

Chemical Bond, September 2020



Saint Louis Section American Chemical Society Chemical Bond

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YCC goes VPD (virtual professional development)

first published 14 May 2020

The Younger Chemists Committees of the St. Louis, Chicago, and Nashville local ACS sections invite you to join them for a free three-week, cross-sectional professional development series.

Chemistry professionals from each of the sponsoring local sections will lead virtual workshops on topics organized chronologically from application preparation to interviewing and negotiating and onboarding:

- navigate your job search (May 19 with **Amanda Carroll**)
- nail your interview (May 27 with **Fran Kravitz**), and
- jump-start your career (June 2 with **Natalie LaFranzo** and **Rhonda Woerndle**)

Sessions will last roughly an hour. [RSVP here](#) to receive a virtual invitation to any or all of the available sessions!

Not a part of the St. Louis, Chicago, or Nashville ACS local sections? No problem! Everyone is welcome to come learn with us! Hope to see you there!



Learn from home with ACS webinars

first published 24 May 2020

Many of us are already working from home as we socially and collegially and professionally distance. Why not also learn from home? The ACS Webinars program is free for members and meets on a wide variety of career-oriented, technical, and general-interest topics almost every weekday at 1 pm Central time.



A few upcoming examples:

- **Failure: Why Science is so Successful** (re-airing of an earlier live event)
Monday, May 25, 2020
Stuart Firestein, Columbia University
- **Making a Big Career Change: Turning Adversity into Opportunity**
Tuesday, May 26, 2020
Allen Claus, CTT Consulting
- **Maximizing Your Opportunities: LinkedIn Networking and Job Search**
Tuesday, June 2, 2020
Sandra Long, Post Road Consulting

[Sign-ups](#) say "Register for Free!" but we're pretty sure that attendance is free, too, for ACS members. You can also [add your contact information](#) to a mailing list in order to receive notifications of upcoming webinars.

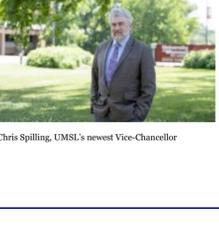
Virtual ProfDev in the age of Covid

first published 10 June 2020

The Saint Louis section Younger Chemists Committee (YCC) partnered with the Chicago and Nashville Local section YCCs to offer a virtual three-week professional development series to our local YCC communities.

Running from mid-May to early June, 2020, the series brought together chemistry professionals from each representative local section to lead workshops on job application preparation, interviewing, negotiating, and onboarding. Young chemists from all over the US tuned in to participate; 15 home states and 5 countries were represented by the 120 members who RSVPed.

The first of the series, on resumes, CVs, and cover letters, was the best attended, with about 60 participants. The following two sessions garnered crowds of around 30 each. All in all, the series was a great way to bring our communities together to expand our skill sets and learn from professional development experts in our field!



Virtual workshop: Discover your elemental strengths

first published 19 June 2020

Does the St. Louis Section-ACS Younger Chemists Committee have a deal for you? Would we ask if the answer were "No"? (HINT: Yes and No in that order.)

Join our local section YCC for this free workshop, where you will learn how to utilize *Strengths-Based Development* to understand your strengths and aim them at the outcomes that matter to you.

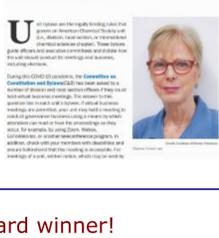
Presented by Gallup Certified Coaches:

- Suzy Hartmann**, MS, MBA
- Carlos Martinez**, PhD

All registrants will receive a free Clifton Strengths Assessment (a \$20 value) to discover their own Signature Themes.

Please register here by July 15. Prior to the workshop, you will be emailed a link and instructions for taking the CliftonStrengths assessment. The time needed to complete the assessment is approximately 45 minutes. Please complete the assessment prior to the workshop!

And share the [flyer](#) with colleagues who might also find added value in their strengths.



