



virtuAIChE®

This month's meeting:

*Primary (with live discussion/live chat) Wednesday, Jan 20 at 9 pm ET (US) / 1 am GMT
Alternate 1 (with live discussion/live chat) Thursday, Jan 21 at 6 am ET (US) / 10 am GMT
Alternate 2 (with live discussion/live chat) Thursday, Jan 21 at 1 pm ET (US) / 5 pm GMT*

DIERS Technology Fundamentals II

Presented by Georges A. Melhem, Ph.D.

President and Chief Executive Officer of ioMosaic

Prevention of accidental releases begins with a thorough understanding of process chemistry and emergency relief system design strategies. The AIChE Design Institute for Emergency Relief Systems (DIERS) was formed on this mandate in 1976 and has developed relief and effluent handling systems design and evaluation methods now used worldwide. This webinar is the second installment of DIERS Technology Fundamentals. The session will cover runaway reactions characterization methods and provide a useful summary of thermal stability indicators. A quick overview of two-phase flow methods is presented. Methods for sizing relief systems for runaway reactions are also discussed.

Georges A. Melhem, Ph.D., FAIChE is President and Chief Executive Officer of ioMosaic, and is an internationally known expert in the areas of pressure relief and flare systems design, chemical reaction systems, process safety, and risk analysis. As the founder of ioMosaic Corporation, he has over 30 years of engineering and process safety experience, and has participated in numerous risk management, consequence analysis, and quantitative risk assessment studies for commercial and government clients. He currently serves the Vice Chair/Secretary for DIERS and he has been active in the organization for over 20 years.



Dr. Melhem has provided litigation support and expert witness testimony to domestic and international cases including disputes over recognized and generally accepted good engineering practices (RAGAGEP), design practices for flare systems and effluent handling, and numerous major fire and explosion events. Dr. Melhem is also the author/co-author of multiple books, many technical papers and presentations, and hundreds of technical reports regarding various aspects of risk assessment.

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

January Meeting Registration Information

Primary	Alternate 1	Alternate 2
(Live Presentation/Live Chat)	(Recorded Presentation/Live Chat)	(Recorded Presentation/Live Chat)
Jan 20 at 9 PM EST / 1 AM GMT	Jan 21 at 6 AM EST / 10 AM GMT	Jan 21 at 1 PM EST / 5 PM GMT
Register in advance for the Primary Meeting	Register in advance for the Alternate 1 Meeting	Register in advance for the Alternate 2 Meeting

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

Introducing Our October 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 October winner – Alexandra R. Ccaman.



Q: : what school did you go to?

A I did my higher studies in the Universidad Nacional del Altiplano – Perú. I tell you it was one of the most beautiful experiences of my life

Q: What kind of jobs have you held?

A Jobs in a quality control laboratory. Where water, soil and food analysis tests were carried out. A pleasant experience. Then I worked as an assistant in safety, occupational health, and environment. In a mining cooperative.

Q: Where do you live?

A: I live in the city of Lima, like any capital, a busy place, but that does not mean that it has a little of all of Peru, it is like having a small piece of each city and I am happy have been born in such a beautiful country with so much to try. I am 25 years old and I can say that I have many places in my country to visit ahead.

Q: Why did you join the Virtual Local Section?

A: I really like learning new things. I really want to meet new people and learn from their experiences, learning from them is something that is fascinating to me that is why I dared to enroll in the Virtual Local Section, I am excited that we can talk with people who are on the other side of the world, that of course without technology it would not be possible.

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.](#)

Pittsburgh Zoo & PPG Aquarium Provides Food To Zoo In Need Amid Coronavirus Pandemic

The Pittsburgh Zoo & PPG Aquarium provided food to a zoo in need during the coronavirus pandemic. The zoo delivered more than 600 bales of hay to the African Safari Wildlife Park in Ohio. [Review here.](#)

Career Search Section

Looking to help our community, we will share regularly a set of tips and some resources from OnCareerSuccess that will help our community.

