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**AUGUST MEETING: THE PRESIDENT-ELECT CANDIDATE DEBATE**

<https://aichelive.webex.com/aichelive/onstage/g.php?MTID=ef68d8add430041ba126bfe963940028a>

**WEDNESDAY, 31 AUGUST 2016**

**9:00 pm EDT, 8:00 pm CDT, 7:00 pm MDT, 6:00 pm PDT;**

**UTC/GMT 0100 31 August 2016**



The VLS continues its popular tradition of hosting an Institute-wide forum for the candidates for AIChE President-Elect. Please join us on **Wednesday, August 31<sup>th</sup>**, as candidates [Christine Seymour](#) (left) and [Liese Dallbauman](#) (right) discuss their visions for AIChE and the profession.



The candidates will address issues including their long-term visions for AIChE, interactions with other professional societies, and addressing differing needs of the broad and varied membership.

The AIChE Elections are not only for President-Elect. Candidates for the AIChE Treasurer and Directors are on the ballot which will be mailed on August 29. Electronic voting will begin on September 6 at [AIChE.Society.Election.com](http://AIChE.Society.Election.com). Instructions for electronic voting will be included

with the mail ballots and will also be emailed to members. Dues must be paid in full in order to vote. All ballots must be received by Oct. 10. Election results will be announced in November at AIChE's Annual Meeting in San Francisco, CA, and in the December issue of CEP.

More information can be found on the on the [AIChE 2016 Election Website](#) and on the [VLS Events Website](#)

## IN THIS ISSUE

August is an active month here in the States, filled with hot weather, home-grown produce abundance for gardeners, music festivals, and summer vacations for all, including some of our regular columnists.

Please note that our meeting this week is on **Wednesday not Thursday** for the convenience of the candidates.

**Neil Yeoman** continues his theme of engineering education, commenting on recent threads from the AIChE Engage discussion board and his personal observations.

I briefly reflect on teleconnections in general, as well as on mentoring, coaching, and the VLS pilot program.

AIChE is hosting a [Virtual Career Fair](#) on 22 September from 12-4 EDT, with a special student hour (3-4 pm).

None of the above should be spectator sports for the readers. Please address comments and contributions on these or other subjects of interest to VLS members to [jbrand@unl.edu](mailto:jbrand@unl.edu) Please include the words *VLS Newsletter* in the subject line.

-- Jennifer Brand, Editor

## MARK YOUR CALENDAR

***VLS Meetings are USUALLY the fourth Thursday of the month:***

***--- Wednesday, August 31<sup>th</sup> ---***

***AIChE President-Elect Candidates Debate***

***--- Thursday, September 22<sup>rd</sup> ---***

***Amending the AIChE Constitution***

***--- Thursday, October 27<sup>th</sup> ---***

***Student Showcase (Paper Competition)***

***--- November Meeting –***

***Unwrapped (Food Processing Tourism)***

***by Amanda Scalza***

***\*\*\****

***AIChE Virtual Career Fair***

***Thursday September 22, 2016***

***12 – 4 pm EDT***

***Special Student hour: 3 -4 pm EDT***

## PERSONAL CONNECTIONS ACROSS SPACE AND TIME

**Jennifer I. Brand**

The VLS is an interesting experiment in using modern technology in the age-old quest to communicate meaningfully with people separated across chasms of time and distance. Throughout history, there have been many effective solutions to the time-distance communication problem. Ancient Greeks, among others, relayed predetermined messages, literally at the speed of light, via fires on mountaintops, but the transmission range was limited to the line-of-sight. Other line-of-sight signal devices included lighthouses, mirrors, and flags (as famously commemorated in the American national anthem). Reading, writing, and messengers meant important details and more complex information could be transferred, although the time for transmission was extended. Electricity made modern telecommunications possible, allowing nearly simultaneous sending and receiving, beginning in the nineteenth century.

