



## American Institute of Chemical Engineers Knoxville-Oak Ridge Section

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Please make your reservations by noon, **November 19**, by contacting:

Linda Puckett,  
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(865)574-6147 or

Lori Daniels,  
[lori.daniels@utk.edu](mailto:lori.daniels@utk.edu),  
(865)974-2421

*The Section will subsidize up to 15 students, including graduate students*

For additional information see our Web site at: <http://www.ornl.gov/sci/aiche/>  
Or contact: Linda Puckett, [puckettlf@ornl.gov](mailto:puckettlf@ornl.gov), (865)574-6147 or  
Lori Daniels, [lori.daniels@utk.edu](mailto:lori.daniels@utk.edu), (865)974-2421

### November 2009 Meeting – Joint with SWE

Date: Thursday, November 19, 2009  
Cost: \$20  
Location: Calhoun's at Turkey Creek, Knoxville TN  
Menu: Buffet (Special menus available upon request)  
5:30 pm Executive Committee Meeting (All members welcome)  
6:00 pm Dinner – Buffet (Special menus available upon request)  
7:00 pm Program – **Dana C. Christensen, Ph.D., P.E., Associate Laboratory Director, Energy & Engineering Sciences Directorate, Oak Ridge National Laboratory, *The Nation's Renaissance in Energy Technology***

**Abstract** – The nation is facing a renaissance in energy technology to include dramatic changes in transportation, electricity production, distribution and use, and energy efficiency. The nation is also rapidly expanding its scientific capabilities and is currently leading the world in areas such as material science, characterization capabilities, and computational science. Today's industrial challenges are increasingly complex and require the integrated use of these tools in order to solve the critical problems in an economical fashion. In fact, it is becoming increasingly clear that science and technology today requires an integrated approach that includes theory, experimentation and computational science. This new three legged stool for science will be discussed and a number of examples involving the changes in energy technology will be presented.



**Bio** – Dr. Dana Christensen is the Associate Laboratory Director of the Energy & Engineering Sciences Directorate at the Oak Ridge National Laboratory (ORNL). The Directorate is the U.S. Department of Energy's (DOE) largest energy research and technology organization, annually executing ~ \$350M of programs for a variety of government and industrial sponsors in all aspects of energy science and technology. Included is research in all forms of energy production, distribution, and utilization. Specific initiatives include emphasis areas of nuclear fission and fusion, nuclear science and technology, nuclear nonproliferation, and all dimensions of fossil energy extraction, production, and use, including technologies for the abatement of greenhouse gas emissions. Also included are energy efficiency and renewable energy concepts in storage, transportation, electrical and pipeline distribution, vehicle technology and traffic management, hydrogen economy, enhanced buildings technology, design and application of solar concepts, policy analysis and investigating the intersection of technology and policy, and concepts to impact industry's approach to energy demand reduction. Finally, the intersection of water technology with the energy sector is an area of research.

Dr. Christensen came to ORNL from the University of California where he was the Deputy Associate Laboratory Director of Threat Reduction at the Los Alamos National Laboratory and the Program Director for Nuclear Energy Programs. Prior to this he was the Deputy Associate Laboratory Director for Energy and Environment at the Lawrence Livermore National Laboratory, also operated by the University of California. He spent a year with the Department of Energy Policy Office, providing leadership in the preparation of the Department's *Integrated Nuclear Materials Management Plan*; a plan requested by congress in an effort to harmonize the nuclear materials management practices and procedures across all DOE Offices and programs. He has thirty years of management experience in material science, nuclear and fossil energy, and renewable energy, nuclear materials management and scientific research in support of DOE and other Government agencies and industries.



ARES I-X on launch pad (Image courtesy of NASA)

"Science is a wonderful thing if one does not have to earn one's living at it."

Albert Einstein,  
Physicist  
1879-1955.

## Nominations for 2010 Local Section Officers and Directors

Nominations for Local Section Officers and Directors are being solicited for the December election.

The following offices are elected each year:

Chair-Elect,  
Secretary,  
Treasurer, and  
Two Directors.

The Chair-Elect acts on behalf of the Chair during his/her absence and automatically becomes the Chair at the end of the current Chair's term.

Secretary and Treasurer serve for one year. The Secretary maintains a record of the proceedings of the Section. The Treasurer is charged with the collection and disbursement of funds as authorized by the Executive Committee. The Treasurer shall keep adequate records and present financial reports at the request of the Chair or the Executive Committee.

