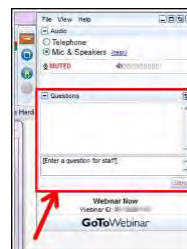




Have Questions?



Type them into questions box!

“Why am I muted?”

Don't worry. Everyone is muted except the presenter and host. Thank you and enjoy the show.

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1

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The Drug Design Delivery Series has built a collection of the top minds in the field to explain the mechanics of drug discovery. Discover the latest research, receive an overview on different fields of study, and gain insight on how to possibly overcome your own med chem roadblocks.

Culinary Chemistry

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Why does food taste better when it is grilled or what molecular compounds make a great wine? Discover the delectable science of your favorite food and drink and don't forget to come back for a second helping.

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Feeling burdened by all that molecular weight? Listen to experts expound on the amazing side of current hot science topics. Discover the chemistry of rockets, how viruses have affected human history, or the molecular breakdown of a hangover.

Business & Entrepreneurship

▶ View the Collection

How do ideas make it from the lab to the real world? Discover the ins and outs of the chemical industry whether you are looking to start a business or desire a priceless industry-wide perspective.

<https://www.acs.org/content/acs/en/acs-webinars/videos.html>

2

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A Career Planning Tool For Chemical Scientists



ChemIDP is an Individual Development Plan designed specifically for graduate students and postdoctoral scholars in the chemical sciences. Through immersive, self-paced activities, users explore potential careers, determine specific skills needed for success, and develop plans to achieve professional goals. **ChemIDP** tracks user progress and input, providing tips and strategies to complete goals and guide career exploration.

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4

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Email us at bridge@acs.org

5

ACS Department of Diversity Programs

Advancing ACS's Core Value of Diversity, Inclusion & Respect



We believe in the strength of diversity in all its forms, because inclusion of and respect for diverse people, experiences, and ideas lead to superior solutions to world challenges and advances chemistry as a global, multidisciplinary science.

Contact Us:

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6

Empowering Academic Researchers to Strengthen Safety Culture



Sunday, March 20, 2021 from 2PM – 6PM EDT.

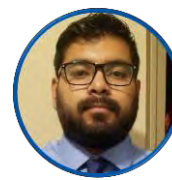
The workshop is \$25 per participant.

Workshop goals are to:

- Educate participants about the value of risk assessment
- Guide participants towards gaining awareness of safety culture messages from the leadership at their institutions
- Empower participants to expand their safety networks and develop laboratory safety teams.



RACHEL WILEY
STEM Doctoral Fellow,
The University of Memphis



OMAR LEON RUIZ
Graduate Student,
Department of Chemistry &
Biochemistry, UCLA

This 4-hour workshop is primarily directed at frontline researchers in academic institutions: graduate students, postdoctoral scholars, and undergraduate students. Faculty and safety staff are also very much encouraged to participate.

<https://dchas.org>

7



Careers in Science and Engineering:
Everything that You Need to Know

Professor Ashutosh Sharma
Institute Chair Professor,
Indian Institute of Technology, Kanpur

Date: Wednesday, November 10, 2021 @ 7:30am ET (6-7pm IT)
Speaker: Ashutosh Sharma, Indian Institute of Technology, Kanpur
Moderator: Deeksha Gupta, American Chemical Society

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Date: Wednesday, November 10, 2021 @ 2:30pm ET
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Date: Thursday, November 11, 2021 @ 2:30pm ET
Speakers: Katherine Aubrecht, Stony Brook University and John Randazzo, North Park University
Moderator: David Constable, American Chemical Society

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- How systems thinking can enrich student learning, and how it strengthens the ACS GC Green and Sustainable Chemistry Modules

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8



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Enhancing Research Productivity

Through Student-Led Laboratory Safety Teams



FREE Webinar | TODAY at 2pm ET



THIS ACS WEBINAR WILL BEGIN SHORTLY...

