
AIChE® The Pipeline

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Mark Kettner - Editor

April 2012

NEWSLETTER OF THE EAST TENNESSEE SECTION OF AIChE

Local section website

<http://www.tnengineering.net/AICHE/>

Local section mailing address

PO Box 7448 Kingsport, TN 37664-7448

East Tennessee Section of AIChE May Meeting Joint Meeting with ACS

Dinner and Family Night at the Gray Fossil Site

Thursday, May 3, 2012

6:00-8:00 pm

Dr. Norman P. Jacob

Section Manager

Process Improvement and Fuel Development Engineering

Nuclear Fuel Services, Inc.

More information given below, but please RSVP by noon on April 30, 2012.

Dr. Jacob's talk should prove to be fun and educational for both children and adults. Plan to bring the family or friends (esp. kids & grandkids) for a great night out. **After Norm's presentation and demonstration, there will plenty of time to enjoy a self-guided tour of the museum, including the special exhibit, "Microbes!"**



Menu (catered by Aramark/ETSU)**Deli Buffet (build your own sandwich)**

\$10.00 Per Person

- Choice of Meats & Cheeses
- Side Salad
- Relish Tray with Condiments
- Assorted Breads
- Potato Chips
- Jumbo Cookies with Icing
- Beverage Station: Iced Tea and Water

Kid's Corner (for children under 12 only)

\$5.00 Per Child

- Choice of Hamburger or 2 slices of Pizza (please specify when you RSVP)
- Chips
- Cupcakes
- Beverage (Tea, Water, Sodas, Lemonade)

The cost for the meal is \$10/person for adults or \$5/person for children under 12 if you choose the Kid's Corner Option. Make check to "East Tennessee AIChE". Indicate number in your party. Send checks to Rebecca Glaspie B-267 (Eastman), Braxton Sluder (BAE), or Tracy Coates (NFS) by **April 30, 2012**. No cost to only attend the lecture and museum site self-tour. **Please RSVP by noon on April 30, 2012!** Reply to Lane Daley (adaley@eastman.com) with number in your party.

Speaker: Dr. Norman P. Jacob

Evening Presentation: Famous Atomic Scientists of the 20th Century and Interesting Facts About Them!

Abstract: What inspires young people to study science or engineering as a profession? Certainly, the numerous technological innovations that have already enhanced our lives serve to underscore what is achievable through science and engineering. Often, it is someone in our family or among our friends who provide the motivation. What can be most motivating to budding scientists and engineers is a better understanding of the men and women who have made significant and far-reaching contributions to our knowledge of the world around us. This presentation will focus on famous atomic scientists of the 20th century, their achievements in the scientific profession, and some very interesting and often humorous facts about their lives. Given sufficient time at the end of the talk, we will offer a brief hands-on demonstration for both kids and big kids to show how different types of natural radioactivity are detected and how each type can be affected by different materials.

**Biographical Sketch
Norman P. Jacob**

Dr. Jacob is Manager, Process Improvement and Fuel Development Engineering Section in the Engineering Department of Nuclear Fuel Services, Inc. In his current capacity at NFS, he is responsible for improving all processes within the plant and for interfacing within the internal departments for implementation of improved processes. He has over 30 years of experience in uranium chemistry, laboratory and pilot plant operations, chemical recovery, fuel development, and conceptual and detailed design of uranium processes. In recent years,

he taught the class on the Nuclear Science Merit Badge during Merit Badge University at ETSU with over 200 Boy Scouts earning this badge. During 2011, he had the privilege of speaking on the topic “The Future of Nuclear Power” to both the local ASME section and the ETSU physics department. He also has traveled abroad to discuss the feasibility of accelerating the rate of converting nuclear warheads to commercial reactor fuel with members of the Russian Atomic Energy Agency. Dr. Jacob received a B.S. degree in Chemistry from Purdue University and a Ph.D. in Nuclear Chemistry from the University of California, Berkeley, where he had the honor of meeting several notable nuclear scientists of the 20th century. He is a member of both ACS and AIChE.

Directions to the Gray Fossil Site

From Interstate 81, take Interstate 26 south to the Gray exit 13 (Hwy 75) and Turn left (south) at the light. The Natural History Museum and Visitors Center is approximately 1.8 miles south on the left. The physical address is 1212 Suncrest Drive, Gray, TN 37615.

Letter from the Chair

Steve Miller

Fifty-four years ago next month, the East Tennessee Section of AIChE had an intersectional meeting with the Northeast Tennessee Section of the American Chemical Society in Bristol, Virginia. The East Tennessee Section of AIChE has gathered with our ACS colleagues a number of times since that first joint meeting and, as noted in this edition of *The Pipeline*, we will be doing so again on May 3rd. Dr. Norman Jacob of Nuclear Fuel Services will be our speaker, and the topic and venue were selected to make it an enjoyable and educational evening for the members and families of both sections. Channel that inter-organizational spirit demonstrated over a half century ago, and make your reservation for our May 3rd evening meeting.

