

For Women in Science & Engineering

2014 TECHNICAL SYMPOSIUM & BUSINESS MEETING 17-19 October 2014, Plaza Hotel, Las Vegas, NM

Please join us for a weekend of networking and technical interchange!! This year's meeting will be held at the historic Plaza Hotel in Las Vegas, NM, one of the most notable of over 900 Las Vegas buildings listed in the National Register of Historic places. Called "The Belle of the Southwest" when it was built in 1882, the Plaza Hotel was lovingly restored a century later. This magnificent hotel, suspended gracefully in the past, presides regally over the Old Town Plaza.

The meeting begins with a Friday evening reception. Saturday morning is the annual business meeting of the Network - all members are encouraged to attend. After lunch Saturday, meeting attendees will have a chance to tour a nearby university and learn about area STEM education and outreach programs (details TBA). The late afternoon features the technical talk and poster sessions - an excellent opportunity to network. Students, teachers, and non-employed members presenting posters are eligible for a meeting scholarship. Saturday ends with dinner at *Dick's Pub and Grill* featuring presentation of the **2014 NMNWSE IMPACT! Award** and an after-dinner speaker. Members are invited to stay though Sunday morning for the first meeting of the new State Board, elected at Saturday's Business Meeting. *- continued on p. 3*

— ANNUAL ELECTIONS —

Make time for giving back to the community by volunteering on the NMNWSE Board!! We are looking for a volunteer for the Vice President/President-elect for the October election. This is a 3-year commitment as VP, President, and Past-President. If you are interested in serving on the Board as a Member-at-Large or any other capacity, please contact Yolanda King, Elections Chair, via the Board email or directly at yolandajk54@gmail.com by October 1. Thanks to those members who have already volunteered to run for Board positions!

Members may vote online starting October 6, or in person at the annual meeting.
- Yolanda King, 2014 NMNWSE Elections Chair

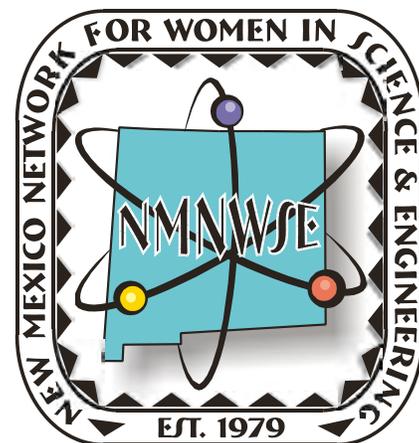
2014 IMPACT! AWARD - Nomination deadline Sep. 15

Please take a moment to reflect about your and your colleagues accomplishments: who is the one person you know that has really gone the extra step to get women participating; to help the next generation get equipped with the right tools and skills to make a difference; to make an **IMPACT!** If you know someone who has truly made a difference in the lives of many, please nominate that person for the **IMPACT! Award**.

I also hope you will be able to join us at this year's annual meeting where you will have a chance to meet this year's **IMPACT! Award** winner and network with many incredible New Mexico women that take the time to encourage women to participate in the world of Science, Technology, Engineering, Math, and allied professions. Face-to-face networking is important, and the annual meeting is a great opportunity to get to know one another and really honor those who have made an **IMPACT!**

For nomination form and instructions, see <http://nmnwse.org/ImpactAward/>.

- Nan Founds, 2013-14 NMNWSE President



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**for more news, see
nmnwse.org**

