



*virtu*AIChE®

This month's meeting:

*Primary (with live discussion/live chat) Wednesday, September 28 at 9 pm ET (US) / 1 am GMT
Alternate 1 (with live discussion/live chat) Thursday, September 29 at 7 am ET (US) / 11 am GMT
Alternate 2 (with live discussion/live chat) Thursday, September 29 at 1 pm ET (US) / 5 pm GMT*

ANAEROBIC DIGESTION: SUSTAINABILITY THROUGH ORGANIC WASTE MANAGEMENT

By: Dana M. Kirk, Ph.D., P.E.



Anaerobic digestion is a tool for addressing sustainability goals through organic waste management. Organic waste is generated from a number of sources ranging from livestock farms, residential food waste, municipal wastewater sludge, and industrial food processing. Traditionally anaerobic digestion

was a means to cost effective and energy efficient sludge stabilization. Today the technology is viewed as an opportunity to reduce carbon emissions and generate renewable energy (electric and gas) and fertilizer from an array of organic waste streams. This discussion will provide an overview of the current trends related to anaerobic digestion implementation.



Dana is associate professor in Biosystems and Agricultural Engineering at Michigan State University and a licensed professional engineer in the State of Michigan. He is the Undergraduate Program Director in Biosystems Engineering and the faculty supervisor of the MSU South Campus Anaerobic Digester. Prior to joining MSU, he worked as a consulting engineer with production agriculture to address environmental challenges. His involvement with food waste and anaerobic digestion includes conducting BMP's on over 1,500 substrates, numerous feasibility studies on community food waste collection, and technical support on anaerobic digester design and operation.

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

September Meeting Registration Information

Primary

(Live Presentation/Live Chat)
September 28 at 9 PM EST / 1 AM
GMT

Register in advance for the
[Primary Meeting](#)

Alternate 1

(Recorded Presentation/Live Chat)
September 29 at 7 AM EST / 10 AM
GMT

Register in advance for the
[Alternate 1 Meeting](#)

Alternate 2

(Recorded Presentation/Live Chat)
September 29 at 1 PM EST / 5 PM
GMT

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 June 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 June winner – Anthony Fregosi



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

A: Like many kids, my parents were a great influence growing up. My father was a Civil Engineer, and while I wanted to go into engineering, the field of civil engineering did not spark my imagination despite a love of blocks and Legos growing up. I did enjoy chemistry a fact many of high school classmates found baffling. When I found out, I could combine the love of chemistry with engineering – that was it! I never looked at any other career choice.

Q: What school(s) you went to

A: My selection of school's in large part was driven by the loss of my parents at an early age.

Palm Beach Community College (Pre-Engineering Track).

Georgia Institute of Technology – Course Work.

Graduated from the University of Florida – GO GATORS!

Q: What kind of jobs have you had?

A: My first job with any ties to chemical engineering was as a high school intern at a local paint manufacturer as a lab technician performing quality tests.

During my “off” time between Georgia Tech. and the University of Florida, I worked in the City of West Palm Beach engineering department as a “Rodman/Chainman” on the survey crew.

My first “real” assignment as a chemical engineer was at the mining operation of a fertilizer manufacturer. My assignment to the mine-testing lab involved determining the correct “flotation” chemical feed needed in the beneficiation unit for a given ore feed. My following assignment was as the process/production engineer at twin sulfuric acid plants and turbo-generator.

I then transferred to the company I work for today as the process engineer for a sulfuric acid plant undergoing conversion to a “spent acid” feed plant. My next assignment was to the methanol plant as the process safety coordinator. Followed by an assignment to the acrylonitrile plant as the process safety coordinator. My following assignment was to the site's urea/melamine plants as the process safety and environmental coordinator. This lead to my assignment to the site IT group as the system administrator for the process data historian. I currently have an assignment with the process technology team maintaining my role as the Sys. Admin. for the data historian with an interest in championing the sites implementation of “Industry 4.0” digitalization concepts.

Q: Where do you live?

A: I started my career in White Springs, Florida just north of the somewhat small (when was there) city of Lake City. I have now lived in Kenner, Louisiana a suburb of New Orleans for the past 30 years.

Q: Why did you join the Virtual Local Section?

A: Through my association with AICHe, I came to know and work with Dan Lambert one of several who supported the founding of the VLS. He told me about the section and although I multiple sections in close proximity, I thought the added benefit of being a member of the VLS is the opportunity to get content not available in my area and to increase exposure to a wider “global” network of chemical engineers.

Q: Any hobbies that are connected to chemical engineering?

A: I have many interests over the years, including Photography, SCUBA diving and Snow Skiing.

However, my association with AICHe has been the most rewarding. Joining the University of Florida Student Chapter. Upon graduation, I immediately became a member of the Peninsular Florida Local Section. When I moved to New Orleans, I became a member of the New Orleans Local Section (Third Oldest in the Institute). I have enjoyed holding many positions at the local and institute levels. I am very proud of my election to the membership grade of Fellow in 2013.