April Program Recap

Steve Miller

“Perspective on Process Control”



James J. Downs

Jim Downs, Engineering Fellow at Eastman Chemical Company and leader of Eastman’s Advanced Controls Technology Group spoke to our section on April 3rd. His presentation took a look back at the early history of process control and traced the advances of the field through the mathematical age, to the computer age, to the state of process control technology today; and, in keeping with our 2011-2012 program theme, he provided perspective and shared his informed speculation about some likely future trends. Advanced techniques in chemical process control application today are commonly based on process models. Jim suggested that it is reasonable to expect a continued migration from the use of deterministic models to stochastic models, necessitating further system identification advances and an improved ability to characterize process information, to quantify uncertainty, and to make the most of “known unknowns” while mitigating the effects of “unknown unknowns.” We are appreciative of Jim’s willingness to provide a very informative and entertaining talk. Jim’s PowerPoint presentation (along with a number of other past presentations) can be downloaded from our section’s web news archive at http://www.tnengineering.net/AICHE/#_Web_News_Archive.

What’s New at National AIChE

Noah McMillan

Did you know that AIChE now has a [Virtual Local Section \(VLS\)](#)? The VLS maintains all the social, professional, and educational functions of a traditional local section, but the membership is not limited by geography. Monthly VLS meetings are conducted via WebEx teleconference. The VLS is targeting:

- AIChE members without access to a local section
- Process Engineers who often aren't well supported professionally by their companies
- Young professionals

So, if you are relocating to a different region or different country for a significant period of time, or are unable for any other reason to participate in your local section, the VLS is one way to stay connected to AIChE.

eChemExpo 2012

We have an opportunity to attend a trade show nearly next door. eChemExpo is scheduled for Meadowview Conference Center on Wednesday May 23. See details on the web. In addition to exhibits, there will be 4 classrooms, with half-hour seminars scheduled from 10:15 AM to 3:55 PM. Past Expo meetings have offered PDH certificates for the seminars – these seminars have not yet been reviewed for PDH credit, but we expect to do so and confirm on the website if PDH will be available. Visit the website to register today, www.echemexpo.com

eChemExpo*"forging the link between business and process"*[Solutions Marketplace](#) [Conference](#) [About Us](#) [To Exhibit](#) [To Attend](#) [Directions](#) [Home](#)

March 27, 2012 UPDATE: The full conference program is now posted. View the complete listing of almost 40 seminar topics in four conference tracks by clicking on the "Conference" button above or the link immediately below

[Click HERE to view the 2012 Keynote and Conference details](#)

March 1, 2012 UPDATE: Registration is now open for the **7th eChemExpo Solutions Marketplace & 5th Technology Innovations Conference** to be held **Wednesday May 23, 2012** at Meadow View Convention Center in Kingsport Tennessee. As home to the chemical industry's largest single chemical processing complex, this one-day exposition and **Technology Innovations Conference** is emerging as the most robust solutions marketplace held in more than a decade. Well over 100 solution providers have already committed to demonstrate hundreds of products and services to save you time, increase profitability and streamline plant operations. An expanded four track, 35 seminar, "meet the experts" **Technology Innovations Conference** will put you on the leading edge of new developments.

The 2012 theme is **SUCCESSFUL EXPANSION OF MANUFACTURING & ENGINEERING CAPABILITIES IN UNCERTAIN ECONOMIES** with exhibitors challenged to demonstrate breakthrough developments which improve:

Continuing Education – Professional Development Hours Available



Eastman Employees Only: Are you a professional engineer seeking to meet state continuing education requirements for professional development hours (PDH's)? If so, please visit this website for a list of potentially eligible courses and more information: [Continuing Education for Professionals](#)

Calendar of upcoming events



Several great programs are planned for the upcoming programming year. Topics include:

- An Evening at the Gray Fossil Site with our Friends from the American Chemical Society – May 3rd, 2012
- eChemExpo, Meadowview Conference Center, May 23rd, 2012

Keep Up With the Local Section Online

Up-to-date information about the East Tennessee Section of the American Institute of Chemical Engineers can be found [on our website \(www.tnengineering.net/AICHE\)](http://www.tnengineering.net/AICHE). The website includes the Local Section Bylaws, List of Officers from 1945 to present, and an archive of Pipeline Newsletters - to mention only a few aspects of the information covered. Photos from past events can be found, along with contact information for the Local Board. Review the site occasionally and keep up with the local section!

2012 Local Section Officers, Directors, & Support Staff

Chair:	Stephen Miller	224-7350
Chair-Elect and Program Committee Chair:	Noah McMillan	224-8114
Secretary:	Lane Daley	229-3064
Treasurer:	Rebecca Glaspie	229-6144
Directors:	Paul Fanning	229-8500
	Mark Harrison	229-6952
	Lauren Moyer	229-2208
Local Section Webmaster:	Tim Nolen	229-8287
Short-Course Coordinator:	Mark Shelton	229-4753
Professional Development Coordinator:	Joe Parker	229-3850
Corporate Relations Coordinator:	Braxton Sluder	578-6225
AICHe Pipeline Newsletter Editor:	Mark Kettner	229-3907
ETEAC Representative:	Lane Daley	229-3064

2012 Local Company Contacts

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Nuclear Fuel Services Inc., a subsidiary of The Babcock & Wilcox Company	Tracy Coates tjcoates@nuclearfuelservices.com
Domtar	Rhonda Smith, Process Control Engineer 423-392-2797, Rhonda.Smith@domtar.com

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