**Contact us at:
NMNWSE_Board-L@list.unm.edu
or
webmaster@nmnwse.org**

Message from the 2013-14 NMNWSE President

Hi! 'Tis the end of the 2013-14 NMNWSE year, so a summary is in order. We've had a pretty good year. The Expanding Your Horizons (EYHs) have had a stellar year. The success is due to the very dedicated chairs and co-chairs. So, Congratulations each and every one of you who helped plan, execute, and clean up after all the EYHs! I still didn't make all the EYHs; it was a goal of mine. However, I did get to be part of the Albuquerque, or Central, EYH. The speaker was Major General Sandra Finian, who obviously likes to encourage young women in the areas of math and science. The Santa Fe, or LANL, EYH was great as well, love to hear about the Mars Rovers, polymers, and the cosmos as well. I made it to the Silver City, but only barely; I took the long route apparently. However, the girl's enthusiasm was infectious; they had a wonderful time during the closeout sessions. I didn't get to the Las Cruces EYH, which I will this year or the Santa Fe EYH. But, I will continue with my quest. The great news however is that we are starting a lessons learned sessions for the EYH chairs and co-chairs to exchange lessons. And, the really big news is that Carlsbad will be hosting an EYH for this coming year as well. Well done one and all!

Accomplishments aside, I would also like to encourage everyone to attend this year's Annual Meeting. The meeting will be in historic Las Vegas. Yep, Las Vegas New Mexico is this year's destination. I love to visit these places where history and hopefully science come alive. You'll get to network with all the folks attending and have some interesting conversations about science, technology, engineering, and math. We are trying for some "Birds of a Feather Sessions" where individuals interested in similar areas can exchange ideas, chat, or explain this year's most interesting subjects. We will also honor our Impact! Award winner. The winner is honored for their contributions to making STEM available to young women. Please come join us for the fun; please bring a friend or two. Visit our website for more details.

Central Chapter is having a revitalization, as well. Jeanne Banks and Phyllis Baca are spearheading monthly meetings with a featured speaker. The talks have been great. I would like to urge you to attend. You will hear many amazing stories about various scientific areas. Of course, the most interesting part of the talk are the speakers, amazing folks which you can get to know and start to, well, network. So please come and bring a friend. Central Chapter is in Albuquerque, but there are other chapters as well in Las Cruces, Silver City, and others. Please visit the website for more information on Chapters in your area. Or, if interested consider forming a chapter in your area.

I would like to extend a big welcome to Phyllis Baca, our incoming President. So please a big hand, of applause!! You will definitely want to get to know Phyllis. She is fun, warm, and very excited about the prospects for women scientists. She is also concerned about what is happening in our communities and schools. Science and math appear to be disappearing, or maybe just less important, these days in school curriculum. Our EYH programs, science fair judging, and networking with other groups are ways to STEM this tide of apathy when it comes to new horizons. New Mexico is ranked well below other states in student preparation for future careers. Phyllis is obviously very interested in making a difference. So let's help her in reaching out to young women and getting them prepared for the future. Let's not let the gains of the past decade or two drop because we have been there and done that. A new generation still needs the support of this generation. So, please join and help bring a renewal of interest in STEM to both young and old (strictly speaking about myself).

Anyway, I would like to thank everyone in this organization for their time and effort. I have had the privilege to get to know all of you and it has been a wonderful experience. I would like to extend a thank you to the board members who take the time to really support this organization. The folks include, Phyllis Baca, Vice President; Claudia Barreto, Secretary; Barbara Torres, Treasurer; Tinka Gammel, Communication (and jack of all trades); Yolanda King, Elections and Annual Meeting; Karen Agogino, Membership; Rebecca Galves, State EYH and fundraising; Jeanne Banks, Policy and Procedures and Central Chapter; Dana Roberson, Member at Large (and Rock Specialist par excellent); Laurie Marnell, Publicity and Outreach; and Cheri Burch for Girls Collaborative.

And, another big thanks to all the EYH chairs and co-chairs!! So thank you, Kelly Collins and Nichole King-Campbell for your tireless efforts in putting on the Central (Albuquerque) EYH. Thank you Jan Frigo for your amazing dedication to the Spring Santa Fe (formerly Los Alamos) EYH. Thank you Mikki Jemin and Adrienne Dare for your continued support, dedication, and interest in promoting STEM with the Silver City EYH. Rebecca Galves for starting an EYH in Las Cruces and your absolute enthusiasm you bring to all your outreach programs. I couldn't forget Irene Lee, Lina Germann, and Phyllis Baca for their support in getting the EYH's kicked off each year with the first one of the year. And, a very warm welcome and thanks to Lisa Chappa the newest EYH chair. So if you need any help Lisa, these are the ladies who are in the know!!!