Directors serve for a two-year term and are members of the Executive Committee. The Directors duties are assigned by the Chair and typically

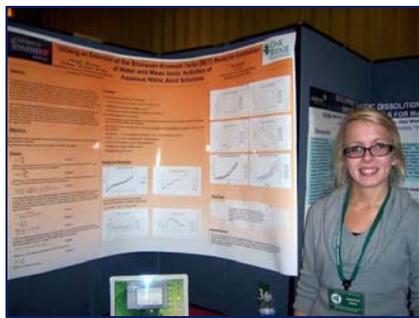
include planning and organizing meetings.

If you are willing to serve your local section, please give your name to one of the current section officers.

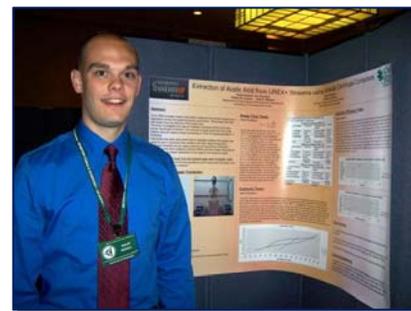
Elections are in December and the terms begin in January 2010.

## Local Section Assists with Funding for Students to Attend Separation Science and Technology Symposium

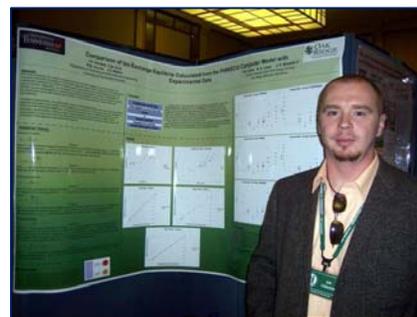
The Knoxville/Oak Ridge Section of American Institute of Chemical Engineers contributed \$300 to the University of Tennessee Chemical and Biomolecular Engineering Department to help defray some of the costs for three students to present posters of their work and to attend the 16<sup>th</sup> Symposium on Separation Science and Technology for Energy Applications in Gatlinburg on October 18-22. Each student presented a poster describing their work.



Christina Karni presented *Utilizing an Extension of the Brunauer-Emmett-Teller (BET) Model for Estimation of Water and Mean Ionic Activities of Aqueous Nitric Acid Solutions*.



Travis Russell presented *Extraction of Acetic Acid from UREX+ Streams Using Annular Centrifugal Contactors*



Jon Garrison presented *Comparison of ion-Exchange Equilibria Calculated from the PHREECQ Computer Model and Experimental Data*.

## AIChE Membership Gift Program

The AIChE, has announced a new membership drive starting in January 2010. The program encourages active members to donate gift memberships to deserving new members for a fraction of the cost of a normal membership. The following is a reprint of a recent mailing describing this new program.

As an active member of AIChE, you know the many ways that AIChE has helped your career.

We believe that there are more member benefits than ever before, including ChemE on Demand, Knovel, SmartBrief, and insurance programs. We also believe that once a non-member makes use of these benefits they will be an AIChE member for life.

Why not offer the same opportunity to someone you

know who is a ChemE and hasn't yet gotten involved with the Institute?

The AIChE Board of Directors has created a "Membership Gift Program" where active members of AIChE can give the gift of membership to a deserving engineer. And, at a special price of only \$49.

This unique gift - reserved exclusively for new members of AIChE - will begin on January 1, 2010 and keep on giving through the end of the year.

So don't delay - give the gift of AIChE membership today.

Simply download the application form at [www.aiche.org/gift](http://www.aiche.org/gift) and return it with payment to AIChE. We'll promptly confirm receipt of your order as well as send a note to those you are giving the

gift to, announcing your generosity.

There's never been a better time to bring a new member into the world's leading organization for chemical engineers.

At \$49, a gift membership is a true value that includes all the tremendous benefits you are enjoying as a member.

Share the benefits and rewards of AIChE membership. Give the gift of membership today to a deserving chemical engineering professional.

If you have questions concerning this program, call 1-800-242-4363 for additional information.

## Society of Women Engineers

The Society of Women Engineers (SWE), founded in 1950, is a not-for-profit educational and service organization. SWE is the driving force that establishes engineering as a highly desirable career aspiration for women. SWE empowers women to succeed and advance in those aspirations and be recognized for their life-changing contributions and achievements as engineers and leaders. SWE offers an exciting array of training and development programs, networking opportunities, scholarships, outreach and advocacy activities, and much more.