9



Enhancing Research Productivity through Student-Led Laboratory Safety Teams



SARAH ZINN
Member, ACS Division of
Chemical Health and Safety



JESSICA MARTIN
Member, ACS Division of
Chemical Health and Safety



KALI MILLER
Member, ACS Division of
Chemical Health and Safety



MONICA NYANSA
Member, ACS Division of
Chemical Health and Safety



RALPH STUART
Environmental Safety Manager,
Keene State College and Chair, ACS
Committee on Chemical Safety

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10

Laboratory Safety Teams (LSTs)

➤ Researcher-Led

➤ Focus on

- ✓ Solving Tangible Needs
- ✓ Bringing Groups Together
- ✓ Communication
- ✓ Useful Training
- ✓ Resources



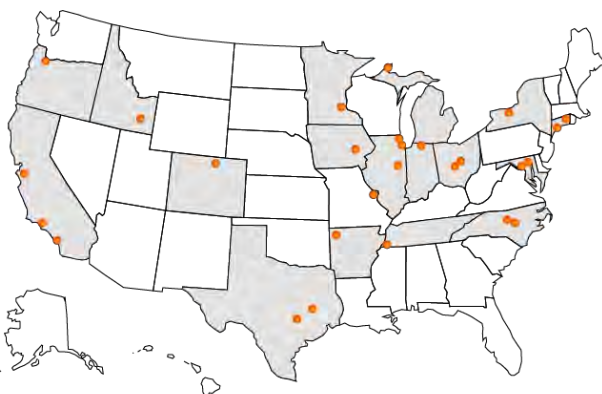
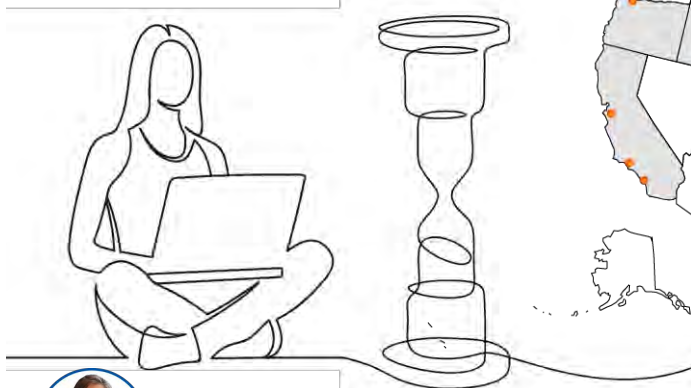
Sarah

11

Laboratory Safety Teams (LSTs)

➤ Researcher-Led

But... *why?*



Sarah

12

Why is this stuff in MY refrigerator?



Jessica

13

Audience Survey Question

ANSWER THE QUESTION ON BLUE SCREEN IN ONE MOMENT



Have you ever had to handle disposal of inherited samples or expired legacy chemicals?