The Workplace Landscape For Mid-Career Professionals

by Dr. Lucia Feng, President & CEO
OnCareerSuccess Inc.

For a working person in the 21st Century, changes in the workplace and work trends make it a jungle gym out there for managing one's career and career progression. A typical 22-year old college graduate joining the workforce today is expected to work about 45 years until retirement at age 67 years old. During this approximately 45-year working career, the average working professional is expected to change jobs 5-15 times. The traditional way of career success in the 20th century by advancing your career in the iconic corporate ladder format at the same company and in the same field is increasingly unlikely. Instead, your career path in the 21st century could look more like climbing in a jungle gym: not necessary to stay in one field but adapt and take diverse different paths to explore new opportunities, deliver new product or service solutions, and then bring your experience and knowledge to move on to new challenges while climbing up on the career ladder.

Concurrently, the world of work for businesses is changing, and the workplace sees accelerated changes due to globalization, increased innovations such as automation and artificial intelligence, and a shorter development cycle time. Companies are embracing the "agile workforce" model with greater regularity in a shift in the long-standing relationship between employers and the workforce. Compared to ten years ago, half of the respondents in a 2019 Harris Poll [1] said their employers see employees as more expendable, and 56% saw employers as less loyal to employees. In a report entitled "Illuminating the Shadow Workforce: Insights into the Gig Workforce in Businesses" released by ADP in February 2020 [2], the study reports the share of independent workers, or contractors, has risen to 16.4% from 14.2% of the workforce in the ten-year period 2010 - 2019. Representing a 15% jump, the share of independent workers now numbers 1 in 6 workers in corporations.

In contrast to the popular conventional (mis)perception that independent workers are younger members of the workforce who may not be skilled, the ADP study found 30% of independent workers are aged 55 or older who are higher or highly skilled and find work based on their skill set. Making up 20% of the total flexible workforce, this group of 55 sees working is a choice rather out of financial necessity and that the work gives them purpose. Additionally, Millennials, born between 1981 and 1997 who now are the largest workforce generation numbering 56 million in the U.S. and represent at least 20% of leadership positions as of 2016, especially value flexibility over traditional employment [3]. A Harris Poll survey done on behalf of TD Ameritrade in February 2019 found 60% of Americans said the new American dream is to work whenever and where you want, and that the on-demand workforce (freelancers) are reporting a higher quality of life, higher level of happiness and lower level of stress.

To attract and retain talent, companies are now opened to new workplace arrangements that include remote working (even before the COVID-19 pandemic) and hiring independent workers for critical work which traditionally would require regular employees to do. The dynamics of these workforce trends, globalization and technology innovations, rapid corporate costing cutting in response to business cycles, all point to the increasing use of independent workers in the workforce is here to stay in the future of work.

The COVID-19 pandemic-induced economic slowdown further accelerates corporate scaling of workforce that included involuntary layoff and the use of technology to create a virtual and distributed workplace by hiring independent contractors, and employees, at lower cost regions to do the work.

Another noteworthy trend is a working professional facing more frequent involuntary job change due to sustained cost cutting measures, acquisition or corporate restructuring. There are abundant anecdotes about individuals required to “reapply” for their own jobs in Fortune 100 to small companies – wherein the “same” job has been changed to a lower grade level with accompanying lower compensation while responsibilities and scope of work increased. Individuals who “reapplied” but not selected for the jobs now face unemployment with little time to prepare. For many of these employed professionals who are typically at the Mid-Career level, it has been many years since they last applied and interviewed for a job. Changes that occur in the talent management industry - such as the use of Applicant Tracking Systems (ATS), LinkedIn, increased competition as jobs are posted online available to national and international competition – become obstacles to successful job search. Other factors, pervasive but not discussed, include potential age discrimination can also come into play for the working professional now turned into a job seeker. These same obstacles are also faced by employed professionals who are interested in applying for a new or a better job. Hence it is important for Mid-Career professionals to have on-demand access to up-to-date credible and proven expert-developed fundamental job search essentials knowledge to compete for a job confidently and successfully.

