

The V-letter

MONTHLY NEWSLETTER OF THE VIRTUAL LOCAL SECTION OF AIChE

JUNE 2018 - VOLUME 8, ISSUE 6



this issue

Monthly Meeting P.1

Student Paper Contest P. 2

Section Announcements P. 3

Section Information P.4

Meeting Begins 9:00 pm EDST/ 8:00 pm CDST/ 7:00 pm MDST/ 6:00 pm PDST

Thursday, June 28, 2018

Using Process Plant Digital Twins to Drive Operational Excellence

by

Tim Shire

KBC (A Yokogawa Company)

Operational Excellence results from making better decisions, faster, and then perfectly and consistently executing those decisions. In this paper, we discuss how using a Digital Twin for unit monitoring has been successfully applied to crude distillation units. Digital Twin-based monitoring enhances traditional unit performance monitoring by providing governance of data quality based on fundamental physical and chemical laws. In addition the simulation provides a richer set of analytic data which is more meaningful than raw measurements (for instance exchanger fouling factors and column performance parameters, instead of raw temperatures, pressures and flows), this allows the end users to make more insightful operational and maintenance decisions.

We will discuss what it takes to build a Digital Twin, and in particular the key factors that make a Digital Twin different to a traditional process simulation.

The WebEx meeting invitation has been sent to all VLS members, or you can click the link below:

[Join WebEx meeting](#)

Meeting number (access code): 639 038 693

If you cannot login, please use one of the following phone numbers:

1-866-469-3239 (Toll free in United States and Canada)

1-650-429-3300 (Toll number in United States and Canada)

Send your name and PE state and number to lg_environmental@bellsouth.net to receive one hour of continuing education credit.

Student Co-op and Internship Presentation Competition

Did you enjoy your time as an intern or co-op, and work on a unique or exciting project? Then enter for a chance to share your experience, practice your presentation skills, and win great awards!

Prizes:

- \$500 1st place
- \$250 2nd place
- \$150 3rd place

Participants must meet the following qualifications:

- Undergraduate ChemE students (graduating Dec 2018 or later)
- Co-op, spring, or summer 2018 intern students
- Teams of 2 students are permitted if both meet qualifications

Students should present their original work done during the co-op or summer internship. Students should receive their mentors' approval before submitting an abstract. Students must be available to present on **September 27, 2018 at 8:30 PM** Eastern Daylight Time (USA) with a microphone and internet connection.

Presentations should be less than 10 minutes and will be judged by practicing chemical engineers and AIChE VLS members, based on:

- application/demonstration of chemical engineering principles to students' work
- understanding of process and/or chemistry
- clarity/appearance of slides and presentation
- understanding how student's work is used/applied/extended into other applications/industries
- ability to answer questions

Timeline:

- 8/1 - abstracts due online
- 8/20 - students notified of acceptance
- 9/17 - Presentations due
- 9/17-9/24 - Recommended "dry run" to test WebEx connections
- 9/27 - Presentations and Awards

The submission form is available online at <http://virtual.iche.org>. Submit questions to Noah Meeks, Past Chair, at NoahChemE@icloud.com

Future Webinar Topics

July 26, 2018

Multiphysics Modeling

August 16, 2018

Atomically Precise Manufacturing

Sept 27, 2018

Student Internship Presentation/Competition

NATIONAL NEWS

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

Dates	Location
June 24-28	Metabolic Engineering 12 (SBE) Munich, Germany
June 24 – 28	North American Mixing Forum Conference San Juan, Puerto Rico
August 12-14	2nd Natural Gas Utilization Workshop College Station, Texas
Sep 16-20	63th Ammonia Plant Safety Symposium Toronto, Ontario, Canada
Oct 26-29	Annual AIChE Student Conference Pittsburgh, Pennsylvania
Oct 28 – Nov 2	2018 AIChE Annual Meeting Pittsburgh, Pennsylvania
Nov 4-6	International Conference on Microbiome Engineering Boston MA
Dec 2-4	Food Innovation and Engineering (FOODIE) Conference Napa, California
March 31 - April 4	2019 Spring National Meeting New Orleans, Louisiana

Volunteers are needed to help run the section. You can exercise your current skills or learn new skills. Our most critical need is for help in preparing the monthly newsletter or managing one of our social media platforms. If you are interested in volunteering in one of these areas or one of your own choice, please contact the VLS Volunteer Recruiter at lg_environmental@bellsouth.net.

Section Announcement

The Leadership Team is pleased to announce section dues will remain at \$10 per year for 2019 fiscal year.

CALL FOR NOMINATIONS

The Nominating Committee is looking for section members to run for chair-elect, treasurer and two open director positions. If you are interested in running for one of these positions, contact Dan Miller at millerd54@comcast.net

Help Wanted

Process/Chemical Engineer – St. Louis, MO

A client with Randstad, USA is looking for a Process Engineer with a BS/MS in Chemical Engineering with 3 to 5 yrs experience in a GMP regulated facility located in the St. Louis, MO area. More information is at www.randstaduse.com.

R&D Chemical Engineer – Orlando FL

Helicon Chemical Company is looking for several research chemical engineers to join small and growing team at an early stage nanotechnology company to develop and commercialize novel composites, surface-active materials, and nanomaterials. Candidates must have a Masters or doctorate in a chemical engineering field and be a US citizen. More information is on the AIChE job board at www.carreerengineer.aiche.org.



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SECTION OFFICERS

Chair:	Sabine Brueske sbrueske@energetics.com
Vice Chair:	Arian Aghajanzadeh AAghajanzadeh@lbl.gov
Secretary:	Laura Gimpelson, P.E. lg_envrionmental@bellsouth.net
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Director 2:	Paul Shuey paul_c_shuey@hotmail.com
Director 3:	Open (Expires 12/31/2018)
Director 4:	Walter Goldstein GoldConsul@aol.com
Director 5:	Dan Miller millerd54@comcast.net
Director 6:	Paul Adamson paul.adamson.01@gmail.com

Attendance at a Virtual Section Meeting is open to AIChE Virtual Local Section Members, AIChE members and interested persons. Attendees are required to log into

<http://virtual.aiche.org/content/join>

to receive the login link and password.

Visit <http://virtual.aiche.org> for more information on AIChE Virtual Section missions, activities and membership.

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