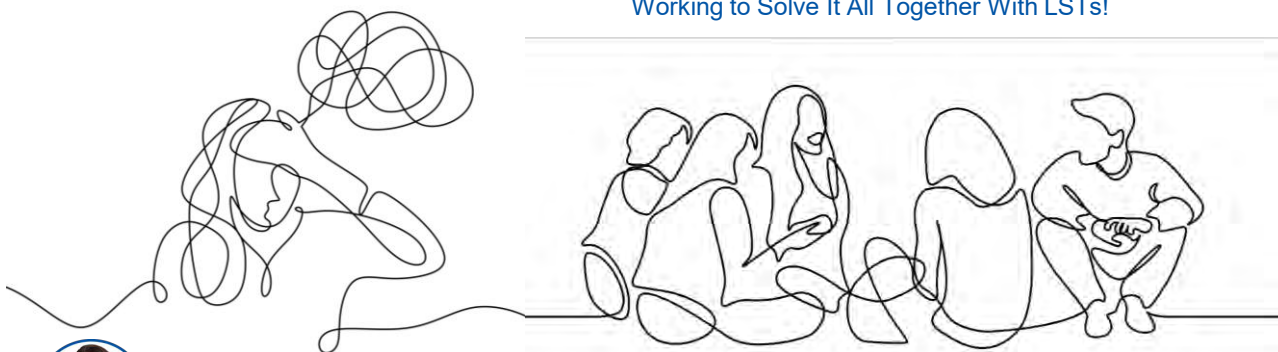
- Yes
- No
- Not applicable



14

A Graduate Student Trying to Resolve Long-Standing Safety Issues on My Own

Working to Solve It All Together With LSTs!

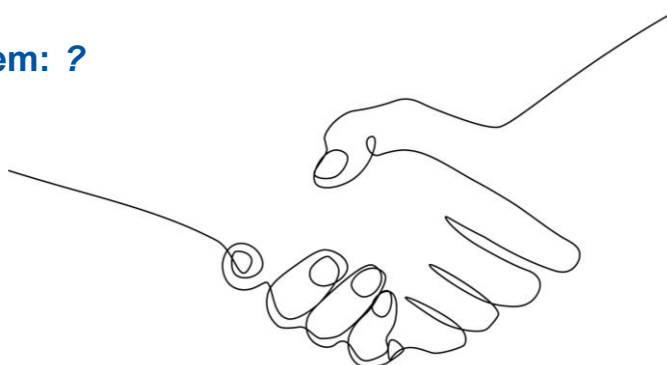


Jessica

15

Succession Planning

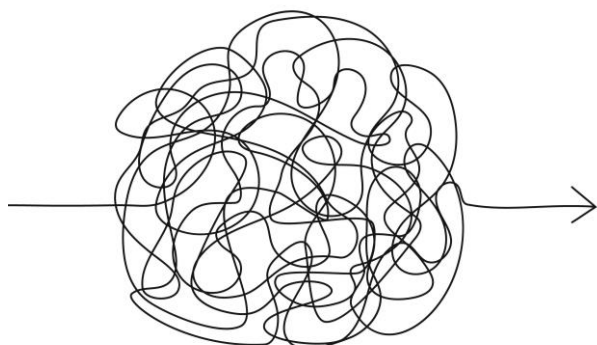
- **User training system: ✓**
- **Lab manager training system: ?**
 - Documentation
 - Knowledge transfer
 - Training
 - Overlap
- **Best intentions ≠ results**



Kati

16

Chemical Inventory



- **How to keep track of hazards in each lab?**
- **Collaborative multidisciplinary research spaces**
 - Unique challenges
- **Policies vs. Practicality**



Kati

17

Audience Survey Question

ANSWER THE QUESTION ON BLUE SCREEN IN ONE MOMENT



Have you ever had to work with a poorly-maintained or non-existent chemical inventory system?

- Yes
- No
- Not applicable



18

Connecting Student Safety Enthusiasts

- **Common problems:** Lack of communication & human error
- How to make it easy to do what you're supposed to do?
- Involvement in safety groups



Kati

19

Turns Out, Reality is Not So Clean

As an outsider, my expectations were miscalibrated



University of St. Andrews

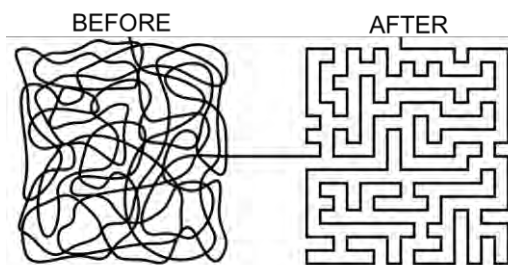
Sarah

UChicago

20

Time Spent Digging for Equipment

Do we have what
I need to start
this new project?



Utter
chaos



Sarah

21

Time Spent Searching for Chemicals

Do we have what I need to start this new project?