SWE is organized in ten regions across the United States with each region composed of

Professional Sections within the states included in each region. The Smokey Mountain Section is one of three sections in Tennessee. The Smokey Mountain Section is a networking group of 35 members in technical fields from a variety of companies in the East Tennessee region, with a mission of:

- informing the community of opportunities open to women in engineering and
- encouraging women to enter and grow in engineering and the sciences.

For additional information on SWE and the Smokey Mountain Section, please see the source web sites for this article.

(Sources:  
<http://societyofwomenengineers.swe.org/index.php>

<http://www.swe.org/RegionD/D006-SmokyMountain/>)



## VOL4STEM – Science Night Call for Volunteers

2009-2010 Science Night Call for Volunteers

Science Club, organized by the Women In Nuclear Organization, has a very aggressive Science Night Schedule planned for this year and needs volunteers. Volunteers are necessary to ensure the success of this very productive activity. Science Club has been hosting Science Nights for three years, and the feedback has been overwhelmingly positive.

Volunteers are needed to: act as chaperones, shuttle the kids from one station to the next; demonstrate/assist with the experiments; and assemble the necessary materials. The photographs below are from previous Science Night activities. The theme for this year's Science Night is "Chemistry".

Each Science Night will require a **minimum** of 20 volunteers. A typical Science Night schedule is to meet either at Katherin's or Julie's house at 4:30 pm to go over the experiments and have dinner, then go over to the school around 6:00 to set-up the experiments, the event goes from 6:30 until 8:00, and we're usually packed up and out of the school by 9:00.

The current schedule of schools is listed below.

### Science Night Schedule

1/22/10 Episcopal School Knoxville  
 1/29/10 Farragut Intermediate\*  
 2/5/10 Bearden (tentative)  
 2/19/10 Farragut Primary  
 2/26/10 Woodland (Oak Ridge)  
 3/26/10 Grand Oakes

\*Theme will be "Weather" for Farragut meeting only

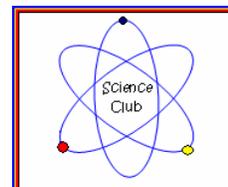
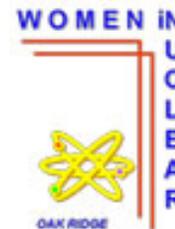
If you are interested and/or willing to volunteer for any of the Science Nights, please send your name, contact information (e-mail, cell phone, etc) to **both** Katherin and Julie. Also, if you have any questions regarding Science Night, please feel free to contact either of them.

Katherin L. Goluoglu, 241-9360  
 (Work), [goluoglu1@ornl.gov](mailto:goluoglu1@ornl.gov)

Julie G. Ezold, 574-9594 (Work),  
[ezoldjg1@ornl.gov](mailto:ezoldjg1@ornl.gov)

Website:  
<http://rsicc.ornl.gov/scienceclub/>

(Source: Images courtesy of the science club website)



## Activities Calendar

Date	Time	Topic	Speaker	Location
Nov 19	6:00 PM	The Nation's Renaissance in Energy Technology	Dana Christensen, PhD, PE, Associate Laboratory Director, ORNL	Calhoun's, Turkey Creek
Dec 10	6:00 PM	Zero Energy Homes	Jennifer Banner, Schadd Cos./Brian McMurry, Barber McMurry Architects	Calhoun's, Turkey Creek
Jan 21	6:00 PM	TBD	TBD	Calhoun's, Turkey Creek
Feb 9	6:00 PM	Joint with ANS	TBD	TBD
Mar 18	6:00 PM	TBD	TBD	Calhoun's, Turkey Creek
Mar 21-25		AIChE Spring Meeting		San Antonio, TX
Apr	6:00 PM	U.T. Student Awards Night	TBD	TBD
May	6:00 PM	TBD	TBD	Calhoun's, Turkey Creek

## Sponsoring Opportunities

We continue to accept advertising in the newsletter in order to provide funds to support student participation in the meetings.

Rates per newsletter are:

**\$80** full-page advertisement

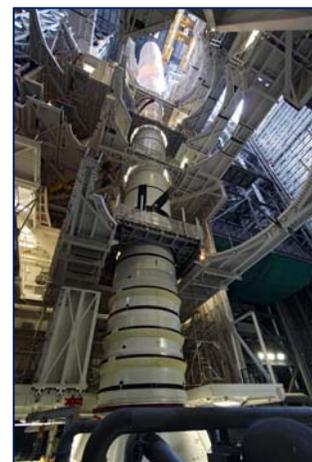
**\$45** half-page advertisement

**\$25** quarter-page advertisement

The section will also continue to accept individual or corporate sponsors to provide student meals at Section meetings. The sponsor

will be recognized at the meeting and in the Newsletter.