So without much further ado, I'll close. Thanks for everything and remember you have made a difference in at least one young lady's life by expanding her horizon!

- Nan Founds, 2013-4 NMNWSE President

Registration forms should be online by Sept 1. The final cost is not yet set, but will be under \$100 including lunch and dinner on Saturday, as well as receptions and snacks. Registration closes 3 Oct 2013, with late registrations accepted through the meeting date on a space-available basis. See the AM 2014 webpage, <http://nmnwse.org/AM/2014/>, for the meeting schedule, registration form, hotel information and other details as they become available. If you have questions, would be willing to help with meeting planning, or would be interested in running for the 2014-15 Board, please fill in the Interest Survey or email the NMNWSE Board.

- Yolanda King, 2014 NMNWSE Annual Meeting Chair

2014 NMNWSE Award winners at NMSEF and NMSCC

Congratulations to the NMNWSE Award winners at the 2014 New Mexico Science and Engineering Fair (NMSEF), held 4-5 April 2014 at New Mexico Tech in Socorro, NM:

There were 10 awards for \$50 plus a certificate and tote bag with career materials:

Junior Division:

Ruby Selvage, Los Alamos Middle School, Los Alamos, "*All Cracked Up: lip balm addiction*"

Alicia Rael, Taos Middle School, Ranchos de Taos, "*Natural NoFlow*"

Lauren Burckel, Jefferson Middle School, Albuquerque, "*Degradable Polymers*"

Neelima Prasad, Los Alamos Middle School, Los Alamos, "*Fractals*"

Lien Tang, Eisenhower Middle School, Albuquerque, "*Finding the Flying Gene*"

Senior Division:

Hiba Muhyi, Arrowhead Park Early College High School, Las Cruces, "*Spelling Glove*"

Kathryn Harris, Rio Rancho High School, Rio Rancho, "*New Generation of Hydrogen Storage*"

Kelly Charley, Navajo Preparatory School, Farmington, "*Using Water to Heat a Solar Hogan*"

Lilly Chiou, Carlsbad High School, Carlsbad, "*Characterization of Carrots in Making Fruit/Vegetable...*"

Maria Troyer, School of Dreams Academy, Los Lunas, "*Effects of Hyper-gravity on *Aliivibrio Fischeri**"

There were 6 honorable mention awards for a certificate and tote bag with career materials:

Lauren Soherr, Jefferson Middle School, Albuquerque, "*Dress Your House for Success*"

Priyanka Velappan, Los Alamos Middle School, Los Alamos, "*Reap the Wild Wind*"

Mykala Chavez, Gattis Middle School, Clovis, "*Don't Let Swimming be a Drag*"

Maria Fanelli, Aspen Elementary School, Los Alamos, "*Ice Age: Fur and Blubber to Survive*"

Celia Flicker, AIMES@UNM, Albuquerque, "*Beta Carotene in NM flowers*"

Alyssa Whiterock, Navajo Preparatory School, Farmington, "*Predicting Populations*"

Congratulations to the NMNWSE Award winners!! The judges felt it was a hard choice, and wish to also congratulate all the students who participated in the State Science Fair, and their teachers and mentors! We hope these students continue to develop their potential as future leaders in STEMM (Science, Technology, Engineering, Mathematics, Medicine) and allied professions!

Judges for the NMNWSE Awards were Yolanda King, Claudia Barreto, Tinka and Juanita Gammel, Karmen Lappo, Clifton Murray, Laurie Marnell, Diane Janni, and Virginia Moradela. Due to the large number of projects well worthy of encouragement, the judges felt next year we should target 10 honorable mention awards.

