

# Mid-Hudson Chemist



October 2014

## Celebrate National Chemistry Week

October 19-25!

### Local Events

#### **SUNY New Paltz**

Event: Family Mole Night

Day: Wednesday, October 22<sup>nd</sup>

Time: 5:30 – 7 PM

Contact: Laura Silvernail ([silvernl@newpaltz.edu](mailto:silvernl@newpaltz.edu))

#### **Mount Saint Mary College**

Event: Family Night

Day: Friday, October 24<sup>th</sup>

Time: 7 PM

Contact: Lynn Maelia ([lynn.maelia@msmc.edu](mailto:lynn.maelia@msmc.edu))

#### **SUNY Orange**

Event: Family Mole Night

Day: Friday, October 24<sup>th</sup>

Contact: Timothy MacMahon ([timothymacmahon@sunyorange.edu](mailto:timothymacmahon@sunyorange.edu))

#### **Vassar College**

Event: College Bowl

Day: Tuesday, October 28<sup>th</sup>

Time: 7 PM

Contact: Joe Tanski ([jotanski@vassar.edu](mailto:jotanski@vassar.edu))

#### **Marist College**

Event: Family Night

Day: Wednesday, November 5<sup>th</sup>

Time: 7 PM

Contact: Jocelyn Nadeau ([jocelyn.nadeau@marist.edu](mailto:jocelyn.nadeau@marist.edu))

## UPCOMING TALKS

COMPUTATIONAL EXPERIMENTS AND THE 2013 NOBEL PRIZE IN CHEMISTRY

SPEAKER: JOHN GALBRAITH, *MARIST COLLEGE*

PLACE: SUNY ORANGE MIDDLETOWN CAMPUS

DATE & TIME: NOVEMBER 20, 7 PM

PLEASE SEE ANNOUNCEMENT ON P.3.

THE CHEMISTRY INVOLVED IN THE MAKING OF APPLE CIDER

SPEAKER: TIMOTHY MACMAHON, *SUNY ORANGE*

PLACE: MOUNT SAINT MARY COLLEGE

DATE: JANUARY 29, 2015

DETAILS TO BE ANNOUNCED.



## 2014 Executive Committee:

**Chair:** Cynthia MacMahon; **Chair-Elect:** William Maelia; **Past Chair:** Lynn Maelia; **Treasurer:** Joan Skinner; **Secretary:** Jocelyn Nadeau; **Councilor:** George Ruger; **Alternate Councilor:** Timothy MacMahon; **Members-at-Large:** Joseph Tanski, Patti Cusatis, Michelle Rissolo; **NCW Co-Chairs:** Cynthia MacMahon and Timothy MacMahon; **Science Olympiad Chair:** Lynn Maelia; **Awards Chair:** Patti Cusatis; **Government Affairs Chair:** George Ruger; **WCC Chair:** Janet Petroski; **YCC Chair:** Jodie Wasacz; **Publicity Chair:** Chet Dziobkowski; **Webmaster:** William Maelia; **Mid-Hudson Chemist Editor/Publisher:** Gissel Mentore

**Mid-Hudson ACS Website:**  
[www.midhudsonacs.org](http://www.midhudsonacs.org)

~Join the Mid-Hudson ACS Discussion List~

The following website may be used to subscribe, unsubscribe, or view the archive:

[lists.msmc.edu/mailman/listinfo/acs-mh](http://lists.msmc.edu/mailman/listinfo/acs-mh)

To post a message to all the list members, send e-mail to [acs-mh@lists.msmc.edu](mailto:acs-mh@lists.msmc.edu).

## Call for Candidates for the Mid-Hudson Section Executive Board

Once again it is time to elect the executive board members for 2015, and we would like to invite any section members interested in serving on the board to put their names on the ballots. Positions open for election are:

**Chair-Elect, Treasurer, Secretary, and Member-at-Large.**

To have your name placed on the ballot for consideration, please contact Jocelyn Nadeau (current Secretary, [Jocelyn.Nadeau@marist.edu](mailto:Jocelyn.Nadeau@marist.edu)) by November 1, 2014. For nomination purposes it is required that all candidates provide a short bio of their chemistry or organizational background.