The cost to sponsor one meeting is **\$200**. It's a great way to encourage students to attend the local meetings and become future members in the Institute!



ARES I-X (Image courtesy of NASA)

*"For NASA, space is still a high priority."*

*Dan Quayle,  
US Vice President,  
1947 -*

## Officers

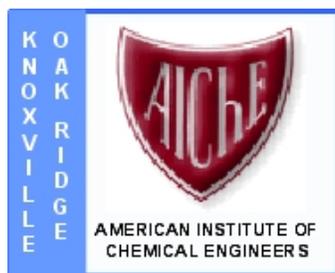
<b>Chair:</b>	Michael Hollander	300-5645	<a href="mailto:enviroms@att.net">enviroms@att.net</a>
<b>Chair-Elect:</b>	Jacob Hutton	560-1706	<a href="mailto:jacob.hutton@power.alstom.com">jacob.hutton@power.alstom.com</a>
<b>Secretary:</b>	David DePaoli	574-6817	<a href="mailto:depaolidw@ornl.gov">depaolidw@ornl.gov</a>
<b>Treasurer:</b>	Paul Taylor	574-1965	<a href="mailto:taylorpa@ornl.gov">taylorpa@ornl.gov</a>
<b>Directors:</b>	Sharon Robinson	574-1150	<a href="mailto:robinsonsm@ornl.gov">robinsonsm@ornl.gov</a>
<b>Term ends 2010</b>	Mark Swientoniewski	220-4730	<a href="mailto:swientoniemd@bechteljacobs.org">swientoniemd@bechteljacobs.org</a>
<b>Term ends 2010</b>	Ed Alperin	694-7335	<a href="mailto:Ed.alperin@shawgrp.com">Ed.alperin@shawgrp.com</a>
<b>Term ends 2009</b>	Stuart Daw	946-1341	<a href="mailto:dawcs@ornl.gov">dawcs@ornl.gov</a>
<b>Term ends 2009</b>	Tom Busmann	694-7517	<a href="mailto:tbusmann@focusenv.com">tbusmann@focusenv.com</a>
<b>Membership:</b>	Paul Taylor	574-1965	<a href="mailto:taylorpa@ornl.gov">taylorpa@ornl.gov</a>
<b>Newsletter:</b>	Linda Puckett	574-6984	<a href="mailto:puckettlf@ornl.gov">puckettlf@ornl.gov</a>
<b>Webmaster:</b>	Ben Lewis	574-4091	<a href="mailto:lewisbejr@ornl.gov">lewisbejr@ornl.gov</a>
<b>E-mail:</b>			<a href="mailto:aiche-chat@chem.engr.utk.edu">aiche-chat@chem.engr.utk.edu</a>
<b>Website</b>			<a href="http://www.ornl.gov/aiche">http://www.ornl.gov/aiche</a>

## Knoxville - Oak Ridge Section

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We're on the Web!

See us at:

<http://www.ornl.gov/sci/aiche/>

### About Our Organization...AICHE SmartBrief Newsletter

Every Tuesday, the AICHE delivers *AICHE SmartBrief*, a guide to news and information for Chemical Engineers. Each edition includes news and technical information selected especially for chemical engineers. You can sign up for this FREE e-newsletter via the national AICHE web site, <http://www.smartbrief.com/aiche/>.

The AICHE editors handpick key articles from hundreds of publications specifically with chemical engineers in mind, prepare a brief summary of each, and provide links back to the original sources. These concise summaries provide a snapshot of critical events and developments in our

industry. As an example of the content of these weekly briefs, the October 20, 2009 edition included the following titles:

[BASF builds aquatic infrastructure in Michigan](#)

[Ethanol producers see opportunity in biochemical market](#)

[Chemical-industry recovery looks to be on the horizon](#)

[Texas industries say EPA pollution crackdown will cost consumers](#)

[Performance to highlight harmony between nanotechnology and jazz](#)

[Philadelphia nanotechnology company receives \\$833K in federal grants](#)

[Green-technology bills are among those Schwarzenegger signs into law](#)

[MicroPower, Texas university campus are partners on green technology](#)

[10 traits your employees are sure to "love"](#)

[Two weeks left before registration rates for Annual Meeting rise](#)

(Source: <http://www.aiche.org/index.aspx>)

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