Chris Spilling named Vice-Chancellor at UM-St Louis

first published 29 June 2020

Chris Spilling, long-time Alternate Councilor of the Saint Louis Section and winner of the 2009 Saint Louis Award, has been named Vice-Chancellor of Research and Economic and Community Development at the University of Missouri-Saint Louis.

Chris has been a member of the Chemistry faculty at UMSL for 31 years.

The position is a new one for Chris, but also for UMSL; it elevates the profile of research at the institution, and also carries responsibility for the [Anchor Institution Initiative](#) and the [Community Innovation and Action Center](#), two programs that further town-gown cooperation and community development.

In addition to his ongoing faculty engagement, Chris is coming off a four-year stint as Vice-provost for Graduate Studies and Research. During his tenure, research expenditures at UMSL grew from \$15 million to \$27 million.

There are more details of Chris' career and his new responsibilities on the UMSL Daily blog, [here](#).



Chris Spilling, UMSL's newest Vice-Chancellor

Donna Friedman preaches from national pulpit

first published 14 July 2020

Well, would you look at that!

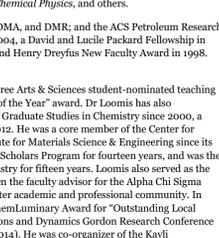
Donna Friedman – former Chair, *Chemical Bond* business manager since forever, and long-serving/suffering Councilor – has an article in a recent *Chemical & Engineering News* on unit governance.

Units, if you're not up on the jargon, refers to Local Sections and Divisions of the ACS. And each one has its own Bylaws. The Bylaws lay out aspects of unit governance like officers, standing committees, elections, special activities, and the like. And all changes must be approved by the national Committee on Constitution & Bylaws, of which Donna is Chair.

In the article, she outlines the process for updating Bylaws, and why any unit would want to. (Mostly it boils down to, "Things change," and if you don't amend the Bylaws to keep current, you could be doing stuff that your own Bylaws forbid: financially, electorally, prize-awardingly.)

We've gone through our own Bylaw revisions from time to time, and have had the benefit of Donna's expertise and hard-nosed adherence to the letter of the law. It has put us ahead of the game because we tend not to propose changes that would fall afoul of national strictures.

Anyway, [give it a read](#) (member login required if you've exceeded your quota of free articles this month) to find out a little of what transpires betwixt here and Washington.



Richard Loomis is the 2020 Saint Louis Award winner!

first published 16 July 2020

Even in the midst of pandemic, life goes on... with modifications. Suzy Hartmann, past chair of the St. Louis Section-ACS and chair of the award jury, has announced the winner of the 2020 St. Louis Section ACS Award to be Richard Loomis, Professor of Chemistry at Washington University in St. Louis.

Richard A. Loomis received his B.S. with latin honors from Dickinson College in 1989 and obtained a Ph.D. from the University of Pennsylvania in 1995 under the mentorship of Professor Marsha Lester. His thesis focused on the characterization of the interactions and dynamics of the hydroxyl radical with argon and hydrogen. He then received a prestigious NRC postdoctoral fellowship to work with Stephen Leone at JILA, a joint institute between the University of Colorado and NIST in Boulder, CO. There he studied radical reactions and novel intermediates, as well as quantum control using ultrafast pulse-shaping methods. He joined Washington University as an Assistant Professor in 1998, was promoted to Associate Professor in 2005, and earned Full Professor in 2017.

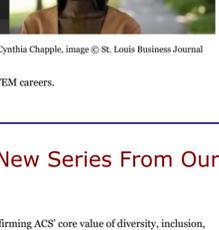
Dr Loomis's research at Washington University began with a detailed interrogation and manipulation of bimolecular gas-phase reactions and dynamics. His group discovered that it is possible to observe spectral features associated with transitions of multiple discrete conformers of van der Waals clusters, even though they are nearly isoenergetic. This enabled the multi-dimensional intermolecular potentials to be characterized and the dissociation dynamics of these clusters to be isolated from contrasting intermolecular orientations. The group is now looking at photo-induced charge-transfer reactions involving halogen bonds using mass spectrometry and ion product velocity-map imaging.