## Hudson Valley Science Café

A Science Café is a monthly gathering in a café, pub or restaurant, open to the public, with a short presentation of a topic followed by discussion. The essence of a Science Café is informality, with groups seated around tables with food and drink to encourage conversation. Hudson Valley Science Café usually meets on the 4<sup>th</sup> **Wednesday** of the month, from April to November, except where indicated.

Website:

[http://www.cafescientifique.org/index.php?option=com\\_content&view=article&id=196:HUDSON-VALLEY&catid=78:cafe-pages](http://www.cafescientifique.org/index.php?option=com_content&view=article&id=196:HUDSON-VALLEY&catid=78:cafe-pages)

**Meeting site:** La Casa Vicina, 1015 Little Britain Road (Route 207) in New Windsor. Website:

[LaCasaVicina.com](http://LaCasaVicina.com). Please arrive around 6 PM if you want to order dinner. There will be a special menu and you can order until 6:45 PM. The \$4.00 admission fee includes coffee or tea. No orders will be taken during the presentation (7:00-7:30 PM).

**October 29 – Epigenetics-How Your Grandmother's Diet May Have Changed Your Life, Haley Clancy, Ph.D., Lieutenant Colonel, US Army, Assistant Professor, Department of Chemistry and Life Science, United States Military Academy, West Point, NY**

**November 19 (3rd WEDNESDAY) – Statistical Insignificance, Arthur Nadas, Ph.D., Associate Professor of Environmental Medicine, NYU-Langone School of Medicine, Tuxedo, NY**

**Winter Break is December through March. Please send suggestions for 2015 speakers to Dr. Toby Rossman ([tobyrossman@yahoo.com](mailto:tobyrossman@yahoo.com)).** Hudson Valley Science Café has received start-up funds from WGBH-NOVA and the American Chemical Society.



The Mid-Hudson Section of the American Chemical Society Announces:

## Computational Experiments and the 2013 Nobel Prize in Chemistry

**Speaker:** John Galbraith, Ph.D., Associate Professor  
Marist College, Poughkeepsie, NY

**Time:** Thursday, November 20<sup>th</sup> at 7 p.m. (Refreshments at 6:30 pm)

**Location:** Rowley Center Science and Engineering Room 010  
SUNY Orange, Middletown, NY

**About the Lecture:** Chemistry is an experimental science. The field is advanced by the careful and controlled manipulation of matter and observation of the outcomes. However, the 2013 Nobel Prize in Chemistry was awarded to Martin Karplus, Michael Levitt, and Arieh Warshel for work that involved no “traditional” experimentation. Rather, they developed methods to model the behavior of matter on computers instead of on the lab bench. This talk will explain how computers can be used to simulate chemical behavior. There will be a brief discussion of the history of computational chemistry, followed by some of the limitations of the field and the creative ways around those limitations. The speaker will give an overview of the work of the 2013 Nobel laureates and how it is related to his own work at Marist College.

**About the Speaker:** Dr. Galbraith received a B.A. in Chemistry from the Colorado College in Colorado Springs, CO in 1992. He received a Ph.D. in Physical Chemistry in 1997 from the University of Georgia in Athens, GA where he worked with Professor Henry F. Schaefer III on computational studies of small molecules. From 1997 to 1999 he held a postdoctoral position at the Hebrew University in Jerusalem, Israel working with Sason Shaik. In Israel, Dr. Galbraith began the line of research that occupies him to this day: computational studies of chemical bonding using Valence Bond theory. He held a second postdoctoral position at the University of Washington in Seattle, WA where he taught General Chemistry and conducted Computational Chemistry research with Weston Thatcher Borden. Dr. Galbraith joined the faculty at Marist College in 2001. He has taught courses in General Chemistry, Introduction to Organic Chemistry, Physical Chemistry, Inorganic Chemistry, and Research Methods all the while conducting research primarily with undergraduates. He has published 24 peer reviewed articles, 7 of which were with undergraduate authors, in Journals such as *The Journal of Physical Chemistry*, *Molecular Physics*, and *Analytical and Bioanalytical Chemistry*. In addition, he has served as a referee for *The Journal of Physical Chemistry*, *The Journal of Chemical Theory and Computation*, *Molecular Physics*, and the American Chemical Society Petroleum Research Fund as well as serving on the editorial board of *ISRN Physical Chemistry*.

For directions to SUNY Orange (Middletown campus), please visit [www.sunyorange.edu](http://www.sunyorange.edu).

