



virtuAIChE®

*This month's meeting:*

*Primary (with live discussion/live chat) Wednesday, August 24 at 9 pm ET (US) / 1 am GMT*

*Alternate 1 (with live discussion/live chat) Thursday, August 25 at 7 am ET (US) / 11 am GMT*

*Alternate 2 (with live discussion/live chat) Thursday, August 25 at 1 pm ET (US) / 5 pm GMT*

## **BOOST GREEN AND SUSTAINABLE CHEMICAL DEVELOPMENT WITH AI**

By: Craig Rowlands

Public concerns about the health and environmental safety of chemicals are driving the development of more sustainable, “greener” chemicals and products. Intrinsic chemical hazards are a function of many factors including physicochemical properties, chemical structure, and sub-structures. Using these properties to predict chemical hazards provides chemical R&D programs with a fast and increasingly reliable technology for new green chemical designs. Artificial Intelligence prediction software is well suited for this purpose and can be applied to all stages of the value chain when developing new green and sustainable chemicals.



Dr. Rowlands is a Senior Toxicologist and Distinguished Member of the Technical Staff at UL Solutions providing leadership in the innovation of products and services for chemical safety assessments of consumer products. He has spent over 20 years applying conventional and new toxicology approaches including non-animal and computational predictive toxicology in chemical safety evaluations. His current research is developing approaches to using artificial intelligence models to aid in the development of green and sustainable chemicals.

***Note that registration for VLS meetings is required.  
Our meetings are still free to attend and open to all.***

## **August Meeting Registration Information**

<b>Primary</b>	<b>Alternate 1</b>	<b>Alternate 2</b>
(Live Presentation/Live Chat)	(Recorded Presentation/Live Chat)	(Recorded Presentation/Live Chat)
August 24 at 9 PM EST / 1 AM GMT	August 25 at 7 AM EST / 10 AM GMT	August 25 at 1 PM EST / 5 PM GMT
Register in advance for the <a href="#">Primary Meeting</a>	Register in advance for the <a href="#">Alternate 1 Meeting</a>	Register in advance for the <a href="#">Alternate 2 Meeting</a>

After registering, you will receive a confirmation email containing instructions for joining the meeting, along with add-to-calendar links.

## **Introducing Our May Meeting Raffle Winner!**

Every month, a dues-paying member who signed in for the duration of the monthly webinar is selected at random to win a free year of VLS membership (Executive Committee members and previous winners during the current year are ineligible). We are pleased to introduce our May winner – Curt Gardner



**Q: What made you want to be a chemical engineer?**

**A:** I always had an interest in chemistry growing up (think of Gilbert Chemistry sets). I started out as a Chemistry major in college, but decided that the engineering aspects of Chemical Engineering were more interesting, so I switched majors in my Freshman year.

**Q: What school(s) you went to**

**A:** I attended the Colorado School of Mines in Golden, Colorado. I received a Bachelor of Science and a Master of Science degrees in Chemical and

Petroleum Refining Engineering from that school.

**Q: What kinds of jobs you've had**

**A:** I spent most of my career as a Process Engineer and later as a Process Engineering Manager at the former American Cyanamid, now BASF Corporation, chemical plant at Palmyra, Missouri, where I was involved with new plant and process startups, and process improvements. The last few years before I retired, I was a Senior Environmental Team Specialist responsible for assuring the above plant operated in compliance with environmental regulations. In retirement, I am working part time as a Senior Environmental Consultant for Trinity Consultants.

**Q: Where do you live?**

**A:** Quincy, Illinois

**Q: Why did you join the Virtual Local Section?**

**A:** I am a registered Professional Engineer in Missouri, and the VLS helps with continuing education credits I need to maintain my license. Beyond that, the information presented in the VLS helps me keep current with the developments in my field. And the webinars are really interesting!

**Q: Any hobbies that are connected to chemical engineering**

**A:** Not really-other than being an avid reader that enjoys reading about new technical developments in engineering.

## AIChE News

The AIChE hosts technical conferences around the world. Check [www.aiche.org/conferences](http://www.aiche.org/conferences) for registration and presentation information for this year's events.

Dates	Event
Aug 15-18	2022 Chemours Sponsored CCPS Faculty Workshop
Aug 21-25	26 <sup>th</sup> International Congress of Chemical and Process Engineering
Aug 15	Leadership Workshop for Rising Star Women Engineers
Aug 21-25	26 <sup>th</sup> International Congress of Chemical and Process Engineering
Sep 7	CCPS Pharma, Food, and Fine Chemicals Meeting
Sep 8	7 <sup>th</sup> CCPS Canadian Regional Meeting
Sep 12-15	66 <sup>th</sup> Annual Safety in Ammonia Plants and Related Facilities Symposium
Sep 14-15	Synthesis and Operability Strategies for Computer Aided Process Intensification
Sep 14-15	2022 Ethylene Middle East Technology Conference
Sep 20-22	2022 Center for Hydrogen Safety Americas Conference
Sep 21-23	2022 Industry 4.0: Digital Transformation Conference
Sep 22	September 2022 TSC Meeting
Sep 27-28	4 <sup>th</sup> CCPS Middle East Process Safety Conference
Sep 28-30	8 <sup>th</sup> Conference on Constraint-Based Reconstruction and Analysis
Sep 29-30	14 <sup>th</sup> AIChE Southwest Process Technology Conference

## Upcoming VLS Meetings

The VLS has monthly meetings. The following meetings have firm dates and speakers.

