



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

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  
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## May 2011 Meeting

Date: Thursday, May 5, 2011  
Cost: \$20

Location: Calhoun's, Turkey Creek Shopping Center, Knoxville TN  
Menu: Buffet  
5:30 pm Executive Committee Meeting (All members welcome) - Executive Committee Meeting  
6:00 pm Dinner (Buffet)  
7:00 pm Program – Bill Zulliger, Y-12 National Security Complex, *Uranium Processing Facility – Behind the Scenes Tour*

**Abstract** – An integral part of Y-12's transformation efforts and a key component of the National Nuclear Security Administration's (NNSA's) Uranium Center of Excellence, the Uranium Processing Facility (UPF) is one of two facilities at Y-12 whose joint mission will be to accomplish the storage and processing of all enriched uranium in one much smaller, centralized area.



Safety, security and flexibility are key design attributes of the facility. UPF will be built to modern standards and engage new technologies through a responsive and agile design. Upon completion, UPF will be a comprehensive uranium processing facility, appropriately sized and capable of meeting national security demands.

In this presentation, Bill will specifically address the need and scope of UPF, schedule, funding, and details on how UPF is being designed.

**Bio** – Bill Zulliger joined the Y-12 National Security Complex in 2004 and quickly began working on the Uranium Processing Facility project. Since becoming its Engineering Manager, the project has completed half of its overall design work. Bill completed his B.S. in Mechanical Engineering at Tennessee Technological University in 1985 after 2 years of study and training at the United States Military Academy at West Point. He is currently a licensed Professional Engineer in the State of Tennessee and holds Project Management Professional (PMP) certification. Bill has more than 20 years of experience in project management, project engineering, and design, including several engineering-procurement-construction (EPC) projects for both commercial and governmental customers.

***The local section will pay for up to 15 High School students from the local area.***

If you know of someone who would be interested in attending this meeting, please provide their name(s) to us so that we can be sure to invite them.

***Please make your reservations by noon on May 5, by contacting***

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## March Meeting Summary – Tour of ALCOA Aluminum Can Recycling Facility

The Knoxville-Oak Ridge AICHe section March meeting included an insightful tour of the ALCOA's Aluminum Can Recycling Facility. The following letter of appreciation provides a good description of the tour and expresses our gratitude for ALCOA's efforts to provide a tour of their facilities.

American Institute of Chemical Engineers  
Knoxville-Oak Ridge Section

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P.O.Box 2008, Oak Ridge, TN 37831-6243



March 18, 2011

Ms. Christy R. Newman  
Community Relations Manager  
Alcoa Inc., Tennessee Operations  
2300 North Wright Road  
Alcoa, TN 37701-3141

Dear Ms. Newman:

On behalf of the American Institute of Chemical Engineers, Knoxville-Oak Ridge Section, I would like to thank you and your coworkers at Alcoa for your gracious hospitality and tour of your Can Reclamation Facility located at the Alcoa, Tennessee, South Plant. Our members were provided a unique opportunity to observe your operations, from receipt of the large bales of used beverage cans (UBCs), through the crushing operations, into the delacquering furnace, and then into the melting furnace where the aluminum chips are transformed into molten metal. We were also provided the opportunity to observe the transformation of the molten aluminum into multi-ton ingots as they were being removed from their molds.

I would like to offer our special thanks to John Kincaid (Can Reclamation Facility Plant Manager), David Sissom (Can Reclamation Facility Superintendent) and Stephanie Sparkman (plant Environmental Manager). With their guidance, we safely maneuvered through your operating facility to see and learn, up close and personal, the process of recycling aluminum. It was obvious to all that these individuals are passionate about the safe, efficient, and reliable operation of their facility.

Again, thank you very much for all your help in arranging and coordinating the tour.

Best regards,

A handwritten signature in blue ink, appearing to read 'Michael L. Aident'.

Michael L. Aident  
Knoxville-Oak Ridge AICHe Section Chair





Courtesy of DOE Digital Photo Archive:  
<http://www.doedigitalarchive.doe.gov/>

"Obstacles don't have to stop you. If you run into a wall, don't turn around and give up. Figure out how to climb it, go through it, or work around it."

*Michael Jordan*  
 1963- American athlete

## Chief Information Officer for Local Sections

In order to foster closer communication between Local Sections and the global AIChE organization, a new leadership position has been developed - the CIO (Chief Information Officer). The CIO is a volunteer identified from each Local Section that will serve as a direct link between Local Section officers and members and the larger AIChE organization.