All the systems for bridging time and distance have advantages and disadvantages, some minor and some major. I, for one, enjoy going to meetings barefoot on my deck in nice weather; and I have occasionally been seriously relieved that literally killing the messenger is pretty difficult via email. Some solutions need to be tailored to time and place: signal fires are not recommended in areas where Smokey the Bear is actively working to

prevent forest fires. Some solutions have more in common than first meets the eye. Tom Standage's [The Victorian Internet](#) is an entertaining and eye-opening exploration of how little is new under the sun, especially in telecommunications.

So, back to the VLS. What is it that we can offer our members to entice them to take the time and effort to become more involved, to make more cross-VLS connections, and to make all VLS communications more of a two-way street?

We never intended to be a substitute for other AIChE activities. AIChE Engage and other online discussion venues are great forums for exchanging information and ideas in the virtual public squares. We have many members who are also belong to geographically local sections. Can we bring added value to those folks, too, whose needs are so different needs than those of us wandering in the wilderness (see my column, January 2014)?

So what do we offer in addition? Off the top of my head, I would say, we have a lot to offer!

1. Attending our webinar meetings live is great fun. For starters, chatrooms allow submission of questions in real time and you can have some great side conversations with other attendees. There is great direct interaction with the speakers from all over the world, and PDH certificates are available for almost all of meetings! The programming committee is really open to producing crowd

- pleasers, so your suggestions for future programs will be taken seriously.
2. The VLS has a long reach – we have over 500 members, spread all over the globe, and this newsletter has a circulation of over twice that. What an audience that is if you want to write a column or give a talk; what a deep pool of talent available if you want to promote a mutual professional interest, or make friends around the world, or simply expand your horizons. And what a variety of interests, ideas, and experiences we have to share!
  3. If you want develop skills working across all sorts of time zones, with people from different backgrounds, this is the place!
  4. Most of all, we want to listen to our members who speak up and tell us what value the VLS can add for them. Here are some ways to speak up effectively.
    - a. All the officers and leaders are genuinely interested in making VLS both fun and valuable to the membership. They enjoy helping more members find ways to participate meaningfully. Contact them via the addresses on the VLS Website.
    - b. You can make incredible connections through working to run the section. We have publicity work, newsletters, programming, long-term planning, and other normal section leadership activities, so anyone who contributes can find a place. Committee meetings and working groups don't involve travelling. Fitting participation into your schedule is much easier virtually.
    - c. The programming committee and the newsletter are always great places to start, whether you want to just get your feet wet or you are an old pro. Or help on a short-term project. There are still opportunities for judges for the 2016 Student Competition and mentors for Mentoring Pilot Program. See VLS Newsletter, July 2016 article, reprinted below, or contact Noah Meeks. [NoahChemE@gmail.com](mailto:NoahChemE@gmail.com)

## **CONNECTOR, MENTOR, OR COACH?**

**Jennifer I. Brand**

The pilot program announced last month for VLS mentoring is still on schedule, with many more applications from folks wanting to be mentored than potential mentors. So there is still time for potential “mentors” to apply. Simply send your answers to the questions in the July VLS Newsletter (article

reprinted below) to Noah Meeks at [NoahChemE@gmail.com](mailto:NoahChemE@gmail.com)

Why are the potential mentors not stepping forward? My opinion is that the problem stems from inexact language, unknown expectations, and basic human nature.

First let me say that Noah Meeks designed the questionnaires well to avoid mismatching and, in practice, to be sure of clear and matching expectations between partners. He has also included an option for partners to simply “connect”, rather than set up a formal “mentoring” relationship.

Now let’s clear up the terminology. What is sometimes called “mentoring” is true mentoring, but sometimes coaching, listening, advising, or connecting. The usual problem is not distinguishing between coaching and mentoring, which are very different. The best explanation I have seen is from “[A Guide to Understanding the Role of a Mentor](#)” by F. John Reh, who says

*Mentoring is a long-term relationship where the focus is on supporting the growth and development of the mentee. The mentor is a source of wisdom, teaching and support, but not someone who observes and advises on specific actions or behavioral changes in daily work.*

*Coaching is typically a relationship of finite duration where the focus is on strengthening or eliminating specific behaviors in the here and now. Coaches are engaged to help professionals correct behaviors that detract from their performance or, to strengthen those that*

*support stronger performance around a set of activities.*

*Both mentoring and coaching are incredibly valuable in providing developmental support, however, one offers high-level guidance for long-term development and the other helps you improve immediately.*

The other option rather than mentoring or coaching, is merely “connecting” – a much more open-ended activity.