In 2005, Dr Loomis began working in a very different area, collaborating with Dr William Buhro (2010 Saint Louis Award winner) to develop high-quality semiconductor nanomaterials for efficient photogeneration of charges that can be transported over large distances. The Loomis group has focused on characterizing the quantum mechanics of photogenerated excitons, holes, and one-dimensional excitons within semiconductor quantum wires. Most notably, they discovered that when the surface of a quantum wire is well passivated and the density of states that can perturb the potential energy landscape along the QWs is minimized, the excitons become delocalized over the entire length of the quantum wires, up to tens of micrometers and their photoluminescent lifetime increases to 200 ns. These results are truly astonishing as they reveal that the quantum nature of the excitons can span over macroscopic distances. These findings will have major impact on nanoelectronic device architectures and significant enhancements to the efficiencies of semiconductor photovoltaic devices. The results of his research have resulted in 70 peer-reviewed publications in such journals as *Nature Materials*, *Nano Letters*, *ACS Nano*, *Journal of the American Chemical Society*, *Journal of Chemical Physics*, and others.

His research has been funded by the Packard Foundation; the NSF through the divisions of CHE, CSDMA, and DMR; and the ACS Petroleum Research Fund. In recognition of his research accomplishments, Loomis received an NSF-CAREER award in 2004, a David and Lucile Packard Fellowship in Science and Engineering in 2001, a Research Corporation Innovation Award in 1999, and a Camille and Henry Dreyfus New Faculty Award in 1998. He was also selected to be a Fellow of the Kavli Frontiers of Science in 2008.

Dr Loomis has a passion for teaching, and has received three Graduate Student Mentoring awards, three Arts & Sciences Student-nominated teaching awards, the David Hadas Teaching Award in Arts and Sciences, and the Student Life "Best Professor of the Year" award. Dr Loomis has also contributed greatly to the Chemistry Department and the University, having served as the Director of Graduate Studies in Chemistry since 2000, a member of the Arts & Sciences Graduate Council since 1999, and the Undergraduate Council since 2012. He was a core member of the Center for Materials Innovation, acting as its Associate Director (2010-11), and has been a member of the Institute for Materials Science & Engineering since its creation in 2012. He was a member of the selection committee for the Ervin and Enterprise Diversity Scholars Program for fourteen years, and was the chair of the 2012. He was also the recipient of the Florence Mogg Fellowship in the Biological Sciences & Chemistry for fifteen years. Loomis also served as the co-chair of the MOSAIC Diversity and Inclusion in the Classroom Committee. Dr Loomis has also been the faculty advisor for the Alpha Chi Sigma (Alpha Epsilon chapter) national chemistry fraternity since 2005. Dr Loomis has also served the greater academic and professional community. In 1998, Loomis co-founded the St. Louis Local Section Younger Chemists Committee, which won the ChemLuminary Award for "Outstanding Local Section of the Younger Chemists Committee" that year. He served as Chair of the Molecular Interactions and Dynamics Gordon Research Conference (2018), and the Vice Chair of the Atomic and Molecular Interactions Gordon Research Conference (2014). He was co-organizer of the Kavli Foundation and US National Academy of Sciences Frontiers in Science Symposia held jointly with the Indonesian National Academy of Sciences in 2011 and 2012.

The Saint Louis Section ACS Award, originally sponsored by the Monsanto Company (now Bayer) and administered by the Saint Louis Section-ACS, is presented to an individual who has made outstanding contributions to the profession of chemistry and demonstrated potential to further the advancement of the chemical profession. The award, consisting of a \$1,500 honorarium and a plaque, will be presented at the Saint Louis Award Banquet, which usually follows the Award Symposium. Details will follow.