Congratulations to the NMNWSE Award winners at the 2014 New Mexico Supercomputing Challenge (NMSCC), held 21-22 April 2014 at Los Alamos National Laboratory in Los Alamos, NM:

Team 90, **Melrose Middle School**

Team Members: **Maggie Martin, Maryelle Dickerman, Hannah Wofford, Rebecca Rush**

Project: ***It's a Bird, It's a Plane, It's Super Silage!!!***

Sponsor: Alan Daugherty, Mentor: Keith "Taz" McAlister

Team 90's project modeled how silage, fermented feed used for cattle, is made and studied how to optimize quality vs. cost. The final report on their project is available at <http://www.challenge.nm.org/archive/13-14/finalreports/90.pdf>

Congratulations to the team members, as well as their mentor and sponsor!

Each student on the team received \$50, an award certificate, and a tote bag with career materials. The judge for NMNWSE was Eleanor Walther.

The dates for the Expanding Your Horizons (EYH) Conferences currently held throughout New Mexico (NM) are:

- | | | | |
|-----------------------|-------------------|--------------------------------|--|
| • EYH Santa Fe-fall | October 5, 2013 | October 18 [?] , 2014 | [?] date may change to November |
| • EYH Carlsbad | NEW! | October 25, 2014 | |
| • EYH Albuquerque | January 25, 2014 | February 7, 2015 | |
| • EYH Las Cruces | April 5, 2014 | February 7, 2015 | note change to earlier in the year |
| • EYH Silver City | February 22, 2014 | late February 2015 | |
| • EYH Santa Fe-spring | March 6, 2014 | March 2015 | aka Los Alamos, Northern |

What a wonderful year! We are still in the process of pulling together all summary reports from each site. Early numbers reflect an increase in attendance, with continued high marks in the evaluation process. Final statewide summary report will be available for the October Annual Meeting.

We are excited to add this fall a new conference site in Carlsbad, NM, with Lisa Chappa joining our Network to coordinate and plan the event – see the EYH Carlsbad report below under “Upcoming EYH”.

Special thanks to the over 300 presenters and volunteers, and the over 30 student mentors and volunteers, who made each EYH unique, inspiring, and challenging! We would also like to thank the NM Public Education Dept. as part of the NM STEM Statewide Initiative via a Carl Perkins Grant with SFCC for sponsoring our 2012-13 EYH conference totebags and Careers CDs given each attendee, and the US Dept. of Education, Ed.gov, for sponsoring the 2014-15 totes.

As we look forward to the 2014-15 EYH Conferences, visit <http://nmnwse.org/eyh/> for the most up-to-date information. We are also hoping to set up some statewide conference calls involving all 6 NMNWSE EYH committees to share lessons learned and best practices. All the EYH can use volunteers to help organize and present workshops.

If you can recruit presenters and host as few as 6 or as many as 30 workshops, you can bring this memorable experience to girls in your town! If you are interested in starting an EYH Conference in your area, please contact me for information, guidance, and assistance.

– Rebecca Galves, NMNWSE state EYH chair, rgalves@cs.nmsu.edu
or via the NMNWSE board at NMNWSE_board-L@list.unm.edu

Upcoming EYH

– Santa Fe-fall EYH, October 18[?], 2014

 Last year’s “vendor” event with multiple activities really got the girls excited. We’re looking forward to bringing it back!

Santa Fe is currently planning to hold an EYH on Saturday, October 18, 2014, 9am - 3pm at Santa Fe Community College (SFCC), targeting girls in Grades 5-8. The 2014 Santa Fe-fall EYH Conference is presented by NMNWSE and AAUW Santa Fe, and hosted by SFCC. If you are interested in volunteering or attending, contact Lina Germann at 505-310-4122, lsgermann@gmail.com, or visit <http://www.expandingyourhorizons.org/conferences/SantaFe/>.