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
Sep 20-22	2022 Center for Hydrogen Safety Americas Conference
Sep 22	September 2022 TSC Meeting
Sep 27-28	4 th CCPS Middle East Process Safety Conference
Sep 28-30	8 th Conference on Constraint-Based Reconstruction and Analysis
Sep 29-30	14 th AICHe Southwest Process Technology Conference
Oct 7-8	Diversity and Equity Accelerator through Learning for Startups
Oct 7-9	8 th International Conference on Stem Cell Engineering 2022
Oct 11-12	2022 Global Conference on Process Safety and Big Data
Oct 17-19	2022 DIERS Fall Meeting
Oct 18-20	9 th CCPS Latin American Conference on Process Safety
Oct 19-20	SPE/AICHe Workshop: Flow Assurance Best Practices for Today, Challenges for the Future
Oct 26-28	4 th Battery and Energy Storage Conference
Oct 27-29	6 th International Conference on Epigenetics and Bioengineering
Oct 31 – Nov 2	5 th International Conference on CRISPR Technologies

Upcoming VLS Meetings

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

Dates	Topic
Sep 28-29 2022	Anaerobic Digestion: Sustainability through Organic Waste Management
Oct 26-27 2022	Decarbonization of chemical manufacturing by CO ₂ electrolysis
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	Automation Cybersecurity: Connectivity's Double-Edged Sword
May 2022	Evaluating our Assumptions: The Need for Diverse Perspectives
Apr 2022	Lessons on Incident Investigations
Mar 2022	Converting CO₂ into useful products?? What's up with that??
Feb 2022	2022 Student Co-Op and Internship Competition hosted by Noah Meeks
Jan 2022	Biomimicry: Green Chemistry Innovations Inspired by Nature
Nov 2021	Reimagining Energy and the Case for Greening Companies
Oct 2021	Don't Wake Sleeping Dragons: Managing Often-Overlooked Ignition Hazards
Sep 2021	Beyond Unconscious Bias Training: What Works?
Aug 2021	How can nuclear energy help fight climate change?
Jul 2021	Automation of Process Simulation and Data Analytics with MATLAB
Jun 2021	Chemical Fuels in Carbon Neutral Energy system
Apr 2021	Impactful Online Meetings
Mar 2021	AI Deployment in Refinery Operations
Feb 2021	Overcoming the Challenge of Applying Chemical Engineering Principles to the Art of Winemaking
Jan 2021	DIERS Technology Fundamentals II: VLS January 2021 Webinar
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	Internships and Undergraduate Education
Aug 2020	Physical Property Models to Design Better Chemical Products
Jul 2020	Julia - A Fresh Approach to Technical Computing

Date	Event
Jun 2020	<u>The Next Digital Leap to AI (An Interactive Webinar)</u>
May 2020	<u>Challenges and Benefits of Remote Operator Training using Cloud-Deployed High-Fidelity, First-Principles Based Standard Operator Training Simulators (SOTS)</u>
Apr 2020	<u>NASEM Chemical Engineering in the 21st Century Study: Give your input!</u>
Mar 2020	<u>Is Your Focus Your Magic!</u>
Feb 2020	<u>DIERS data/standards in HAZOPS of two phase flow</u>
Jan 2020	<u>A Brief History of Measurement</u>
Nov 2019	<u>Using Thermal Imaging to Guard Industrial Facilities</u>
Oct 2019	<u>Python for chemical engineers: Getting started</u>
Aug 2019	<u>Reactive Chemical Hazards</u>
Jul 2019	<u>Should I Py or Should I Fortran?</u>
Jun 2019	<u>Design Considerations for Organic Electronic Materials and Devices</u>
May 2019	<u>Why Can't You Compete Without Virtual/Augmented Reality in Your Plant</u>
Apr 2019	<u>The Chemistry of Bourbon: The "spirit" of molecules</u>
Mar 2019	<u>Demystifying Professional Engineering Licensure and How to Put it to Work for you</u>
Feb 2019	<u>Municipal Wastewater and Sludge Are a Resource, Not a Waste: Coping with Tightening Water Supplies and Limited Landfill Availability</u>

The Virtual Local Section's Executive Committee

Officers

Chair:	Steve Treese
Senior Vice Chair:	open
Vice Chair:	Hashim Al Hajji
Immediate Past Chair:	Paul Adamson
Secretary:	Laura Gimpelson
Acting Treasurer:	Kirsten Rosselot

Directors

Member Care	Fred Fischl
Programming	Kirsten Rosselot
Newsletter	Shannon Brown
Member Feedback	Andrew Riederer
Publicity/Website	Paul Wissmann
Student Competition	Marc Clithero

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@aiche.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, to receive one hour of continuing education credit for attending this meeting.