2	Please add an entry when you purchase chemicals and delete the entry when you finish the stock. Please Ctrl+F search by CAS No. first when entering a new chemical.						
4	Substance Name	CAS No.	Hazards SDS/MDS	Amount	Room	Shelf Location	Notes
3	<i>Please do NOT auto-alphabetize!</i>		Click on the link	If more than one vial, enter second value on a new line in the same entry			(Dates in month/year) rcvd = received
658					E247	Shelves	
659	Rhodamine 700	63561-42-2		0.5 grams	E030	Fisher Refrigerator - Laser Dyes Box	rcvd 7/19/2018
690	Ammonium molybdate tetrahydrate	12054-85-2		25 g	E030		rcvd 8/12/2018
691	1,2,4,5-tetracyanobenzene	712-74-3		5 g	E030		rcvd 8/12/2018
692	2-mercaptoethanol	60-24-2	X	100 mL	E247	Refrigerator	
693	phosphate buffer solution, 1.0 M		X	1 gallon	E247	Refrigerator	rcvd 12/12/2019
694	Benzamidine hydrochloride, 99%	1670-14-0	X	5 g	E247	Shelves	rcvd 12/12/2019
695	Caproic acid (hexanoic acid)	142-62-1	X	100 mL	E247	Corrosives	rcvd 12/12/2019
696					E030	Refrigerator	rcvd 11/2019
697	Coumarin 153	53518-18-6		200 mg	E030	Fisher Refrigerator - Laser Dyes Box	light sensitive, rcvd 2/2021



Sarah

22

Time Spent Tracking Figuring Out Unknown Messes

Whose mess is this?

How long has this hotplate been on?



Does anyone know what's in this unlabeled vial?

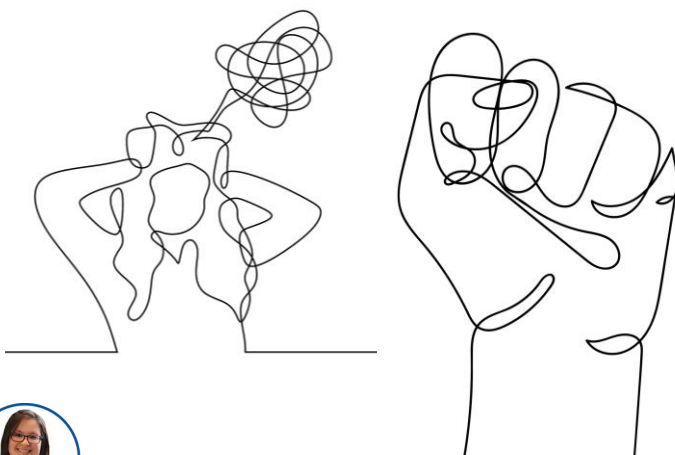


Sarah

23

Why I Co-Founded My LST

But it didn't last...



Version history

Only show named versions

JUNE

June 8, 2:42 PM

Current version

Sarah Zinn

FEBRUARY

February 2, 5:18 PM

Sarah Zinn

JULY 2020

July 18, 2020, 4:35 PM

Sarah Zinn

July 15, 2020, 2:16 PM

Sarah Zinn



Sarah

24

Audience Survey Question

ANSWER THE QUESTION ON BLUE SCREEN IN ONE MOMENT



Sarah

How often have you encountered a disruptive equipment mess or chemical contamination that was produced by previous occupants of your lab space?

