analysis of competitive products. Details about his extensive career can be found at <https://che.engin.umich.edu/people/fred-shippey/>

**Stefani Waldenberg Weiss** (016: Elected by the University of Michigan Chapter)

### April 14 - 2021 Teacher-of-the-Year Denise Dutcher (Creekside, Dexter Schools)



### May 5 - 2021 ANNUAL LECTURE Naomi Levin, Ph.D. Associate Professor Department of Earth and Environmental Sciences

#### "Rift basins, volcanoes and hominin diversity in Pliocene Ethiopia"



## NEW MEMBERS - 2021

### *Full Members (\*Induction Today)*

Eytan Adar  
Anthony Bloch\*  
Nanjun Chen  
Pamela Davis-Kean  
Paul L. Freedman  
Nicolette Gabel\*  
Salim Hayek  
Kimberly Heinrich\*  
Katsuo Kurabayashi

Anna Mapp\*  
Rada Mihalcea  
Bruce Palfey  
Annette Richard\*  
Keith Riles  
Sheria G. Robinson-Lane  
Wenhao Sun  
Nils G. Walter

### *Associate Members (\*Induction Today)*

Paige K. Demers  
Mische Hubbard  
Sarah Kiger\*  
Ketrin Lengu\*  
Alison Li

Maaz Munawar  
Maribel E. Okiye  
Amber Rochette\*  
Nithya M. Rao  
Nathan D. Sotherland

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The Chapter is grateful for a very generous donation from **Ms. Cathleen Zepelin** to establish a fund in memory of **Dr. Harold Zepelin**, a *Sigma Xi* member, who died in 2006. The fund helps maintain the honorary nature of election to membership by paying initiation and membership fees for new members. The Chapter is also very grateful for a grant from Pfizer Foundation (established by Pfizer Inc, the pharmaceutical company) that is used for our awards for the Teachers of the year. Finally, donations in support of Chapter activities from Henry Buchtel, Margaret Evans, John Mansfield and Peter Woo are also gratefully acknowledged.

## PROGRAM

*Welcome* Henry (Gus) Buchtel

*Introduction to Program* Cynthia Marcelo

**APRIL 14, 2021**

*Science & Math Teachers of the Year Award - 2021* Peter Woo

**Denise Dutcher**  
Creekside Intermediate School (Dexter)

*Science Fair Awards* Jack Cederquist

### Junior Division

1st Prize: **Tanay Panja** (Clague Middle School; Teacher/Mentor: Priyanka Meharia):  
"Raspberry pi based access control using machine learning and image recognition"

2nd Prize: **Judy Bai** (Clague Middle School. Teacher/Mentor: Yongsheng Bai)"  
"Computational prediction of COVID-19 risky genes associated with lung cancer"

### Senior Division

1st Prize: **Akshith Pulgam** (Pioneer High School. Teacher/Mentor: Steve Armstrong): "Can a Glove Stop Heart Attacks?"

2nd Prize: **Akshar Cowlagi** (Huron High School. Teacher/Mentor: Andrew Collins):  
"'Tempo to Tribo': A Novel, Efficient, Seed-Based Triboelectric Nanogenerator"

**MAY 5, 2021**

*Introduction of 2021 Sigma Xi Lecturer* Francine Dolins

*Sigma Xi Annual Lecture* Naomi Levin

*Induction of New Sigma Xi Members  
and Sigma Xi Pledge for New (and Current) Members* Apryl Brown

*Approval of 2021-2022 Slate of Officers* Cynthia Marcelo

*Recognition of 50-year Sigma Xi Members* Henry A. Buchtel

*Adjournment* Henry A. Buchtel