This exciting opportunity provides a central, local resource of information on everything AIChE while also providing feedback from your Section on what additional resources could improve your programming. In short, the CIO will be the focal point for communicating grassroots issues and needs to the rest of the AIChE organization and leadership, and help to create member service and value.

To summarize, the CIO will:

- Advise Local Section members of upcoming webinar subjects and speakers
- Serve as a reminder of deadlines for discounted registration for AIChE meetings
- Share opportunities for recognition through the expanded Institute Awards program, including several new awards for chemical engineers working in industry

- Provide additional material for programs specifically designed for the Local Sections – such as the Speakers Corner, the Leadership Development Conference and Project Connect Grants
- Communicate with the AIChE staff on how the Institute could tailor career services to better serve members in your area
- Inform the AIChE leadership if there is an important public policy issue impacting chemical engineers in your community or state where AIChE support could help

The CIO for the Knoxville-Oak Ridge Section is Sharon Robinson ([robinsonsm@ornl.gov](mailto:robinsonsm@ornl.gov)). Monthly summaries of upcoming events and issues are available at: <http://www.aiche.org/localsections/cioinfo.aspx>.

(Excerpt from: <http://www.aiche.org/localsections/cioinfo.aspx> )

## Job Opportunities

Candidates are presently being sought for the following positions:

### Process Design Chemical Engineer – Oak Ridge, TN

Process Engineering Associates, LLC is currently seeking one or more Process Design Engineers for executing process design and engineering projects across a variety of industrial market segments. Candidates must be willing to travel as assignments, both domestic and international, will require some on-site work. Job requirements include a B.S. in chemical engineering from a well recognized university and 10-15 years of combined plant operations, troubleshooting, project management, and process design experience. Ideal experience includes a variety of unit operations process simulation and design (distillation, heat exchangers, scrubbers, relief valve sizing, etc.). Advanced degrees (M.S. or M.B.A.) and professional registration are a plus but not required. Pay rate will be based on qualifications and experience. Interested candidates should

submit resumes to [info@processengr.com](mailto:info@processengr.com) in MS Word or PDF format.

### Engineering Manager – Flowserve, Cookeville, TN

Flowserve is the recognized world leader in supplying pumps, valves, seals, automation, and services to the power, oil, gas, chemical, and other industries. With more than 15,000 employees in more than 50 countries, we combine our global reach with a local presence.

**Job Description -**  
Provide direction and leadership to the engineering group in support of the sales and manufacturing organizations to ensure that timely support is delivered so that the business plan is achieved. Support the achievement of the financial objectives for the Cookeville site as defined by the budget.

**Requirements -**  
Bachelor's Degree in Engineering, preferably with a Master's Degree. Minimum of 15 years of proven engineer/technical leadership experience preferably in a heavy industrial highly technical global manufacturing environment.

Demonstrated history of driving improvements and achieving measurable results. Proven proficiency in driving a high performance culture. Solid project management skills and ability to effectively manage projects using project planning tools. Strong interpersonal, communication, decision making and problem solving skills. Prior experience utilizing an integrated ERP system such as Oracle or SAP.

To apply for this position, visit - <http://flowserve.contacthr.com/19150502>



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<http://www.doedigitalarchive.doe.gov/>

“One secret of success in life is for a man to be ready for his opportunity when it comes.”

*Benjamin Disraeli*  
1804-1881- British Statesman

## Volunteer Needed for Chair-Elect

A volunteer is needed to serve as the Knoxville-Oak Ridge Section Chair-Elect for 2011. Unfortunately, our present Chair-Elect, William Johnson, has resigned as a result of uncertainty over his availability to serve in the coming year. The duties of the Chair-Elect primarily include presiding over meetings in the absence of the Chair and automatically ascending to serve as the Section Chair at the end of the current Chair's term. If you are willing to serve in this capacity, please contact one of the section officers.

## Members Forum – Testimonials on the Benefits of Membership

This column will publish a series of articles written by local section members that are intended to describe the reasons why members joined the AIChE and the benefits of being a member of the local section.

This forum represents an open invitation to all members to contribute to these monthly articles. It is our intent that these articles help others learn more about the real world benefits of being a member of the AIChE.

This sixth article comes from one of our local section members, William Johnson. William is a postdoctoral staff member at the Energy and Transportation Science Division at the Oak Ridge National Laboratory National Transportation Research Center.