## Mid-Hudson ACS Excellence in High School Chemistry Teaching

Christine Marmo is the 2014 recipient of the Mid-Hudson ACS **Excellence in High School Chemistry Teaching Award**. This award is presented to an outstanding high school chemistry teacher currently teaching within the Mid-Hudson Section of the American Chemical Society. This award was formally presented to her at the Undergraduate Research Symposium held at SUNY New Paltz on April 25<sup>th</sup>.

Ms. Marmo, a native of the Philadelphia area, received a B.S. in Plant Science from Penn State University and an M.S. from the University of Massachusetts. Early in her career she worked at the Hudson Valley Laboratory in Highland and taught at SUNY Ulster. She attended SUNY New Paltz and obtained her NYS certification in Biology and Chemistry, and since 1989 has been teaching both Regents and Honors Chemistry at Kingston High School.

During her tenure at Kingston High School, she also taught Botany at the Cary Institute of Ecosystem Studies and spent five summers at Bard College. There, through the Howard Hughes Medical Institute and Johns Hopkins University award, she was funded to conduct research in the Biology Department.

Since 2006, she has teamed up with an artist at Kingston High School to teach a course entitled *Chemistry for Artists*. Christine has had the unique opportunity to teach applied chemistry to art students as it relates to the artists' materials and in turn, the students use physical and chemical characteristics of these materials as an expressive tool.

Christine plans to retire from teaching in June of 2015. She is still pondering her next project. She lives with her husband in the village of New Paltz.



## Celebrate National Chemistry Week!



October 19 – 25

## The Sweet Side of Chemistry- Candy

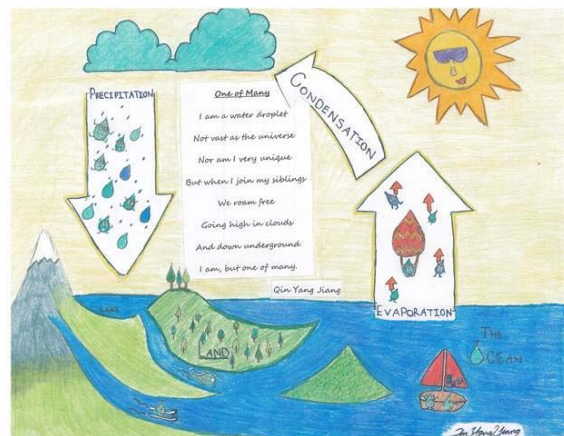
## September Talk

The Mid-Hudson ACS began its Fall 2014 series of lectures on September 24<sup>th</sup> with "Pharmaceutical Method Validation" presented by Marianne Scheffler (Scheffler & Associates LLC) at Vassar College. Validation of an analytical procedure is the demonstration that the analytical test method is suitable for its intended use. The validation process and the requirements of method validation (regulatory requirements, good science, and quality control requirements) were discussed.

## Chemists Celebrate Earth Day Poetry Contest 2014 Winners

### Grades 6-8

1. Qin Yang Siang - Minisink Valley Middle School
2. Brandon Bell – Minisink Valley Middle School
3. William Schiele – Minisink Valley Middle School



Qin Yang Siang

### Grades 9-12

1. Naima Mackrel – Kingston High School
2. Elizabeth Ricci – Red Hook High School
3. Faith Carelli – Kingston High School

Like solutions to problems  
I'll be your solute  
You'll be my solvent  
Our love the heat  
Escaping oxygen  
making it hard to breathe  
But my love's supersaturated  
and yours un  
I'm oil, you're water  
And we are incompatible for Love

Naima Mackrel

Four schools participated:

- Heritage Middle School, Newburgh
- Minisink Valley Middle School
- Red Hook High School, Red Hook, NY
- Kingston High School





**American Chemical Society  
Mid-Hudson Section  
2014 College Recognition Award Winners**

The 2014 College Recognition Awards were presented at the Undergraduate Research Symposium held on April 25<sup>th</sup>. The purpose of the award is to recognize achievement in the field of chemistry and to encourage further study in chemistry. One student from each of the colleges in the Mid-Hudson Section was presented with a certificate and a monetary award. The names of the worthy recipients and their research advisors are listed below.