[?]The date may change to a Saturday in November due to conflicts with NMNWSE and AAUW meetings on Oct. 18.

– Carlsbad EYH, October 25, 2014

“Be the change you want to see in the world.” - Gandhi

There I was, interviewing two intelligent, confident, and engaging young ladies from Roswell who had applied to attend the AAUW sponsored Tech Trek in Las Cruces. Having already met with three young ladies from Carlsbad, one thing caught my attention and I could not shake it long after the interviews were over. The young ladies from Roswell had many more experiences to grow their interests in STEM than our local girls did. They attended a STEM charter school, had been to a few all girl summer camps focused on STEM, and they competed in STEM related competitions. In Carlsbad, very similarly intelligent and engaging girls shared their interests and curiosity about possible careers in STEM, yet none of them had been to a STEM summer opportunity and there is nothing like a STEM school here. I felt very deeply that something needed to change for these girls and the hundreds of others that I did not interview in Carlsbad, and I needed to be that change.

So that is where it started and here we are, connected with a wonderful group of women who also believe in giving STEM opportunities and exposure to young women. We have set October 25th as the date, and are co-hosting with NMSU Carlsbad as we move ahead confident that this is a need in our community and also that EYH is a good fit to meet that need. Together with a dedicated team of AAUW members, I have found that the number of female STEM professionals in Carlsbad interested in being part of this national movement to empower girls is impressive. I’m excited to be a part of bringing our young women an experience that is unique, powerful, and enlightening.

Our goal is to start our first year with 50 girls, 15 sessions, 3 Tech Trek participants, 1 lunch speaker and several community volunteers. My hope is that this is the first of what becomes an annual tradition for both the youth and the professionals. I hope that you all will send us your good wishes and advice as we become a part of the STEM pipeline you have developed here in New Mexico. Volunteers are most welcome!

- Lisa Chappa, Stem4Lisa@gmail.com

See <http://nmnwse.org/eyh/> for more information on upcoming NMNWSE EYH conferences.

Las Cruces EYH

April 5, 2014

The Las Cruces EYH was fantastic! We hosted 79 participants, providing 13 workshop choices offered by 32 presenters, and coordinated by an additional 11 volunteers. The energy was amazing with young women in grades 5 - 10, representing 31 different schools, and an ethnicity breakdown of 43% Hispanic, 42% Caucasian, 7% American Indian/Alaskan Native, 4% African American, and 4% Asian. 68% of attendees reported the day to be "Super Fun!"



Santa Fe-fall EYH

October 5, 2013

I expected....: "boring and not fun at all"
I got....: "really cool and fun activities"

Our fifth Santa Fe Expanding Your Horizons conference event can be viewed as very successful based on several different metrics. The event drew a diverse group of 5th – 8th grade girls; geographic - from all over Santa Fe (public, private, and home schooled) and the surrounding communities. Thirty one different schools were represented. The participants were diverse in terms of race / ethnicity – 65% of respondents were from underrepresented groups in STEM; and socioeconomic status – 51% of the participants requested and received scholarships to attend. The mission of EYH is to encourage young women to pursue STEM careers by providing STEM role models and hands-on activities for 5th -8th grade girls. The activities were appropriate for the girls at this age level, with most of the participants rating their workshop experience as "just right" and "fantastic." To summarize, there was a major difference between what girls expected, a boring noninteractive lecture, and what they received, a hands on experience that stimulated learning and engagement, with girls desiring to replicate and show friends and family what they have learned immediately after the event. On closer examination, girl's responses bring to light the greater engagement and deeper learning achieved through active learning. As in previous years, the overwhelming number of volunteers at this event was integral to its success.

The conference was presented by NMNWE, AAUW, and Santa Fe Institute GUTS y Girls, and hosted by SFCC.