“AIChE is an organization that can have great value to chemical engineers at all levels and particularly during these difficult economic times. I joined AIChE during my undergraduate days at the University of Michigan. When I finished my Ph.D. at Michigan, several years later, I took a process engineering position in lithography at Intel Corporation in Oregon. Times were difficult in the state of Michigan due to the massive decline in the auto

industry in 2007 so it was a good opportunity to move away and get full time work experience outside of my area of study: NOx after treatment, reaction engineering, and catalysis. I found out how diversified I was in my talents and began to understand the importance of education beyond degrees. Work experience is highly valued outside of school and typically during austere economic times experience outside of school can be the difference between successfully landing the next opportunity or getting no positive response from employers.

Another aspect of the job search that many new graduates neglect is the power of networking through professional groups such as AIChE. When I began my postdoctoral fellowship at Oak Ridge National Laboratory I was mainly focused on my research and planning my next opportunity. Now that my postdoc is ending, again in a down economy, I am searching for my next career opportunity in a very competitive job market. Luckily I decided to get involved in Knoxville beyond my postdoctoral position and joined the Knoxville-Oak Ridge AIChE chapter. In this chapter, there are people with a variety of

skill sets and positions with various organizations and businesses. My involvement in AIChE is helping me expand my relationships with members on a more personal and professional basis.

In this risk averse time many employers are less willing to take chances on employing new people that they do not know. Therefore networking and references can play a large role in a job applicant's ability to obtain their next position. The chemical engineering community particularly in a sub-discipline can be very small and therefore a person's interaction with others can have lasting impressions on various people that interact at different levels. AIChE gives young talented chemical engineers the ability to leave positive impressions on people who can be helpful in the job search for these new young talented professionals. I am very proud to be a member of AIChE in the Knoxville-Oak Ridge, TN chapter and I look forward to having a long career as a chemical engineer and AIChE member so I can help other young chemical industry professionals define their next career moves.”

## New AIChE eLearning Center

AIChE is proud to announce the launch of the new AIChE eLearning Center. Featuring well-known instructors, the Center will offer chemical engineers high caliber technical training to further advance our chemical engineering skills. And since the classes and interactions with professors are all online, the courses can be tailored to conveniently fit into our demanding schedules.

The eLearning Center's instructors are experts with deep backgrounds in key areas of Chemical Engineering. Classes are taught in two formats, so you can choose a self-paced, on-demand format or a more traditional format with some classes that meet at a scheduled time.

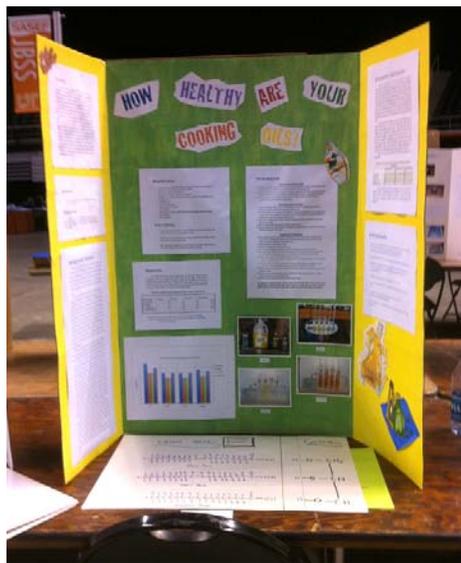
Upon completion, all courses provide Professional Development Hour (PDH)

credits to assist in meeting professional license requirements. Inaugural classes kick off June 6.

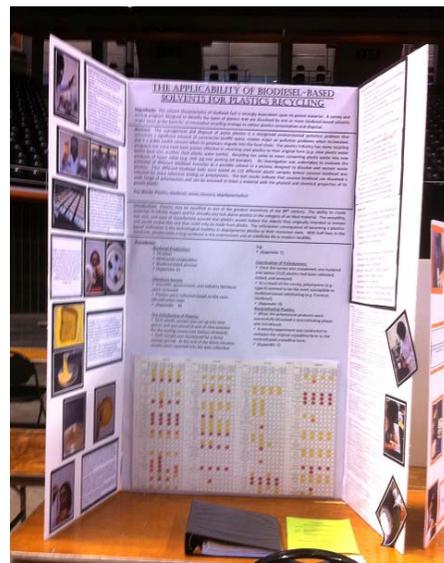
New courses will be added this fall and in 2012. Additional information on this new program is available on the National AIChE web site at: <http://www.iche.org/CareersEducation/Education/eLearning.aspx>.