Moving on to the human nature part: People are motivated to do things where they think they can be successful and where there are rewards of some sort, tangible or intangible. For example, employers may include “mentoring” as part of a job, assigning a more experienced worker to train a newer employee. Goals are generally fairly well-defined, as are rewards: the mentor’s next raise, promotion, or recognition may partially depend upon the way she mentors, or how her “mentee” acclimates to the new situation.

Volunteer situations are often quite different. People wanting to be mentored usually have a long list of reasons why people should mentor them. Most reasons are actually centered around the mentor-seekers own needs and expectation and some are such fluffy warm-fuzzies that I expect flashmobs led by Joan Baez and Pete Seeger’s ghost to burst upon the scene, singing Kumbayah in four part harmony.

Meanwhile, the potential mentors may not want to make a long-term commitment like that. We’re engineers, after all. We are busy with life, the universe, and everything.

Mentoring sounds pretty touchy-feely, like one of those weird assignments from that psych course we took because it fit in our schedule senior year and we needed one more gen-ed course to graduate. And what's in it for me, anyway, when I'd rather be doing \_\_\_\_\_?

Enter Noah's program. You can try this stuff in a three-month pilot program. If you think you are a coach type or a connector type, not a mentor type –say so in your expectations and see if you like what you choose. You might want to see if you can make the partnership a 2-way street, with your specific goals spelled out, if the social interaction alone doesn't seem like it is going to be enough reward. Write these things into your expectations. Maybe you can get feedback on a talk from your partner before you give it in front of your co-workers. Maybe you want to practice a foreign language – say that you want that your partner to be a native speaker who will practice with you in exchange for your coaching or wisdom.

It will be over in three months. You just may find out whether you really want to apply for that new assignment which includes 25% mentoring. Or you may find another connection to hang out with at the AIChE meeting in San Francisco in November.

## THE WORLD OUT THERE: THE INDUSTRY ACADEMIA DISCONNECT

Neil Yeoman



Two threads of messages in the AIChE Engage discussion board deal with chemical engineering education, both of which cited *Chemical*

*Engineering Academia-Industry Alignment: Expectations about New Graduates, An NSF-Sponsored Study led by the American Institute of Chemical Engineers, November 1, 2015.* From those three sources, some common themes emerge.

1. Chemical engineers need to know more than they learn in undergraduate school; they need more technical skills and more "soft skills." There isn't general agreement where these skills should be learned, as undergrads, or in grad school, in intensive short courses, in company sponsored courses, from managers, supervisors, senior associates and/or other mentors, by self study, or by normal on-the job training.
2. Industry and academia operate in different environments, and, since people are influenced by the environment in which they work, academics and industrials will often tend to see things differently.

3. Everybody agrees that the fundamentals should be taught in the undergraduate curriculum but there is not full agreement as to what those fundamental are.
4. There is general agreement that teaching is best done by people who have actually done what they are teaching and that too many who teach ChE do not have that kind of experience.
5. Many academics are primarily focused on the research they are doing rather than teaching. There are many great teachers in the country's chemical engineering departments but there are also some teachers who are not great at all. (In my undergraduate school, there was only one ChE instructor who I felt really did a good job of teaching. He was the only one in the department who did not have tenure. However, every ChE instructor I had in my grad school was good, and they all had tenure.) When the "soft skills" people needed to learn were discussed there was no mention of methods of instruction. I wonder how many academics have had formal training in how to teach. Some people are natural teachers but many are not.

