

FACSS PRESENTS

SCIX2019



PRELIMINARY PROGRAM

RENAISSANCE

Register by
SEPT 20TH
to Save!

OCTOBER 13 - 18

Palm Springs Convention Center - Palm Springs, CA

SciXconference.org

FACSS MEMBER SOCIETIES

American Chemical Society Division of Analytical Chemistry
 AES Electrophoresis Society
 American Society for Mass Spectrometry
 ANACHEM
 Austrian Society of Analytical Chemistry
 CLIRSPEC
 The Coblenz Society
 Council for Near Infrared Spectroscopy
 Infrared and Raman Discussion Group
 International Society of Automation - Analysis Division
 North American Society for Laser-Induced Breakdown Spectroscopy
 Royal Society of Chemistry Analytical Division
 Society for Applied Spectroscopy
 Society for Archaeological Sciences
 Spectroscopical Society of Japan

SciX IS WHERE YOU WILL ALSO FIND THE ANNUAL MEETINGS OF

AES Electrophoresis Society
 The Coblenz Society
 North American Society for Laser-Induced Breakdown Spectroscopy (NASLIBS)
 The Society for Applied Spectroscopy (SAS)

FACSS EXECUTIVE OFFICERS

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SciX 2019 OFFICERS

Mark Hayes, Arizona State University, General Chair
Garth Simpson, Purdue University, Program Chair
Robert Chimenti, RVC Photonics/ Rowan University, Workshops Chair
Mike Carrabba, Droplet Measurement Technologies, Exhibits Chair
Christopher Harrison, San Diego State University, Local Chair

SciX 2019 PROGRAM SECTION CHAIRS

The SciX Organizing Committee thanks the following Program Section Chairs for organizing scientific sessions within their area of expertise:

AES Electrophoresis

Sagnik Basuray, *New Jersey Institute of Technology*
 Adam Wooley, *Brigham Young University*

Atomic Spectroscopy

Jorge Pisonero, *Universidad de Oviedo*
 Derrick Quarles Jr., *Elemental Scientific*

Awards

Mary Kate Donais, *Saint Anselm College*

Biomedical and Bioanalytical

Karen Esmonde-White, *Kaiser Optical Systems*
 Juergen Popp, *Friedrich Schiller University Jena*

Chemometrics

Peter Harrington, *Ohio University*

Contemporary Issues in Analytical Science

Rebecca Airmet, *Airmet Editing*

Forensics and Security

Greg Klunder,
Lawrence Livermore National Laboratory

Robert Lascola, *US Dept. of Energy,*
Savannah River National Laboratory

International LIBS

François R. Doucet, *Elemission*

Mass Spectrometry

Christopher Hendrickson,
National High Magnetic Field Laboratory
 Glen Jackson, *West Virginia University*

Molecular Spectroscopy (IR)

Curt Marcott, *Light Solutions*
 Michael George, *University of Nottingham*
 Bernhard Lendl, *TU Wien*

Nanotechnology

Wei Zhao, *University of Arkansas, Little Rock*

Pharmaceutical Analysis

Anna Luczak, *Bristol-Myers Squibb*
 John Wasyluk, *Bristol-Myers Squibb*

Process Analytical

James Rydzak, *Specere Consulting*
 Xiaoyun (Shawn) Chen, *Dow Chemical*

Raman Spectroscopy

Duncan Graham, *University of Strathclyde*
 Ian Lewis, *Kaiser Optical Systems*
 Pavel Matousek, *Rutherford Appleton Laboratory*

Spectroscopical Society of Japan

Yukihiro Ozaki, Shigeaki Morita, Igor Lednev,
 Yusuke Morisawa, and Yuika Saito

Special Sessions at SciX 2019

Garth Simpson, *Purdue University*
 Robert Lascola, *Savannah River National Laboratory*
 Andrew Whitley, *HORIBA Scientific*

Surface Plasmon Resonance

Jean-Francois Masson, *University of Montreal*
 Kateryna Artyushkova, *Physical Electronics*

ABOUT THE PROGRAM

Plan to attend SciX 2019, the annual meeting of the Federation of Analytical Chemistry and Spectroscopy Societies (FACSS). This event is a comprehensive, intimate and all-inclusive meeting where the newest, most innovative research in the analytical sciences is presented. Meet up with old and new friends, learn, and network while attending multiple days of oral presentations, workshops, poster sessions, the SciX technical exhibition hall, and a plethora of social events.

REGISTRATION

Register online at SciXconference.org by Friday, September 20, 2019 to receive reduced registration rates. To receive the discounted member rate, be sure your membership is current in at least one of the 15 FACSS member societies. To join or renew, visit the society's website.