Richard Loomis, 2020 Saint Louis Award winner

Cynthia Chapple on racism in STEM

first published 23 July 2020

While we're keeping you in the know about local section members making noises on larger stages... **Cynthia Chapple**, our Minority Affairs coordinator, was featured in a *St. Louis Business Journal* virtual symposium on "how racism has impacted their lives, impeded their careers and shaped the path they tread today." The journal invited "a group of seven Black community leaders – accomplished professionals in fields of technology, marketing, law, nonprofits, community advocacy" to join the panel.

Cynthia, whose day job is senior research and development chemist at ELANTAS PDG Inc, told her stories of being the only Black woman in her undergrad chem classes, graduate department, and among work colleagues; of being belittled and tokenized. Her experience led her to form a non-profit, **Black Girls Do STEM**. At first, "[i] started out as me doing workshops in community centers trying to fill a need for programming for girls," Cynthia related. As a full-fledged non-profit organization, it addresses broader goals of racial equity in STEM education and STEM careers.

Don't take this Reader's Digest condensed version as the whole story. Read it all, for yourself, [here](#).



Cynthia Chapple, image © St. Louis Business Journal

Let's Talk Race and Racism: An Important New Series From Our Minority Affairs Committee

first published 12 August 2020

In response to the killing of George Floyd, ACS President Luis Echegoyen has issued a [statement](#) reaffirming ACS' core value of diversity, inclusion, and respect, and has announced specific actions taken by national ACS in furtherance of those goals.

The Saint Louis Local Section endorses and embraces those goals. Our own commitment to action begins with the following series of podcast listening and discussion sessions on locally focused topics of race and racism.

"Let's Talk Race and Racism" Podcast Listening Discussions

The Committee on Minority Affairs (CMA) launches its podcast/discussion series "Let's Talk Race and Racism", engaging members and the broader St. Louis community in fostering togetherness, developing shared language, and building comfort and courage to better discuss race and racism.

We are hoping to help people understand how to take personal action to build their own race consciousness and to the move toward a more diverse and inclusive local Section in response to many national conversations such as #BlackoutSTEM and in response to the cries for justice over the loss of unarmed Black lives.

On the third Tuesday of each month, September through January, we will listen to a podcast on an issue of race and racism. *We ask all members of the community to come prepared to listen, learn, engage, be uncomfortable and possibly abandon their own ideas for new ones as they hear vulnerable conversation from primarily people of color.*

RSVP to Cynthia Chapple at cmchapple@gmail.com for Zoom invite.

Part 1: Tuesday, September 15th, 6:30 – 8:00 pm

We will be launching our first listening session with an episode of the *Speaking of Racism* podcast hosted by Tina Strawn and Jen Kinny. Tina Strawn is an anti-racism educator, advocate, and activist. Jen Kinney is a writer, podcaster, and activist.

The purpose of their podcast is to have honest discussion about race and racism. The theme of this listening session will be race during the Obama era.

Part 2: Tuesday, October 20th, 6:30 – 8:00 pm

This month we will listen to an episode from the *What Next* podcast with Mary Harris. Mary has reported throughout the public radio system, for NPR, Marketplace, and WNYC. This short daily show is here to help you make sense of things, when the news feels overwhelming. This month's theme will be the accuracy of American history and how we create American traditions that fail to account for racial trauma and pain.

Part 3: Tuesday, November 17th, 6:30 – 8:00 pm

This month we will be listening to a podcast episode of *Unlocking Us* by Sociologist Brené Brown. Dr Brown is a research professor at the University of Houston where she holds the Huffington Foundation – Brené Brown Endowed Chair at The Graduate College of Social Work. Brené states "I've spent over 20 years studying the emotions and experiences that bring meaning and purpose to our lives, and if there's one thing I've learned, it's this: We are hardwired for the connection, and connecting requires courage, vulnerability, and conversation." The episode centers around Kendi X. Brame, the best-selling author of the book "How to be an Antiracist," and his definition of "antiracist."