About six years after BChE graduation, I started to think about what should have been included in my undergraduate training. At that time, I had two years of solid process engineering experience under my belt, preceded by what I would best call the obtaining of three years of engineering

maturity. I could easily identify courses I had to take that had proven useless and could not have been otherwise, and could just as easily identify courses that should have been in the curriculum, but weren't. Those who established the ChE curriculum where I received the BChE were somewhat out-of-date with what a chemical engineer in industry needed to know. From where I now view that situation, it was less than professional, the kind of thing that would not have been tolerated in most industrial environments.

During my career, I interviewed scores of new graduates and people just a few years out of school, and found a large variation in what new grads seemed to know and how they had been taught to think. During that career I visited a number of ChE departments and was turned down when I offered to visit others. There were some academics who welcomed people from industry as guest lecturers and others who seemed like they would never consider anybody from industry as having anything to contribute to the teaching of embryonic chemical engineers. There are definitely disconnects between some academics and the general industrial world into which most of the students at the schools that employ those academics will eventually work. There is wide variation in those levels of disconnect.

The Engage discussions and the NSF-AIChE report both suggest that there are two area of concern: the quality of teaching and the content of the curricula. I think we need to consider how important each is. For

example, how important is it that some ChE instructors are mediocre, at best? How often is one encountered? I cannot imagine anybody wanting to make a career of teaching chemical engineering. Teaching will always be a secondary activity of many, if not most, ChE faculty members. Is this an area into which any significant effort should be put? My feeling is that it should not, although if I were specifying the requirements for tenure I would include the successful completion of an approved course in methods of instruction. On the other hand, the content of curricula is a real area of disconnect and if the disconnect is to be addressed it must be primarily via the curricula.

If there is a feeling that the disconnect should be minimized the strategy has to be to allow industry to have more influence on what is taught or to at least give academia access to the feelings on the matter industry has. One mechanism for doing this would be for AIChE to sponsor the development of model curricula to be done by a carefully selected committee of present and past hands-on middle management industry leaders with a little help from a small number of academic consultants. Because of the diversity of the profession, a fairly large committee would be needed, perhaps about 15 people from industry and three academic consultants. One of the first things that such a committee would need to address is how many undergraduate model curricula would be needed, that is, what options should the students have. When I was in

undergraduate school so many years ago there were three pathways to the BChE: general, nuclear, and plastics, all with a secondary option of ROTC or not. In today's world the ROTC option would be far less important and considering it would be a very low priority. In today's times the options, if there are any, might be very different if based on interest than it was when I was in college, and/or the committee might decide that options should be based, at least in part, on whether or not the graduate plans on graduate school and if he or she does whether the terminal degree sought would be an MS or a PhD.

Model curricula produced by savvy industrial people is a positive way of communicating to academia what industry thinks it wants. Schools can use what the committee develops as best suits their specific needs. Some may choose to use the models as developed; others may use only parts; and others will use the models only as guides. Each school will have its own personality and will offer curricula consistent with that personality. One good that might come from this would be that a sensitivity to curricula would be developed and that incoming students might make choices based on what curricula the schools offer in addition to the general reputation the school has.

The foregoing was written during a several week period ending in July. In early August I had a very informative hour-long discussion about parts of this general topic with a very insightful young (by my part of



the country far from the schools I attended. After that discussion, I reread parts of that NSF study previously mentioned. From that I have come to understand that what I am proposing is more "outside the box" than I had previously realized. Accordingly, I am inviting comments from those reading this newsletter. Please send your thoughts, whether you agree or disagree, to me at [virtualtreasurer@aiche.org](mailto:virtualtreasurer@aiche.org). It is well understood that a great deal of work has already gone into this subject, especially by ABET, and that they are a major stakeholder in the development of chemical engineering (and other) curricula. My proposal is not intended to replace this dedicated work done by them, and others, but rather to supplement it from what some people seem to think would be a different point of view. It is also well understood that ChE departments do not have carte blanche on the curricula they develop and often have to satisfy requirements other than to produce competent chemical engineers.

[Ed. Note: Neil Yeoman is an active member of AIChE Engage, where he engages in lively discussions on a wide range of issues such as PE Licenses, Education, and Climate Change.]

