



*virtu*AIChE®

This month's meeting:

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

Using Thermal Imaging to Guard Industrial Facilities

presented by Dr. Ram Hashmonay and Mr. Eran Bluestein

Early detection prevents disaster. Perimeter breach, terrorism, drone intrusion, hazardous leaks, fire... Whether the danger is inbound or outbound, catastrophic incidents in critical infrastructure and industrial plants may cause irreparable damage to the surrounding environment, to invaluable property, and cost precious lives. Thermal imaging solutions offer 24/7 all-weather monitoring, using advanced analytics to alert of potential threats. They provide environmental protection in the most literal sense of the word.

Dr. Ram Hashmonay is the Principal Innovation Scientist at Opgal Optronic Industries Ltd. Israel, as well as an entrepreneurial strategic industrial air quality consultant. An international expert in the development and implementation of optical remote sensing and other advanced air monitoring methodologies, Dr. Hashmonay is the co-inventor of the Radial Plume Mapping method (EPA Other Test Method 10, Optical Remote Sensing for Emission Characterization from Non-Point Sources). As Opgal Optronic Industries' Asia-Pacific Sales Director, Mr. Eran Bluestein became well acquainted with the business climate of a wide range of technological fields in the defense, HLS, and security markets. His advanced knowledge of optical and thermal technology, as well as his in-depth experience in B2B and B2C service level agreements, have proven invaluable to the company. Since 2019, Eran serves as Opgal's Business Development Director.

This meeting is free and open to all, not just to Virtual Local Section members. See the next page for join instructions and add-to-calendar links.

November Meeting Join Instructions and Add-to-Calendar Links

Primary

(Live Webinar/Live Chat)
Nov 20 at 9 PM EST / 2 AM GMT

[Click here](#) and use meeting number (access code): 799 824 129 to log in.

To use telephone audio:

1-866-469-3239 Call-in toll-free number (US/Canada) or
+1-650-429-3300 Call-in toll number (US/Canada)

[Click here for global call-in numbers](#)

[Add this meeting to your calendar](#)

Alternate 1

(Pre-Recorded Webinar/Live Chat)
Nov 21 at 5 AM EST / 10 AM GMT

[Click here](#) and use meeting number (access code): 791 445 019 to log in.

To use telephone audio:

1-866-469-3239 Call-in toll-free number (US/Canada) or
+1-650-429-3300 Call-in toll number (US/Canada)

[Click here for global call-in numbers](#)

[Add this meeting to your calendar](#)

Alternate 2

(Pre-Recorded Webinar/Live Chat)
Nov 21 at 1 PM EST / 6 PM GMT

[Click here](#) and use meeting number (access code): 790 296 014 to log in.

To use telephone audio:

1-866-469-3239 Call-in toll-free number (US/Canada) or
+1-650-429-3300 Call-in toll number (US/Canada)

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[Add this meeting to your calendar](#)

Daniel Seyedebrahimi Wins 5th Annual Student Competition

by Noah Meeks, Student Competition Coordinator

Daniel Seyedebrahimi, a ChemE student at UC Berkeley, won the recent Student Co-op and Internship Presentation Competition and was awarded \$500 by the VLS. His talk “Process Validation and Data Integrity” described his internship with Boehringer Ingelheim, during which he produced reports validating the process bioreactors to stakeholders, utilized and verified the Laboratory Information Management System (LIMS), and automated additional aspects of the data handling associated with purification.

Other top finishers were also awarded prizes and include:

- Noah Seiler, University of Buffalo; intern at McGard
- Hannah Aspinwall, Johns Hopkins University; intern at IMEC
- Magdalena Hansen, Clemson University; intern at Savannah River National Lab

VLS hosts the Student Co-op and Internship Presentation Competition to commend the outstanding contributions of chemical engineering undergraduates to industry. Seyedebrahimi recognized the breadth of the industrial topics covered by the students, and wrote afterwards, “Seeing how other students studying the same curriculum as me utilize their education provides a valuable perspective regarding the possible areas that engineering concepts can be applied.”