- Too many times
- A few times
- Never
- Not applicable



25

Why I Co-Founded My LST

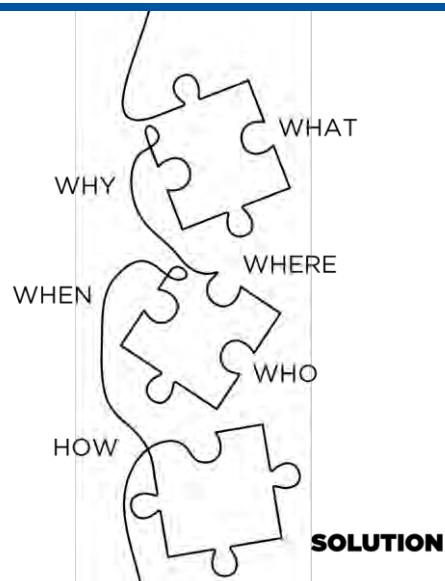


It's actually in **all** of our best interests to *solve* this problem.

Address the salience



DON'T MISS THE FOREST FOR THE TREES

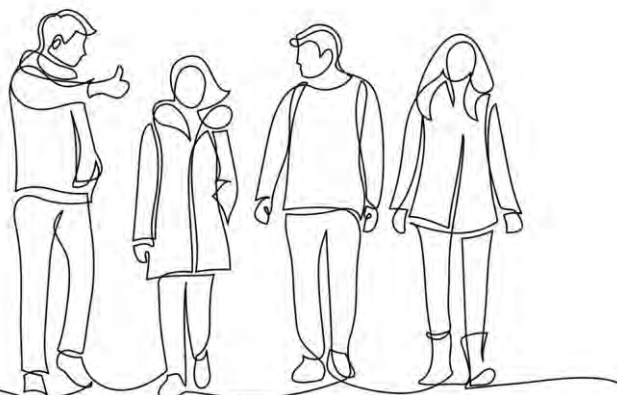


Sarah

26

Safety professionals as allies

Alone and Confused when it comes to lab safety?



Monica

27

Audience Survey Question

ANSWER THE QUESTION ON BLUE SCREEN IN ONE MOMENT



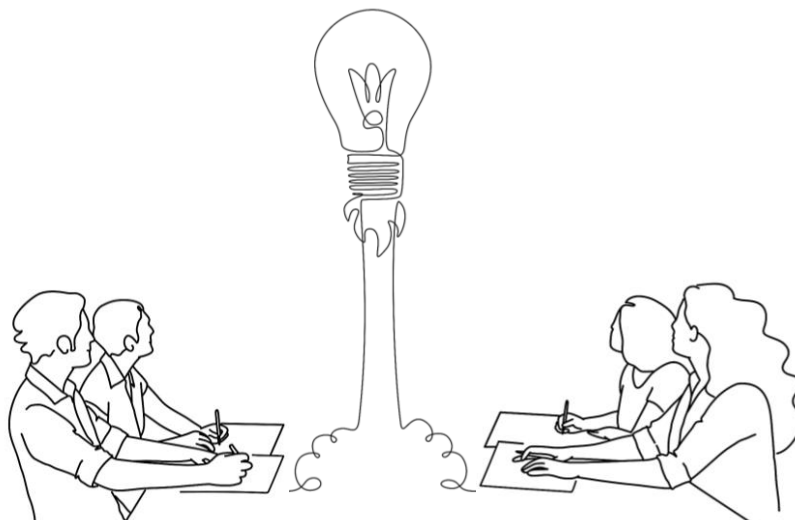
Have you ever contacted safety professionals for help with specific questions about research safety or hazardous waste issues in your lab?

- Yes, they were helpful
- Yes, they were NOT helpful
- No, I haven't needed them
- No, I don't know anyone I can contact
- Not applicable