Dates	Topic
Aug 24-25 2022	Boost Green and Sustainable Chemical Development with AI
Sep 28-29 2022	Waste Biomass Digestion to Make Biofuels
Oct 26-27 2022	Converting CO <sub>2</sub> to Ethylene
Nov 16-17 2022	Process Development/Process Modeling Tools
Dec 14-15 2022	Holiday Social
Jan 25-26 2023	Process Modeling of Adsorption Processes
Feb 22-23 2023	Student Competition

## Past VLS Meetings

The VLS records its monthly meetings and archives them on the AIChE Academy website in case you missed a meeting or are looking for a particular topic. See below for current recordings. To view a recording as a VLS member, click on the link to go to the recording. Checkout and use the "Purchase with Money" option. The cost should show as \$0.00. Purchase the recording.

Date	Event
Jun 2022	<a href="#"><u>Automation Cybersecurity: Connectivity's Double-Edged Sword</u></a>
May 2022	<a href="#"><u>Evaluating our Assumptions: The Need for Diverse Perspectives</u></a>
Apr 2022	<a href="#"><u>Lessons on Incident Investigations</u></a>
Mar 2022	<a href="#"><u>Converting CO<sub>2</sub> into useful products?? What's up with that??</u></a>
Feb 2022	<a href="#"><u>2022 Student Co-Op and Internship Competition hosted by Noah Meeks</u></a>
Jan 2022	<a href="#"><u>Biomimicry: Green Chemistry Innovations Inspired by Nature</u></a>
Nov 2021	<a href="#"><u>Reimagining Energy and the Case for Greening Companies</u></a>
Oct 2021	<a href="#"><u>Don't Wake Sleeping Dragons: Managing Often-Overlooked Ignition Hazards</u></a>
Sep 2021	<a href="#"><u>Beyond Unconscious Bias Training: What Works?</u></a>
Aug 2021	<a href="#"><u>How can nuclear energy help fight climate change?</u></a>
Jul 2021	<a href="#"><u>Automation of Process Simulation and Data Analytics with MATLAB</u></a>
Jun 2021	<a href="#"><u>Chemical Fuels in Carbon Neutral Energy system</u></a>
Apr 2021	<a href="#"><u>Impactful Online Meetings</u></a>
Mar 2021	<a href="#"><u>AI Deployment in Refinery Operations</u></a>
Feb 2021	<a href="#"><u>Overcoming the Challenge of Applying Chemical Engineering Principles to the Art of Winemaking</u></a>
Jan 2021	<a href="#"><u>DIERS Technology Fundamentals II: VLS January 2021 Webinar</u></a>
Nov 2020	<a href="#"><u>Protecting Lives and Livelihood: Hazardous Materials Classification and its Impact to the Supply Chain</u></a>
Oct 2020	<a href="#"><u>Chemical Safety Board (CSB) Accidental Release Reporting Rule</u></a>
Sep 2020	<a href="#"><u>Internships and Undergraduate Education</u></a>
Aug 2020	<a href="#"><u>Physical Property Models to Design Better Chemical Products</u></a>
Jul 2020	<a href="#"><u>Julia - A Fresh Approach to Technical Computing</u></a>
Jun 2020	<a href="#"><u>The Next Digital Leap to AI (An Interactive Webinar)</u></a>
May 2020	<a href="#"><u>Challenges and Benefits of Remote Operator Training using Cloud-Deployed High-Fidelity, First-Principles Based Standard Operator Training Simulators (SOTS)</u></a>
Apr 2020	<a href="#"><u>NASEM Chemical Engineering in the 21st Century Study: Give your input!</u></a>
Mar 2020	<a href="#"><u>Is Your Focus Your Magic!</u></a>
Feb 2020	<a href="#"><u>DIERS data/standards in HAZOPS of two phase flow</u></a>
Jan 2020	<a href="#"><u>A Brief History of Measurement</u></a>
Nov 2019	<a href="#"><u>Using Thermal Imaging to Guard Industrial Facilities</u></a>
Oct 2019	<a href="#"><u>Python for chemical engineers: Getting started</u></a>
Aug 2019	<a href="#"><u>Reactive Chemical Hazards</u></a>
Jul 2019	<a href="#"><u>Should I Py or Should I Fortran?</u></a>
Jun 2019	<a href="#"><u>Design Considerations for Organic Electronic Materials and Devices</u></a>
May 2019	<a href="#"><u>Why Can't You Compete Without Virtual/Augmented Reality in Your Plant</u></a>
Apr 2019	<a href="#"><u>The Chemistry of Bourbon: The "spirit" of molecules</u></a>
Mar 2019	<a href="#"><u>Demystifying Professional Engineering Licensure and How to Put it to Work for you</u></a>
Feb 2019	<a href="#"><u>Municipal Wastewater and Sludge Are a Resource, Not a Waste: Coping with Tightening Water Supplies and Limited Landfill Availability</u></a>