## CONNECT THROUGH VLS: A PILOT PROGRAM

**Noah Meeks**



Establishing personal connections in a virtual local section presents a perennial challenge, but the

VLS is committed to making opportunities available to our members. To that end, we are going to try a short-term mentoring program. We think this will be attractive for busy professionals who want personal, professional connection outside their immediate workplace. The goal of this mentoring relationship is to establish a personal connection for VLS members within AIChE.

Unlike other mentoring programs, this one has three distinct features:

1. Defined length
2. Suggested activities
3. Prizes!!!

How does it work? Here's all the fine print:

### **WE STILL NEED MORE MENTORS**

### **POTENTIAL MENTORS PLEASE APPLY**

1. Express interest by answering the following in 1-2 paragraphs total, and send to VLS Past Chairman Noah Meeks ([NoahChemE@gmail.com](mailto:NoahChemE@gmail.com)). This information will be used to pair participants. Please send by August 31<sup>ST</sup>.

- a. Are you interested in being a mentor, mentee, or just connecting?
  - b. Are you planning to be at the AIChE Annual Meeting in San Francisco?
  - c. Where do you work and what is your role?
  - d. What is your education/professional/personal background?
  - e. What do you hope to give or gain in this program?
  - f. What is your contact info that we should share with your mentor/mentee?
2. Participant pairs will be notified by email *shortly after* August 31st.
  3. Watch the AIChE webinar on mentoring:  
<http://www.aiche.org/academy/webinars/mentoring-what-you-need-know-and-do>
  4. Have a meeting, virtual meeting, or phone call at their convenience during September. We suggest discussing your career backgrounds/paths/outlooks/goals.
  5. Have another meeting in October, again at their convenience. We suggest discussing AIChE participation, including technical divisions/forums/sections/meetings.
  6. If feasible, meet in person in November at the AIChE annual meeting. There may be a VLS Social which would be the perfect opportunity, so that we can also meet you both. For those not attending the Annual Meeting, we suggest discussing work/life balance and soft skills experience, and discussing whether this program has been effective.

7. Write a short (1 page max) overview of your meetings and your reaction to them. This can be done throughout the program or at the end.

8. Send the overview to NoahChemE@gmail.com. All participants who submit a synopsis will be entered into a random selection. The winner will receive their choice of a chemical engineering book or e-book, courtesy of the VLS. Their partner participant will also win a \$50 Barnes and Noble gift card. Both participants in a pair may submit an overview, which will increase the chances of winning!

9. Increase your chances of winning by attending VLS meetings August to November. For each meeting that a participant attends live, he or she will receive an additional entry, so that up to 5 entries may be accrued by each participant.

10. The most thoughtfully and meaningfully written overview (as subjectively selected by VLS leadership) will also receive a \$50 gift card and their overview will be featured in an upcoming VLS Newsletter.

11. Overviews are due by Dec 1st. The writing winner will be announced at the December VLS meeting, and the random winning participant will be selected and announced live at the December meeting!

12. Participation is limited to members of the VLS as of September 1, 2016. Contact membership services if you are unsure.

*Attendance at a Virtual Local Section Meeting is open to AIChE Virtual Local Section Members, AIChE members, and other interested people.*

***The statements and opinions in this newsletter reflect the views of the contributors, not of the AIChE or the VLS, neither of which assume responsibility for them.***

## **PDH CREDIT FOR VLS MEETINGS**

**LAURA J. GIMPELSON, P. E.**

Attendees of the Virtual Local Section Meetings can receive up to 1 hour of professional development credit that meets the continuing education requirements of most state professional engineering registrations. To receive the certificate documenting your attendance, send an email to the VLS secretary, Laura Gimpelson, at [virtualaiche@gmail.com](mailto:virtualaiche@gmail.com).

Include the following information in your email:

1. Name of the Presentation and Speaker
2. Attendee's name as listed on the registration certificate
2. Attendee's registration number and state/providence of issuance

The certificate, in pdf format, will be issued within 30 days of the receipt of the request.