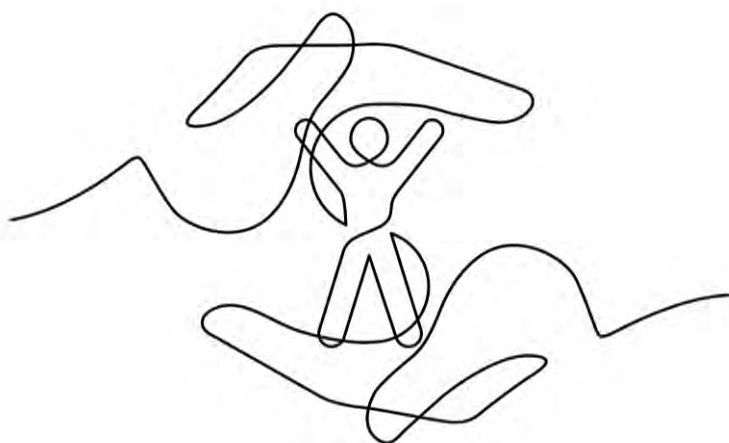
28

Safety-related Team Conversations with Peers



Monica

Safety Networks



Monica

Research Productivity and Housekeeping Challenges



Jessica







Graduate and Postdoctoral Led Laboratory Safety Teams


Safety Professionals and Faculty Champions



Jessica

The workshop started at an ACS National Meeting in 2018...and the rest is history!


 ACS
 Chemistry for Life®
 
 ACS Committee on Chemical Safety
 
 ACS Chemical Safety Programs
 
 ACS Division of Chemical Health and Safety

FALL 2019 NATIONAL ACS WORKSHOP
Developing Graduate Student Leadership Skills in Laboratory Safety

 Featuring three safety program experts
 Create individualized plans for student safety programs

SUNDAY, AUGUST 25 3:00–6:00 PM \$25

 REGISTER OR REFERENCE MATERIAL

HISTORY OF THE CHAS LST WORKSHOP

NOVEMBER 4, 2020 RALPH STUART LEAVE A COMMENT

 In 2018, Dr. Kali A. Miller, at the time a graduate researcher at the University of Illinois-Urbana Champaign and involved in the laboratory safety team there, developed a workshop called "Developing Graduate Student Leadership Skills in Laboratory Safety." Initially supported by the ACS Committee on Chemical Safety, ACS Division of Chemical Health and Safety, ACS Safety Programs, and the ACS Office of Graduate Education, the workshop was first held at the ACS National Meeting in Spring 2018. A paper was published describing this pilot workshop and initial survey analysis that can be found [here](#). The workshop continued to be held at ACS National Meetings with different graduate researcher facilitators.


Jessica

33

2021 CHAS Graduate Student Safety Leadership Award

Recognizing graduate student researcher or recent graduate who demonstrates outstanding leadership in the area of chemical health & safety in their laboratory or department.

Jessica DeYoung, University of Iowa
 Omar Leon Ruiz, University of California, Los Angeles
 Sarah Zinn, University of Chicago
 Cristian Aviles-Martin, University of Connecticut



In recognition of these students' collective and individual contributions to the workshop "Empowering Academic Researchers to Strengthen Safety Culture" supported by the ACS Division of Chemical Health and Safety and for their role in developing and strengthening Laboratory Safety Teams (LSTs) at their respective institutions.



Jessica

34

dchas.org



ACS Division of Chemical Health and Safety

CHAS WORKSHOPS 2021

SEPTEMBER 1, 2021 | 8AM-12PM EDT

The Division of Chemical Safety presents several workshops as part of the American Chemical Society's continuing education program around chemical safety issues. CHAS has two workshop tracks, aimed at either specific stakeholders or chemistry professionals who need specific chemical safety education to complete their expertise, either in the lab or in business settings. The stakeholder workshops are taught by people from that group with safety experience (e.g. grad students teaching grad students), whereas the professional development workshops are taught by full-time Environmental Health and Safety professionals.

To register for any of these workshops, click on the **workshop description for that workshop**.