# Why should you run for a Virtual Local Section (VLS) leadership position?

**Paul Adamson, VLS Immediate Past Chair**

In the 2022 VLS election cycle, there are four positions open for election: Vice Chair, Treasurer, and two Director positions. Why would you want to serve in one of these roles?

You may see a specific area within VLS operations that you think could use improvement. In that case, you may want to serve as a Director, helping to continue our mission of providing membership with the best possible experience, whether it is programming, member care, social media, the newsletter, or another function.

Or you may have many years of successful leadership and management experience under your belt, and you want to give back to the VLS organization by running for the Vice Chair position and progressing up to Chair.

But what if you are a junior engineer or feel that you are lacking one or more soft skills? Serving in leadership of a professional organization is a great way to develop those capabilities that you may be missing (or just need a little sharpening). Your employer may offer occasional workshops on leadership and management skills, but a longer term and more substantial experience can be achieved by volunteering for a professional organization like VLS. For me personally, I was an officer in the United States Air Force with about 17 years of leadership and management experience when I first joined VLS leadership as a Director. I had countless hours of leadership and management training, but it was mostly targeted at specific roles within the military. Serving as a VLS Director and eventually as Chair helped me understand how my training and experiences could relate to life outside of the military. Also, the experience helped open my eyes to a few areas that could use some improvement.

Also, being an effective leader and team member requires you to be able to work with many different types of people from varying backgrounds. During my time in VLS leadership, there were a few people who were around for the whole time, but there was also significant turnover in key positions. I got experience adapting to different approaches to problem solving and leadership styles. As members changed, I had to learn how to develop new working relationships with these individuals who often had different styles from their predecessors. I came to understand that not only was I growing as a team member and leader, but VLS was growing and adapting in the process.

So please consider throwing your name in the hat for one of the open positions. If you would like to be a candidate, discuss the opportunities that are available, or learn more about what is like to serve in VLS leadership, please email me at [paul.adamson.01@gmail.com](mailto:paul.adamson.01@gmail.com).

## The Virtual Local Section's Executive Committee

### Officers

Chair:	<a href="#">Steve Treese</a>
Senior Vice Chair:	<a href="#">Mario Arredondo</a>
Vice Chair:	<a href="#">Hashim Al Hajji</a>
Immediate Past Chair:	<a href="#">Paul Adamson</a>
Secretary:	<a href="#">Laura Gimpelson</a>
Acting Treasurer:	<a href="#">Kirsten Rosselot</a>

### Directors

Member Care	<a href="#">Fred Fischl</a>
Programming	<a href="#">Kirsten Rosselot</a>
Newsletter	<a href="#">Shannon Brown</a>
Member Feedback	<a href="#">Andrew Riederer</a>
Publicity/Website	<a href="#">Paul Wissmann</a>
Student Competition	<a href="#">Marc Clithero</a>

## Did You Know?

You can visit [the VLS website](#) for more information on the Virtual Local Section's mission, activities, and membership. Also at this website, AIChE student members and VLS members can watch previous webinars for free.

## We're in this Together

The ongoing COVID-19 situation has provided us with a reminder that even in uncertain times, AIChE is a diverse community of people who lead, create, inspire and learn—together. AIChE is here to help. Knowing that many of our members are working virtually, AIChE has created this page to act as a hub for online content, access to communities, and communication updates. [Learn more.](#)

## Subscription Information

Current fully paid members of the Virtual Local Section receive this newsletter. If you wish to update your email address, contact the AIChE's New York Office for Permanent Address Corrections at [xpress@aiiche.org](mailto:xpress@aiiche.org) or 1-800-242-4363.

## Continuing Education Credits

Members of AIChE can receive 1 hour of continuing education/professional development credit for attending Virtual Local Section webinars. Send your name, the certificate number on your professional engineer's license, and the licensing entity (state or country) in which you are licensed to our Secretary, [lg\\_environmental@bellsouth.net](mailto:lg_environmental@bellsouth.net), to receive one hour of continuing education credit for attending this meeting.