Following is the second part of a series of Webinars to support you on your job search:

2. “Critical Components of an Effective Resume”

Direct link to password-protected page:

[Critical Components of an Effective Resume Live Webinar AICHe 2020-10-28 \(oncareersuccess.com\)](#)

Case-sensitive password: NorCalAICHe

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.

Date	Event
Nov 2020	Protecting Lives and Livelihood: Hazardous Materials Classification and its Impact to the Supply Chain
Oct 2020	Chemical Safety Board (CSB) Accidental Release Reporting Rule
Sep 2020	September VLS Meeting - Internships and Undergraduate Education
Aug 2020	Physical Property Models to Design Better Chemical Products
Jul 2020	Julia - A Fresh Approach to Technical Computing
Jun 2020	The Next Digital Leap to AI (An Interactive Webinar)
May 2020	Challenges and Benefits of Remote Operator Training using Cloud-Deployed High-Fidelity, First-Principles Based Standard Operator Training Simulators (SOTS)
Apr 2020	NASEM Chemical Engineering in the 21st Century Study: Give your input!
Mar 2020	Is Your Focus Your Magic!
Feb 2020	DIERS data/standards in HAZOPS of two phase flow
Jan 2020	A Brief History of Measurement
Nov 2019	Using Thermal Imaging to Guard Industrial Facilities
Oct 2019	Python for chemical engineers: Getting started
Aug 2019	Reactive Chemical Hazards
Jul 2019	Should I Py or Should I Fortran?
Jun 2019	Design Considerations for Organic Electronic Materials and Devices
May 2019	Why Can't You Compete Without Virtual/Augmented Reality in Your Plant
Apr 2019	The Chemistry of Bourbon: The "spirit" of molecules
Mar 2019	Demystifying Professional Engineering Licensure and How to Put it to Work for you
Feb 2019	Municipal Wastewater and Sludge Are a Resource, Not a Waste: Coping with Tightening Water Supplies and Limited Landfill Availability

AIChE News

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

Dates	Event
Jan 6 – 9	ICBE 2021 – 11 th International Conference on Biomolecular Engineering
Jan 13	RAPID Technology Showcase> Johnson Matthey
Jan 13	Don't be Blind 'Sited': Facility Siting Insights
Jan 20	Process Intensification and Process Scale-up: Gaps and Opportunities
Jan 26	RAPID Tehcnology Showcase Featuring RAPID's Software Toolbox
Jan 28	Modeling and Simulation of Fuel Cells and Electrolyzers
Feb 2	CCPS India Regional Members (Virtual) meeting
Feb 3	Distributed Processing Series: Taking Advantage of Feedstocks
Feb 10 – 12	Food Energy-Water Nexus
Feb 17	CCPS February 2021 TSC Meeting
Feb 17	Virtual RAPID Info Session

Upcoming VLS Meetings

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

Dates	Topic
February 2021	Understanding wine: the role of yeast in phenol production during fermentation
March 2021	The Application of AI in Chemical processing

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.

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, [Laura Gimpelson](#), to receive one hour of continuing education credit for attending this meeting.

The Virtual Local Section's Executive Committee Officers

Chair:	Paul Adamson
Senior Vice Chair:	Aaron Sarafinas
Vice Chair:	Steve Treese
Immediate Past Chair:	Dan Lambert
Secretary:	Laura Gimpelson
Treasurer:	Jennifer Brand
Directors	
Member Care	Fred Fischl
Publicity	Paul Wissmann
Newsletter	Mario Arredondo
Programming	Scott Clarke
	Kirsten Rosselot
Member Feedback	Richard Evans

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 or 1-800-242-4363