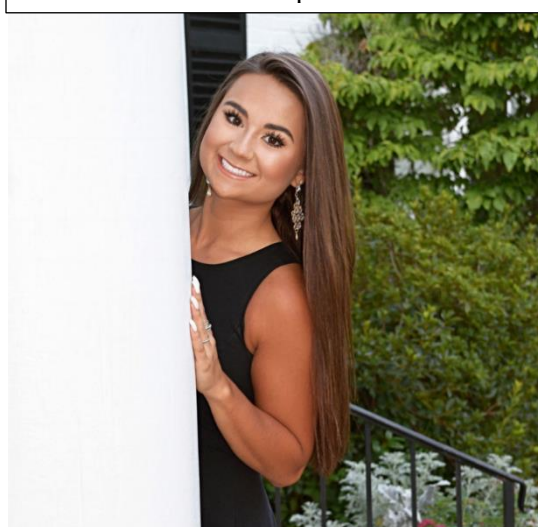
The competition also gave students needed presentation experience. Seiler wrote, “Through this competition, I learned a lot about condensing a large presentation, originally an hour long, into a brief summary for an audience unfamiliar with the exact topic.” Aspinwall





Noah Seiler

Hannah Aspinwall



Magdalena Hansen



echoed this benefit when she wrote, “Presenting in the Virtual Local Section helped me learn about contextualizing my work for a broader audience.”

Although web-based conference calling is common in industry, many students lack experience with these tools and the unique challenges of presenting virtually.

Hansen echoed all the finalists by describing the competition, “an eye-opening experience I thoroughly enjoyed”

The Student Co-op and Internship Presentation Competition fills a need by giving participating students presentation experience to talk about their industrial chemical engineering accomplishments. The competition was hosted at the VLS regular meeting in September, after a call for abstracts was published in the summer. VLS leadership selected finalists from among the received abstracts, and each finalist presented their work for 10 minutes. Several VLS leaders were judges and awards were presented at the program conclusion.



Introducing Our September 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 September winner – Hugh James.



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

A: When starting university I knew I liked science, mathematics, technology, and business. My father was a lawyer and wanted me to be one too. What to major in? A friend showed me a publication by AIChE that said chemical engineering uses science, mathematics, technology, and business to make a better world taking into consideration many different legal aspects. I signed up and have had no regrets.

Q: What school(s) did you go to?

A: I got a BS and ME in Chemical Engineering at Texas A&M University and a doctoral level Chemical Engineering Degree with an MBA equivalent at MIT.

Q: What kinds of jobs have you held?

A: I've worked for everything from small, startup companies to large operations with more than \$3 billion of assets in oil & gas, energy, mining, and infrastructure. In 2000, I began providing consulting and interim executive services with assignments inside and outside the United States. My experience has included rapid turnarounds involving complex political, regulatory, and economic environments based on my experiences gathered on four continents. I have also advised law firms on litigations and arbitrations and acted as an expert witness both inside and outside the US.

Q: Where do you live?

A: I currently live in St. Petersburg, FL on the edge of downtown in a home my wife and I designed and had constructed three years ago.

Q: Why did you join the Virtual Local Section?

A: Much of my career has been outside the United States covering every continent except Antarctica. When I moved back to the States in 2013, I went to a number of different local chapters of AIChE and other organizations while deciding where to settle down. I found these much less creative than some of the organizations I had experienced outside the United States. A friend at last year's AIChE National Meeting told me about VLS. I signed up and have enjoyed the meetings.

Q: Do you have any hobbies that are connected to chemical engineering?

A: I like technology and business startups. Over the last few years these have become a kind of hobby. All these activities have a chemical engineering component. The activity is not really a hobby; it's more of a learning experience. Real hobbies include travel, golf, reading, and enjoying the beaches in Florida. There's not much chemical engineering in any these.

DISCOVER ENGINEERS WEEK



FEBRUARY 16–22, 2020

by Laura Gimpelson, VLS Secretary

Each year more than 70 United States engineering, education, and cultural societies, and more than 50 corporations and government agencies celebrate being an engineer during the week of George Washington's birthday. In 2020, the week of February 16 – 22 had been declared "National Engineers Week" (Eweek) in the United States. Ireland (<http://www.engineersweek.ie/>) will celebrate Eweek the week of February 29 – March 6, 2020. Canada will honor engineers and engineering during the entire month of March (<https://nem-mng.ca/>). The website, <http://www.wfeo.org/engineersdays/>, tracks Eweek celebrations around world.

The goal of National Engineers Week (Eweek) is to promote engineering and the positive contributions engineers make to our lives especially at local schools and to the public. Depending on your location, events range from hosting competitions such Mathcounts, Future City, Robotics, Odyssey of the Mid, and Science and Engineering Fairs to honoring the top engineers, agencies and employers at banquets and dinners.