## Southern Appalachian Science and Engineering Fair

The Southern Appalachian Science and Engineering Fair is the premier science competition for students in middle and high school in the 23 counties of central East Tennessee. SASEF has promoted teaching the scientific method in science, engineering, and math since 1952. This year there were more than 250 projects. The Knoxville – Oak Ridge Section of AIChE awards two \$50 prizes for the top chemistry or engineering related projects in the senior and junior divisions. The winner in the junior division was Ellie Lai for her project “How Healthy Are your Cooking Oils”. Ellie measured the unsaturated fat content of several different types of cooking oils. The senior division winner was Chelsea Solomon for her project “Applicability of Biodiesel-based Solvents for Plastics Recycling”. Chelsea made biodiesel from several different types of oils and determined the solubility of many different plastics in the biodiesels.



How Healthy Are your Cooking Oils



Applicability of Biodiesel-based Solvents for Plastics Recycling

## UT Student Awards

Each year, the Knoxville-Oak Ridge Section of the AIChE presents two \$100 awards to the Outstanding Student and the Outstanding Baccalaureate from the Chemical and Biomolecular Engineering Department at the University of Tennessee. The winners are selected by the faculty. This year's winners are Heather Lauren Johnson as Outstanding Student and Joseph Reynolds as Outstanding Baccalaureate. Congratulations to Heather and Joseph.



Paul Taylor and Lauren Johnson, Outstanding Student from the UT Chemical and Biomolecular Engineering Department



Paul Taylor and Joseph Reynolds, Outstanding Baccalaureate from the UT Chemical and Biomolecular Engineering Department

## Activities Calendar

Date	Time	Topic	Speaker	Location
May 2-5		Offshore Technology Conference		Houston, TX
May 5	6:00 PM	Uranium Processing Facility – Behind the Scenes Tour	Bill Zulliger	Calhoun's, Turkey Creek
June 5-8		AIChE-DECHEMA Global Conference on Energy Sustainability in the Process Industries		Hong Kong SAR, China
Oct 16-21		AIChE Annual Meeting		Minneapolis Convention Center, Minneapolis, MN

## 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!



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<http://www.doedigitalarchive.doe.gov>

"Sponges grow in the ocean. That just kills me. I wonder how much deeper the ocean would be if that didn't happen."

*Stephen Alexander Wright*  
 1955 - American comedian, actor,  
 and writer

## Officers

<b>Chair:</b>	Michael Aident	694-7333	<a href="mailto:Michael.Aident@shawgrp.com">Michael.Aident@shawgrp.com</a>
<b>Chair-Elect:</b>			
<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>			
<b>Term ends 2011</b>	Jacob Hutton	560-1706	<a href="mailto:jacob.hutton@power.alstom.com">jacob.hutton@power.alstom.com</a>
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<b>Term ends 2012</b>	Ed Alperin	604-0798	<a href="mailto:Ed.Alperin@gmail.com">Ed.Alperin@gmail.com</a>
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<b>Term ends 2011</b>	Richard Denney	458-8875	<a href="mailto:rgdenney@charter.net">rgdenney@charter.net</a>
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## Knoxville - Oak Ridge Section

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We're on the Web!

See us at:

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

Editor: B. Lewis

## About Our Organization – Career Support

AIChE provides professional and technical training, a job search engine just for engineers, expert advice from industry leaders, employer profiles, salary information and more. These benefits are available to our members for free or at low member-only prices:

[Salary finder](#) - Powered by Salary.com. Find out what you're worth.

[CareerToolsPLUS](#) - Get career advice, planning tips and job search strategies from ExecuPlanet. Plus, through local sections you can get career counseling.

[Useful Links](#) - Check out these websites, which we consider the best-kept secrets on the internet for remaining competitive in the industry.

[Professional engineering licensure](#) - Get licensed in your state.

[Careers in the news](#) - Stay current with links to career development news, salary trends, job listings, consulting opportunities and more.

[Sloan Foundation](#) - What do Engineers do? The Sloane Foundation offers great chemical engineering career resources for students, teachers, counselors, parents, and early career professionals.

[Chemical Producers and Suppliers](#) - Chemical producers, suppliers and information resources relevant to chemical and process engineering. Provided by the University of Florida.

[WhyNotChemEng.com](#) - Chemical Engineers are in demand throughout the world and have a huge variety of employment opportunities. More information on major Chemical Engineering employers can be viewed here.

(Information from the National AIChE web site at <http://apps.aiche.org/chemeonde/mand/LiveWebinars.aspx>)

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