Central Chapter

The Central Chapter met several times during the last year. The meetings were held on the 3rd Wednesday of each month and will continue so through the end of 2014. The meetings are held in downtown Albuquerque at The Flying Star at 723 Silver Ave SW from 6:30p - 8:30p. The evenings start with a networking time, then the speaker.

In April, we heard from Dr. Laura Crossey of UNM's Department of Earth and Planetary Science. May's speaker was Kenya Moore Dias da Cunha. Originally from Brazil, Dr. Moore is currently an Adjunct Professor, at Center for Environmental Technology, Department of Civil Engineering, University of New Mexico, conducting studies in the area of environmental contamination applying nuclear and atomic techniques. Bernadette Hernandez was our June speaker. Her talk was titled "Adventures in Chemistry: From National Laboratory Research to Community Outreach". The speakers for the remaining 2014 meetings will be announced as soon as they are scheduled.

The remaining meeting dates are Sep 17, Oct 15, Nov 19 and Dec 17.

Personal Highlights



* **NMNWSE Board Member Dana Roberson** was recently selected to be one of the 2015-16 Top Ten business women in America by the American Business Women's Association (ABWA). Each year, 10 ABWA members are recognized nationally for exceptional achievements in their ABWA groups, professions and community, by being selected as the Top Ten Business Women of ABWA. The Top Ten Business Women of ABWA serve as important role models. Dana says: *"I am completely stoked!!"* **Congrats, Dana!**

* **Claudia Barreto Recognized with 2014 SACNAS Distinguished Community College Mentor Award**



SACNAS (Society for Advancement of Hispanics/Chicanos and Native Americans in Science) is a society of scientists dedicated to fostering the success of Hispanic/Chicano and Native American scientists—from college students to professionals—to attain advanced degrees, careers, and positions of leadership in science. Each year individuals who have demonstrated dedication to excellence in science mentoring, and teaching, exemplifying the SACNAS mission, are recognized. One of the award categories is the Distinguished Community College Mentor, which was bestowed upon Dr. Claudia Barreto, Professor of Biology at the University of New Mexico, Valencia Campus. Claudia always wanted to make a difference in students' lives. A first generation college student herself, she realized that a student's early

education can lay the foundation for their future success. The daughter of immigrants – her mother from the Dominican Republic and her father from Peru – she is very familiar with the struggles that immigrant families go through to make a better life in the United States. As a child she enjoyed playing outside, exploring her environment and the animals inhabiting it. When she got the chance to go to college, she focused her studies on biology. As part of her undergraduate education, Claudia also earned a degree in secondary education. She completed a MS in Natural History from New York University, and became a Milwaukee Public Museum curator where public outreach was a major responsibility. When dinosaur fossils were discovered with cellular structure preserved, she went off to the University of Wisconsin Madison. Her PhD thesis was on bone growth in birds and dinosaurs. Furthermore, she realized that by enhancing her own knowledge she could better explain biology to others. This led her to a teaching position at the University of Wisconsin-Milwaukee. In her years as faculty member at UW-Milwaukee, she noted that most senior faculty were not interested in teaching and guiding freshmen and sophomores. So, she gave up her Associate Professor position at UW, to come to the University of New Mexico-Valencia Campus – where she was confident she could provide the kind of early education that would prepare students persist in the sciences and succeed in biology. As a Professor at UNMVC she can devote herself to enhancing teaching and learning by working directly with students and coordinating the institution's assessment activities. Claudia's proudest moments are when she sees her former students earn their degrees and continue to graduate school and or professions. She knows that the choice she made to focus on undergraduate education was the right one. She is able to live her dream of making a difference in students' lives. Claudia is involved in numerous volunteer activities including NMNWSE, Friends of Whitfield Wildlife Conservation Area, and a literacy program in which her Therapy Dogs play a key role in helping children learn to read. **Way to go, Claudia!**

***The NMNWSE Board welcomes suggestions for women to nominate for awards and similar recognition.
- email your suggestions to NMNWSE_Board-L@list.unm.edu -***