During my 40 plus years in the engineering field, I have judged science fair projects, introduced elementary, junior high and high schools students to environmental and chemical engineering, and organized award banquets to honor outstanding engineers and engineering projects.

My favorite event has been the "Introduce a Girl to Engineering" day. Using the process of baking cookies, I explain how engineers create the process, equipment and instructions to make millions of cookies each year. Even the safety department joins in by conducting a safety briefing on how to prevent burns, spills and fires when baking cookies at home. At the end of the day, most of the attendees including the chaperones and teachers understand engineering is more than building roads or power plants.

Another program that fits with being a virtual section is the Future City Completion. Even though I live about 250 miles (400 kilometers) from the nearest competition site, I can be a remote judge of the written presentations. For the 2019 Future City Competition, I reviewed 10 entries from the 6th -8th Grade level online using the guidance documents and scoring rubrics to record my scores. Some of the entries showed a true appreciation of the technical challenges to solving the problems a future city would face. Visit <http://discovere.org/our-programs/future-city> for more information on how to become a judge for the Future City Competition.

For information on the events in your location, check some of the websites listed below or contact your local engineering societies, school districts and private schools and governmental agencies for more information.

- www.aiche-metrony.org/Engineers/Week.html
- <https://www.facebook.com/EngineersWeek>
- www.futurecity.org
- www.discovere.org/our-programs/girl-day
- <https://msachieves.mdek12.org/2020-national-engineers-week-nasa>
- www.carnegiesciencecenter.org/calendar/event-details/?eventID=2187
- <https://www.ashrae.org/government-affairs/grassroots-advocacy/national-engineers-week-eweek>
- www.engineeringfamilyday.org
- www.dvewc.org/about
- www.new-sandiego.org/awards/outstandingengineer.html
- <https://www.army.mil/article/120306>
- www.wfeo.org/engineersdays (International Dates and host organizations)
- Australia: <https://www.facebook.com/EngineersAustralia>
- Canada: <http://www.nem-mng.ca/>
- India: <https://www.ieindia.org/en>
- Ireland: www.engineersweek.ie

National 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
Nov 6 - Nov 8	Polymers and Textiles conference 2019
Nov 8 - Nov 11	2019 Annual AIChE Student Conference
Nov 9 - Nov 10	Conference of Engineering Cosmetics and Consumer Products (ECCP 2019)
Nov 9 - Nov 10	Industrial Water Use and Reuse Workshop 2019
Nov 10 - Nov 15	2019 AIChE Annual Meeting
Nov 10	AIChE K-12 STEM Outreach Competition/Showcase
Nov 18 - Nov 20	2 nd Space Travel: Adaptive Research and Technologies from Biological and Chemical Engineering (STAR Tech)
Nov 21 – Nov 22	PD2M Future of Pharmaceutical Manufacturing Workshop
Dec 2 – Dec 4	2 nd International Conference on Microbiome Engineering
Dec 3	2019 AIChE Gala
Dec 4 – Dec 6	Cell Free Systems Conference
Dec 5 – Dec 6	2019 Food innovation and Engineering (FOODIE) Asia Conference
Dec 5 – Dec 6	Food – Energy – Water Nexus
Dec 8 - Dec 10	Optogenetic Technologies and Applications
Dec 8 – Dec 10	2019 Food innovation and Engineering (FOODIE) Conference
Dec 11 - Dec 13	7 th International Conference on Stem Cell Engineering 2019
Dec 12 – Dec 13	Engineering Sustainable Development 2019
Dec 12 – Dec 13	Solar Energy Systems Conference '19
Dec 16 – Dec 18	Sustainable Packaging Symposium 2019

The Future of Chemical Engineering

by Kirsten Rosselot, 2019 VLS Chair

The National Academies of Science, Engineering, and Medicine (NASEM) have begun a three-year study that will outline a vision for the chemical engineering discipline over the next 25 years. The study is expected to influence research, innovation, and education for chemical engineers for the next few decades.

As part of the information gathering stage of the study, NASEM is seeking input from chemical engineers. The Virtual Local Section's monthly meeting in April, led by Aaron Sarafinas, will be dedicated to capturing your thoughts regarding the future of chemical engineering.

You can read more about this study here <http://nas-sites.org/dels/studies/chemical-engineering-in-the-21st-century-challenges-and-opportunities>

The Virtual Local Section's Executive Committee

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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.

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

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 state in which you are licensed to our Secretary, [Laura Gimpelson](#), to receive one hour of continuing education credit for attending this meeting.