CONFERENCE

REGISTRATION TYPE	EARLY RATES	REGULAR RATES (after 9/20/19)
Member	\$650	\$700
Non-Member	\$725	\$800
Student or Retiree	\$250	\$250
One Day	Available onsite only	\$450
Companion Registration <i>(see website for details)</i>	\$75	\$75

WORKSHOPS AND SHORT COURSES

Choose to attend one or more workshops taking place throughout the SciX conference. These courses are open to conference and non-conference attendees for a separate registration fee. Visit the Short Courses/Workshop web page on SciXconference.org for course details. Onsite registration is not guaranteed.

REGISTRANT TYPE	HALF DAY	FULL DAY
Conferee	\$225	\$550
Non-conferee	\$325	\$550
Student or Retiree	\$25	\$50

Cancellations

Requests for refunds must be received on or before September 30, 2019. There will be a \$50 processing fee for all refunds. Refunds will not be processed until after the meeting. Refund requests received after September 30, 2019 will not be honored.

Americans with Disabilities Act

FACSS complies with legal requirements of the Americans with Disabilities Act. If you need special accommodations, please email your specific needs to the FACSS SciX office at SciX@scixconference.org. Advance notification is required to ensure our ability to accommodate your request.

LOCATION AND TRAVEL

The SciX conference takes place at the Palm Springs Convention Center with overflow activities inside the connected Renaissance Palm Springs. Fly into the Palm Springs International Airport (PSP) and you are just two miles from the SciX meeting venues.

HOTEL ACCOMMODATIONS

SciX offers discounted room rates and special rates for government employees and students at the Renaissance Palm Springs and the Hilton Palm Springs. Both hotels offer a complimentary airport shuttle. Be sure to receive the SciX discounted hotel rates by securing your room via SciXconference.org or by calling the hotels directly. **Book your room prior to Friday, September 27th for discounted rates, but act fast – rooms may sell out early!**

Renaissance Palm Springs **From \$219**
888 E Tahquitz Canyon Way, Palm Springs, CA 92262
(760) 322-6000

Hilton Palm Springs **From \$209**
400 E Tahquitz Canyon Way, Palm Springs, CA 92262
(760) 320-6868

FOR STUDENTS

FACSS and SciX are dedicated to the development of undergraduate and graduate student attendees, who are invited to take advantage of the following opportunities:

- Reduced hotel and registration rates
- Multiple student poster sessions and awards by FACSS, SAS, and AES Electrophoresis
- Employment Bureau
- Complimentary conference registration available to limited number of students who volunteer 4 hours to help at the conference

Contact the SciX Conference Office at SciX@SciXconference.org.

DON'T MISS OUR POPULAR NETWORKING OPPORTUNITIES

FACSS / SciX Events

SciX Bicycle Ride
SciX Welcome Mixer
Multiple Coffee Breaks and Poster Sessions
SciX Complimentary Lunches in Exhibit Hall
Happy Hour and Evening Receptions with Exhibitors

Member Society Events

SAS Members' Events
SAS Sunday Night Student Poster Session
Coblentz Speed Networking
More to be announced!



WORKSHOPS/SHORT COURSES

SUNDAY, OCTOBER 13

- 9 am – 12 pm A Practical Introduction to Infrared, Raman, and Near Infrared Spectroscopy - James A. de Haseth, University of Georgia
9 am – 4 pm Basic Chemometrics - Barry Wise, Eigenvector
1 pm – 4 pm Searching Infrared and Raman Spectra - James A. de Haseth, University of Georgia

MONDAY, OCTOBER 14

- 9 am – 12 pm Introduction to Hyperspectral/Multivariate Image Analysis - Robert T. Roginski, Eigenvector
9 am – 12 pm Introduction to Raman with Imaging Applications - David Tuschel, HORIBA Scientific
1 pm – 4 pm Non-Linear Methods for Regression and Classification - Donal O'Sullivan, Eigenvector
1 pm – 4 pm Problems with FT-IR Spectra & How to Avoid Them - Ellen Miseo, TeakOrigin; Jenni Briggs, Pike Technologies; Gloria Story, Procter & Gamble

TUESDAY, OCTOBER 15

- 9 am – 12 pm Laser Fundamentals for Spectroscopy - Robert Chimenti, RVC Photonics/Rowan University
9 am – 12 pm Electrokinetic Microfluidics: Theory and Hands-on Simulations - Cornelius (Neil) Ivory, Washington State University
1 pm – 4 pm Portable Raman: What It Takes to Create Small Systems & What They Can Do for You - Katherine Bakeev, B&W Tek; Adam Hopkins, Metrohm
1 pm – 4 pm Advance Applications of LA-ICP-OES, LA-ICP-MS and LIBS - Jhanis Gonzalez, Applied Spectra/Lawrence Berkeley National Laboratory