Part 4: Tuesday, December 15th, 6:30 – 8:00 pm

In early 2015, the St. Louis region was reeling from the killing of Michael Brown, shot dead by a Ferguson police officer. The St. Louis Public Radio newsroom, like other local media outlets, covered the story. But the news organization decided it needed to do more. They tasked two people – reporters Tim Lloyd and Emanuele Berry – to design a project that would examine race in St. Louis. The result was the *We Live Here* podcast. This month's theme will be COVID-19 xenophobia as we listen to Asian-American persons from our community talk about the racism they faced at the onset of the COVID-19 pandemic.

Part 5: Tuesday, January 19th, 6:30 – 8:00 pm

This month we will return to the *We Live Here* podcast, born in the wake of the Michael Brown shooting in 2015 and hosted by two St. Louis Public Radio reporters, Tim Lloyd and Emanuele Berry.

This time, the theme is how St. Louis came to be as segregated as it is today. Addressing the myth of *de facto* segregation, this episode will help unpack the policies and laws that let us "divided by design".

EDIT: *This post has been edited to show the revised session dates. The start of the series has been moved to the third Tuesday in September to provide better advance notice of this important program. You haven't missed anything yet.*

LET'S TALK! RACE & RACISM
Podcast Edition : Full membership invitation to listen to race focused podcast episodes and discuss with CMA-STL.
GOAL: MAKE OUR MEMBERS MORE CONSCIOUS OF HOW RACISM SHOWS UP IN OUR SOCIETIES, WORKPLACES AND COMMUNITIES.
Hosted by Cynthia C. and Jeramia O.
PODCASTS INCLUDE: WE LIVE HERE, THE NDD WITH LEXI, CODE SWITCH, SHETOSTEM, MANY MORE.
EVERY 3RD TUESDAY THIS FALL VIRTUAL VIA ZOOM. RSVP FOR LINK 6:30PM - 8PM.
Contact Cynthia Chapple, cmchapple@gmail.com for additional details.

Science Fairs in the age of COVID

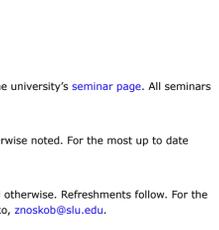
first published 15 August 2020

This is it: the report on the past Spring's science-fair-curtailed science fairs, that you've been waiting half the summer for. Is the virus-phore? (A demi-sciencephore?)

As reported by GSM Sundaram, the local section Science Fair coordinator.

Missouri Tri-County Regional Science and Engineering Fair, March 7

- **Grades 9-12 Division**
Second Place: **Lakshita Senthil**, Grade 9, Fort Zumwalt West High School, MO: *Biodegradable Superabsorbent Polymers made of Orange/Avocado peels help Combat Drought in Agriculture?*
There were no first or third place awards given this year.



Lakshita Senthil's 9th Grade 2nd place winning project

- **Grades 5-8 Division**
First Place: **Gunnika Singh**, Grade 5, West Middle School, MO: *Water Electrolysis: Effect of type and concentration of electrolyte on the release of hydrogen gas*

- **Grades 5-8 Division**
Second Place: **Denzel Montalvo**, Grade 6, Jefferson Intermediate, MO: *What effect does sugar and fat have on liquids when frozen*

- **Grades kindergarten – 4th Division**
A congratulatory letter + a purple participation ribbon were each given to 100 chemistry-related entries this year.

- **Illinois Junior Academy of Science Region 12 Science Fair, March 30**
The event was converted to online presentations due to pandemic.



Denzel Montalvo's 5th-8th Grade 2nd-place winning project for the MO Tri-County Fair

- **Grades 9-12 Division**
First Place: **Gabe Lewis**, Grade 11, Waterloo High School, IL: *How Do Different Synthesis Materials Affect the Size of Carbon Quantum Dots?*

- **Grades 9-12 Division**
Second Place: **Reagan Guerra**, Grade 12, Metro-East Lutheran School, IL: *Evaluation of Isoheme: A Novel Replacement for Blood in Forensic Science*

- **Grades 9-12 Division**
First Place: **Julian A. Eaken**, Grade 5, North Elementary School, IL: *Home Made Bouncy Ball*

- **Grades 9-12 Division**
Second Place: **Allison Nemnich**, Grade 5, Mather's Lyeceum, IL: *Which Detergent Cleans the Best*

Saint Louis Academy of Science, Science Fair, April 20
We didn't participate in Academy of Science Fair this year, as the organizers weren't able to accept books and Science Center membership which they felt difficult to track in the existing situation.