<b>College</b>	<b>Student</b>	<b>Research Advisor</b>
Marist College	Megan Romer	John Galbraith
SUNY Dutchess	Jan Jaminal	Jeff Cavalieri
SUNY Orange	Karen Kaytes	Timothy MacMahon
Mount Saint Mary College	Nathaniel Dziuba	Janet Petroski
SUNY New Paltz	Jeffrey Babicz	Mike Machczynski
United States Military Academy at West Point	Seth Harbol	LTC Richard C. Comitz
Vassar College	Morgan Howe	Chris Smart
Bard College	Iden Sape	Swapan Jain

## 2014 Dutchess County Regional Science Fair Results

### Outstanding ASC Award

**Award: \$ 50 Barnes & Noble Gift Card / ACS Certificate / ACS Medallion**

Category	Level	Student	Exhibit	School
Chemistry	6 <sup>th</sup>	Alice Rosi-Marshall	Hot or Cold, Sweet or Sour	Dutchess Day School
Physics	7 <sup>th</sup>	Matus dos Santos	Which Liquid has the least viscosity	St. Mary's Wappingers
Chemistry	Senior division	Sushruta Irvanti	Removal of Heavy Metals from Water using banana peels	Arlington High School

### Superior ACS Award

**Award: \$ 25 Barnes & Noble Gift Card / ACS Certificate / ACS Medallion**

Category	Level	Student	Exhibit	School
Chemistry	5 <sup>th</sup>	Nadia Zerafa	Egg Effect	Evans Elementary
Chemistry	7 <sup>th</sup>	Kanisha Bahierathan	Electrolysis – A Greenier World	St. Mary, Fishkill
Environment	7 <sup>th</sup>	Keertana Talla	Decomposition of Bio-Degradable Spoons	Van Wyck Junior High
Physics	7 <sup>th</sup>	Michelle Lam	Hydrogen and Oxygen- The Odd Couple	St. Mary, Fishkill

A message from Marianne Scheffler: I would like to acknowledge the **Special Judges** representing the Mid-Hudson ACS section, who volunteered their time on March 29, 2014. Kudos to our special judges:

**Chi-Lin O'Young**  
**Larissa Cohen**  
**Patti Cusatis**  
**Tony Scaduto**  
**Glen Roy**  
**Dominic Schepis**  
**Mark Logan**  
**Ines Augie**  
**Sarjit Kaur**  
**Beth Baumert**  
**Nicoline Kiwiet**

Our judges reviewed exciting and challenging exhibits that were presented this year at the Dutchess County Regional Science Fair. They reviewed over 44 chemistry-related exhibits out of 225 exhibits that were presented at the science fair. We acknowledge that there were many young budding scientists for the future presenting at this year's science fair!

## 2014 Dutchess County Regional Science Fair Results

### Honorable Mention Award: ACS Certificate / ACS Medallion

Category	Level	Student	Exhibit	School
Chemistry	5 <sup>th</sup>	Tyler Johnson	Power Aid	Brinckerhoff Elementary
Chemistry	5 <sup>th</sup>	Kripa Thomas	Which salt melts ice the quickest	Gayhead Elementary
Chemistry	5 <sup>th</sup>	Katharine Schueren	Stubborn Stains	Myers Corners Elementary
Chemistry	6 <sup>th</sup>	Jacquelyn Crowley	Can Water Float on Water	Dutchess Day School
Chemistry	6 <sup>th</sup>	Logan Morales	A is for Arsenic	St. Mary, Fishkill
Chemistry	6 <sup>th</sup>	Thomas Schaff	Candles of Heat	Evans Elementary School
Chemistry	7 <sup>th</sup>	Cassidy Diasparra	Stains be Gone	Van Wyck Junior High
Chemistry	7 <sup>th</sup>	Antonio Hayes	Which Breakfast Cereal is Iron- astic	Van Wyck Junior High
Chemistry	7 <sup>th</sup>	Christopher Yang	Cola Can Dissolve a Human Tooth	Union Vale Middle School
Chemistry	7 <sup>th</sup>	Nina Jabbour	The Energy Content of Ethanol (BTU)	St. Mary, Fishkill
Chemistry	7 <sup>th</sup>	Joseph Richard	Soda Madness	Millbrook Middle School
Environment	Senior Division	Pramoda Bapatla	Propane versus Tetrafluoroethene	John Jay High School
Chemistry	Senior Division	Sahana Natesan	The Effects of Biodiesel on Global Economy	John Jay High School
Chemistry	Senior Division	Alex Psichas	Biotray	F.D. Roosevelt HS