WEDNESDAY, OCTOBER 16

- 9 am – 12 pm Molecular Networking and The Global Natural Products Social Molecular Networking (GNPS) Platform for the Analysis of Metabolomics Data - Amina Bouslimani, Alan Jarmusch, and Mingxun Wang, University of California, San Diego
9 am – 4 pm Process Analytical Technology: Out of the Lab and into the Line - Jim Rydzak, Specere Consulting

SUPPORTERS AND SPONSORS (At the time of printing)

Agilent Technologies	Elsevier	Metrohm USA	RPMC Laser
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Instrumentation	Spectroscopy	Phenomenex	
CPACT	JASCO	Renishaw, Inc.	
Eigenvector Research, Inc.	Meinhard - Elemental Scientific	Royal Society of Chemistry	

EXHIBITS (At the time of printing)

Attendees enjoy spending time in the SciX exhibit hall where the latest technological advances are displayed and discussed. Don't miss the What's Hot Theater, poster sessions, and the many receptions, coffee breaks, and lunches in the exhibit hall provided by SciX.

Hall Hours: Monday 5:30 pm - 7:30 pm | Tuesday 10 am - 4:30 pm | Wednesday 10 am - 4 pm

Exhibiting companies as of the time of printing:

ABB	Fette Compacting	PerkinElmer
ACS Division of Analytical Chemistry	FiberTech Optica, Inc.	Photon Systems
AES Electrophoresis Society	Hamamatsu Corporation	Photothermal Spectroscopy Corp
Agilent Technologies, Inc.	Harrick Scientific	PIKE Technologies
Alluxa	Hellma USA	Pittcon 2020
Andor Technology	HORIBA Scientific	Princeton Infrared Technologies, Inc.
Anton Paar USA	Ibsen Photonics	R Specialty Optical Fibers
Applied Spectra, Inc.	ICP Information Newsletter	Renishaw, Inc.
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Barnett Technical Services	Lumibird, Inc.	Sentronic GmbH
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Bio-Rad Laboratories, Informatics Division	Metrohm USA	Specac, Inc.
Broadcom	MONTFORT Laser GmbH	Spectral Systems LLC
Bruker Optics	Mott Corporation	Spectroscopy Magazine
CloudMinds Technology, Inc	neaspec GmbH	Spring SciX
Coblentz Society	Necsel IP	Teledyne Princeton Instruments
Cobolt by HUBNER Photonics	NKT Photonics	Thermo Fisher Scientific
Czitek	Ocean Insight	Timegate Instruments Ltd
DRS Daylight Solutions	Ondax, Inc.	Tornado Spectral Systems
Edinburgh Instruments	OPCO Laboratory	TSI ChemLogix™
Eigenvector Research, Inc.	Optigrate Corp	Wasatch Photonics
EmVision LLC	OptoSigma	WITec Instruments Corp
FACSS	Pendar Technologies	

Thinking about exhibiting at SciX?

Limited opportunities remain for exhibit space, What's Hot vendor showcases, and sponsorship — get your exposure now at SciXconference.org.

SciX 2019 Preliminary Program

Subject to Change

SUNDAY, OCTOBER 13

3:00 pm – 6:00 pm "What's Hot" Vendor Presentations

6:15 pm – 7:15 pm Welcome and Keynote Presentation

Chair: Garth Simpson



Keynote Lecture

The Convergence of Measurement and Data Sciences: A Great Exchange

Rohit Bhargava

University of Illinois

7:15 pm Welcome Mixer and SAS Student Poster Session

MONDAY, OCTOBER 14

7:45 am – 9:30 am Plenary Session

Chair: Mary Kate Donais

8:00 am RSC Theophilus Redwood Award/2018 Coblenz Society Craver Award
Polymer-enabled Plasmonic Sensing
Christy L. Haynes,
University of Minnesota



8:30 am Ellis R. Lippincott Award
From Bond-selective Chemistry to Bond-selective Imaging: My 30 Years' Path to Tackle Missions Impossible
Ji-Xin Cheng, Boston University



9:00 am Spectroscopy's Emerging Leader in Molecular Spectroscopy Award
Decoding the Molecular Pathology of Cancer with Vibrational Spectroscopy
Ishan Barman, Johns Hopkins University



