

# THE PIPELINE

## Letter From the Chair: Lane Daley

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Your local section of AIChE offers many services that other local sections can only dream of. We coordinate high-quality technical programs, offer young professional events, and even reach out to the community to promote chemical engineering. Even more amazing, we offer all of this to our members and affiliates free of charge. Most of our sister chapters charge \$30/\$50 (member/non-member) to attend each technical event. For a non-member who attends all nine of our programs a year, this would cost \$450. Instead of charging our members directly, our volunteer officers opt to fill out the paperwork and plead our case to receive funding via grants from AIChE. A combination of these grants and your local section member dues (at \$10/year) are what fund our events. Without this funding, we would have to do as our sister chapters and charge individuals to participate in our programs.

You can help continue our local section's good financial health by becoming an AIChE member today! Your member dues ensure that the funding is available for AIChE to continue offering these grants to local sections. Furthermore, it guarantees that we have enough AIChE members in attendance to appeal for funding. Plus, these dues fund our local section's charitable giving to events such as engineers week, chemistry week, and DB's FIRST robotics team.

AIChE membership also comes with advantages such as free webinars, discounted conference fees, and networking opportunities which can be found at <http://www.aiche.org/community/membership/benefits>. If you currently are not a member and would like to take advantage of a one year discounted rate, please contact me at [adaley@eastman.com](mailto:adaley@eastman.com) or 423 276 9061. For returning members, please consider [renewing your 2015 membership](#) today!



### Newsletter Spotlight

Program Committee

September Program on  
Relief Devices

Update on Outreach Group

## Professional Engineering Exam Review Course

the middle of April, and at the end of October. In the past, the East Tennessee Section of AIChE has offered a review course for those planning to sit for the exam. The winter months seem to be more conducive to studying for the exam, so the course has traditionally been offered in February and March. Many who do not plan to sit for the exam until October also attend the class, however, in order to refresh their memories about the topics they will be reviewing.

If you are interested in attending this course, please contact Joe Parker at 423-229-3850 (e-mail [jparker@eastman.com](mailto:jparker@eastman.com)) so we can determine if there is sufficient interest to hold the course next year.

The class would meet one night a week for six weeks; each week, a different subject would be reviewed. The subjects that would be covered by the course are:

Mass and Energy Balances

Thermodynamics

Fluid Mechanics

Heat Transfer

Mass Transfer

Reaction Kinetics

Each session would last two to three hours. The course would begin around the first week in February 2015.

The cost of the course is \$15 for members, \$75 for non-members. If you are not a member, a local section officer will be happy to [sponsor you](#) for \$59 membership. Contact Lane Daley at 423-276-9061 or [adaley@eastman.com](mailto:adaley@eastman.com) for more information about becoming a member of AIChE.

**EVEN IF YOU ALREADY HOLD AN ENGINEERING LICENSE, YOU MAY WISH TO ATTEND THIS COURSE!** The State of Tennessee requires each licensed engineer to obtain 24 Professional Development Hours (PDHs) over a two-year period in order to retain his or her engineering license. The East Tennessee Section of AIChE will award PDHs according to the number of class hours attended. Students who attend all sessions of the course will receive 15 PDHs, more than enough to satisfy the requirement for one year.

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### **AIChE Outreach Committee Update:**

The outreach committee is expanding its reach across Eastman! We have increased our committee membership from four dedicated members to ten. We welcome Madison Barefoot, Julie Boyles, Rachael Kandray, Andrew Silva, Taylor Thornton, and Randy Waymire. Along with Rachel McLendon, Carol Torres, Lauren Johnson and Braxton Sluder, we are a strong group that is dedicated to spreading the love of our profession to classrooms and to the community. It is an exciting time for us, as we are revamping the group organization to form multiple sub-committees. The sub-committees will include community relations, student relations, and organizational relations. We are excited to see the expansion of our group as well as increase the impact our group will have on people throughout the community.

The goal of the Outreach Committee is to spread knowledge and understanding of chemical engineering to the community and to potential students. We aspire to provide avenues of learning and open communications with students to help them consider chemical engineering as a viable career.

*As always, if you are interested in helping us to spread our love of chemical engineering to students, or if you have an idea of other avenues we can pursue, please contact Alexandra Kleven at [akleven@eastman.com](mailto:akleven@eastman.com).*

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### **Program Committee Announcement:**

The East Tennessee Local Section of AIChE is please to introduce its Program Committee for the 2014-2015 program year.

Nathan Bryant	Ashley McLean
Jason Carter	Rachel McLendon
Rebecca Glaspie	Braxton Sluder
Andi Hawksley	Randy Waymire
Lindsay Hoggatt	Meg Wiebe

Leveraging the diversity of the group, the Program Committee prepares the calendar of speakers and educational opportunities each year. They work to ensure that more than three satellite locations: BAE Systems, NFS, Tempur-Pedic, and the occasional call-in from Estonia are properly connected. Most importantly to many, they order and layout the pizza that we enjoy each time at our main location within Eastman. Average program attendance is ~100, with more than 50 taking PE credit when offered. If you're interested in giving a presentation or joining the program committee, please contact Braxton Sluder at [braxton.sluder@tempursealy.com](mailto:braxton.sluder@tempursealy.com).

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### September Program Recap: Pressure Relief Devices, Jennifer Mize, Eastman Chemical Company



Jennifer Mize  
Chemical Engineer,  
Plant Protection,  
Eastman Chemical  
Company

Kicking off our first program for the 2014-2015 program year, on September 16, Jennifer Mize from Eastman Process Safety Services gave an overview presentation of pressure relief devices. Never used for routine pressure control, relief devices should be one of the last lines of defense as a safety layer of protection.

Ms. Mize presented the aftermath of improperly protected systems through several pictures of not only overpressure but also undervacuum incidents. Undervacuum of a vessel can happen as simply as pumping out with a closed vent or even the collapsing vapors when an ESD is initiated on a distillation column. Every vessel (not just code vessels) should have careful relief evaluations/calculations undertaken regularly by a competent person.

Three major types of relief devices exist: relief valves, rupture disks, and conservation vents. Although all relief valves have some hysteresis in opening and closing characteristics, chattering relief valves should not be common as this can damage the valve. Rupture disks, often used with a relief valve to prevent fugitive emissions, can achieve very low pressure setpoints and are much more accurate in newer designs. Conservation vents come in many different styles such as special manway lids and pipeaway systems to relieve low pressures and vacuum.

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Eastern Tennessee Local Section

#### 2014 Local Section Officers, Directors, and Support Staff

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

We're on the Web!

AIChE



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	Joe Bays	229-5854
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Short Course Coordinator	Mark Shelton	229-4753
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Corporate Relations Coordinator	Braxton Sluder	782-6570
Young Professionals Committee Chair	Dan Crandall	229-2979
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