Councilor (virtual) talking points issued for Fall 2020 meeting

first published 27 August 2020

It was almost business as usual for the governance aspects of the Fall 2020 National ACS meeting, as councilors met virtually, in committees and en banc, to address their responsibilities.

The Councilor Talking Points document always reports national meeting attendance, and, somewhat surprisingly, it wasn't too far down in our COVID-19 era, possibly reflecting the reduced registration fee structure and the zeroed costs of travel and lodging for this meeting held totally in cyberspace. Across all membership categories, registrations were almost 6,500, and slightly over 4,000 presentations were uploaded to the program site.

Some actions of interest (subjectively) taken by the Council:

- approved formation of an International Chemistry Section in Israel (who knew they did not already have one?)
- as reported by Budget and Finance, 2020 financial performance through July 31 yielded a Net from Operations of \$55.7 million, or \$25 million greater than the same period in 2019, due to a 5% increase in revenues and a 3% decrease in expenses

In other business, the Board of Directors held a strategic discussion on ways to turn the ACS core value of Diversity, Inclusion, and Respect into a prioritized action plan that would emphasize the urgency of "moving the needle" both within ACS and in the broader chemistry enterprise. Clearly an outcome – or an aspirational outcome – of the broader societal (not "Societal") impetus in that direction.

The full [talking points document](#) is here for your perusal. You may find that other points are more interesting than those selected here.

Meeting & Seminars

Board of Directors

St. Louis Section-ACS Board of Directors meets the second Thursday of each month, usually at the Glen Echo Country Club (map and driving directions). Meetings are open to all members, and all are encouraged to attend. Elected officers and chairs of major committees vote on questions put to the Board; others in attendance have voice but no vote.

If you want to attend for dinner, please contact the section Chair at least a week in advance. The usual cost of the dinner is \$22 (\$11 for post-docs and unemployed members). Bar service extra. Members wishing to become active in section activities are welcomed for their first dinner as guests of the section.

Date: September 10 (via Zoom)

Join internet meeting at 6:00 pm for social/chit-chat

Business meeting begins at 6:30 pm

Future meetings: Oct 8, Nov 12

Maryville University

Seminars are approximately once a month on Thursdays, 4-5 pm. Details are available on the university's [seminar page](#). All seminars are free and open to the public. Contact [Jason Telford](mailto:Jason.Telford@maryville.edu) for more information.

St. Louis College of Pharmacy

The Center for Clinical Pharmacology hosts a monthly seminar series in ARB 212 unless otherwise noted. For the most up to date information refer to the center's [seminar page](#) or contact [Jodi Maslin](mailto:Jodi.Maslin@sluc.edu).

Saint Louis University

Seminars are generally on Fridays at 12 noon in Carlo Auditorium, Tegeler Hall, unless noted otherwise. Refreshments follow. For the most up-to-date information, refer to the department's [seminar page](#) or contact Brent Znosko, znoskob@slu.edu.

University of Missouri-St Louis

Mondays at 4 pm in 451 Benton Hall, unless otherwise specified. Refreshments 15 minutes prior to seminar time. For timely information on visiting seminar speakers, contact the Chemistry Department, 314.516.5311, or visit the [seminar schedule](#). The department has additional seminar series which are also accessible from this page.

Washington University

Seminars are in McMillen 311 at 4 pm unless otherwise noted. For information, consult the departmental [events page](#). Related seminars, including endowed seminar series and the WU med school biochemistry series, are linked here as well.

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