We can also help arrange presentations of these workshops in other venues. If you are interested in arranging any of these trainings for your company or local section meetings, contact us at member-sha@dchas.org

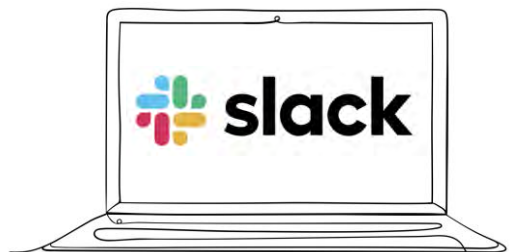
ACS CHAS Stakeholder Workshop:
Empowering academic researchers to strengthen safety culture

JST
JST SAFETY TEAM

Workshop Goals:
• Educate participants about the value of risk assessment
• Foster and guide students gaining experience of safety culture through hands-on lab conditions
• Challenge participants to expand their safety horizons for academic research environments

Also known as the Lab Safety Teams workshop, taught by chemistry graduate students with experience with implementing and maintaining laboratory safety programs at their home institutions. The workshop will meet on **Friday, October 17, 2021, 10am-12pm**. www.dchas.org for full details.

Navigation menu: CHAS WEBSITE CONTENTS, CHAS WEB PRESENCE STRATEGIC PLAN, CHAS INFORMATION SOURCES, ACS CHEMICAL SAFETY RESOURCES, CHEMICAL SAFETY EDUCATION RESOURCES, LABORATORY LEARNING LEARNED PAGES, LAB SAFETY TEAM RESOURCES, ASSISTING SAFETY OF CHEMICAL STUDIOS, PERIODIC TABLE OF SAFETY RESOURCES, CHAS LAB RISK ASSESSMENT VIDEO, WORKING ALONE IN THE LAB VIDEO, ACS Webinars: Working Together to Design Safer Laboratories (Nov 10, 2021)



Workspace: labsafetyteams



Jessica

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Co-produced with:

ACS Technical Division Chemical Health & Safety (CHAS)

ACS Committee Chemical Safety

Enhancing Research Productivity

Through Student-Led Laboratory Safety Teams



FREE Webinar | TODAY at 2pm ET



ASK YOUR QUESTIONS NOW IN THE QUESTIONS WINDOW...THE Q&A IS ABOUT TO BEGIN!



Enhancing Research Productivity through Student-Led Laboratory Safety Teams



SARAH ZINN
Member, ACS Division of
Chemical Health and Safety



JESSICA MARTIN
Member, ACS Division of
Chemical Health and Safety



KALI MILLER
Member, ACS Division of
Chemical Health and Safety



MONICA NYANSA
Member, ACS Division of
Chemical Health and Safety



RALPH STUART
Environmental Safety Manager,
Keene State College and Chair, ACS
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Presentation slides are available now! The edited recording will be made available as soon as possible.

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Careers in Science and Engineering:

Everything that You Need to Know

Professor Ashutosh Sharma
Institute Chair Professor,
Indian Institute of
Technology, Kanpur

Date: Wednesday, November 10, 2021 @ 7:30am ET (6-7pm IT)
Speaker: Ashutosh Sharma, Indian Institute of Technology, Kanpur
Moderator: Deeksha Gupta, American Chemical Society

Register for Free!

What You Will Learn:

- What are the current career options and job opportunities for chemistry graduates in India
- How to choose a career based on personal strengths and values
- How to bridge gaps to increase your chance of employability

This special broadcast is targeted for an audience based in India and is co-produced with ACS International and ACS Publications.

Sustainability Through Innovation

A Conversation with Industry Experts

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- Real life innovations where the chemical industry has incorporated sustainability into their operations
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Bringing Systems Thinking into the Classroom

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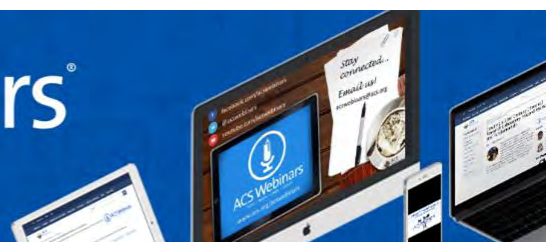
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Mike Russell Erik Katie Erin

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