9:45 am – 10:45 am Poster Session and Break

10:50 am – 12:30 pm Morning Symposia

19AES01: Electrokinetic Fundamentals

Chairs: Aliaksei Boika, Karina Torres Castro

19AWD01: RSC Theophilus Redwood Award Honoring Christy Haynes

Chair: Christy Haynes

19BIM01: Biomedical Spectroscopy and Imaging for Cancer

Chair: Michael Schmitt

19FORENS01: Nuclear Forensics

Chairs: Dallas Reilly, Greg Klunder, Rob Lascola

19IRO2: Nanoscale IR Spectroscopy I: Recent Advances

Chair: Andrea Centrone

19IR12: Forefront of Molecular Spectroscopy

Chair: Isao Noda

19LIBS01: Fundamentals

Chair: Alessandro Digiacomio

19NANO01: Carbon-based Nanomaterials: Synthesis, Properties, and Applications

Chair: Wei Zhao

19PMA03: Biopharmaceutical Raw Material Characterization

Chair: John Bobiak

19RAM11: Food Security

Chair: Roy Goodacre

19SPECIAL03: Society for Archaeological Sciences: Chemistry in Art & Archaeology I

Chairs: Mary Kate Donais, Andrew Zipkin

19SPSJ01: VUV/FUV/DUV I

Chairs: Yukihiko Ozaki, Yusuke Morisawa

1:30 pm – 3:10 pm Afternoon Symposia

19AES02: Electrokinetic Applications

Chairs: Jeffrey Moran, Anna Nielsen

19ATOM01: Low Pressure Glow Discharge Spectroscopies

Chair: Jorge Pisonero

19AWD13: Ellis R. Lippincott Award Honoring Ji-Xin Cheng

Chair: Ji-Xin Cheng

19BIM02: Spectroscopic Approaches to Tackle Infectious Diseases

Chair: Jürgen Popp

19IRO3: Nanoscale IR Spectroscopy II: Fundamentals and Applications

Chairs: Andrea Centrone, Georg Ramer

19LIBS03: Biomedical and Pharmaceutical Applications

Chair: Noureddine Melikechi

19MASS04: Forensic Applications of Mass Spectrometry

Chair: Glen Jackson

19NANO02: Nano-Facilitated Sensing

Chair: David Thompson

19PMA01: Solving Industrial Problems using Vibrational Spectroscopy

Chair: Andrew Marriott

19RAM09: IRDG

Chair: Karen Faulds

19SPECIAL04: Society for Archaeological Sciences: Chemistry in Art & Archaeology II

Chairs: Mary Kate Donais, Andrew Zipkin

19SPR01: Nanostructure Implications on Plasmonics

Chair: Amanda Haes

3:10 pm – 3:50 pm Poster Viewing and Break

3:50 pm – 5:30 pm Afternoon Symposia

19AES03: ACS ANYL-AES Joint Session: Micro/Nano Scale Analytics

Driven by Electric Fields

Chairs: Mark Hayes, Lane Baker

19ATOM02: Laser Ablation Based Spectroscopies

Chair: Jorge Pisonero

19AWDO6: Spectroscopy's Emerging Leader in Molecular Spectroscopy

Award Symposium Honoring Ishan Barman

Chair: Ishan Barman

19CTP01: Commercialization of Analytical Technologies

Chair: Karen Esmonde-White

19IRO4: Advances in Molecular Spectroscopy

Chair: Xianghuai William Wang

19IR11: Nanoscale IR Spectroscopy III: Bio-Applications

Chairs: Andrea Centrone, Liang Gong

19LIBS09: Geology

Chair: Lütfü Özcan

19MASS02: Untargeted Metabolomics: Innovations and Applications

Chair: Amina Bouslimani

19PAT07: Process Analytical in the Petroleum/Refineries Industry

Chair: Toni Miao

19PMA02: Biophysical Characteristics of Biotherapeutics: From Discovery to Development

Chair: Deniz Temel

19RAM06: SERS I

Chairs: Roy Goodacre, Colin Campbell, Duncan Graham

19SPSJ02: VUV/FUV/DUV II

Chair: Yukihiro Ozaki

5:30 pm – 7:30 pm Exhibits Opening Reception

TUESDAY, OCTOBER 15

7:45 am – 9:00 am Plenary Session

Chair: Mary Kate Donais

8:00 am Charles Mann Award for Raman Spectroscopy



Development of SERS and SESORRS for Multiplexed Bioanalysis

Karen Faulds, University of Strathclyde

8:30 am ANACHEM Award



Droplet Microfluidics with Mass Spectrometry for High-Throughput Chemistry, Screening, and Sensing

Robert Kennedy, University of Michigan

9:15 am – 10:55 am Morning Symposia

19AES04: 3D Printed Microfluidics: New Materials and New Applications

Chairs: R. Scott Martin, Ana Egatz

19AWDO3: Charles Mann Award Symposium Honoring Karen Faulds

Chair: Karen Faulds

19BIM03: Liquid Biopsies for Biomedical Applications (CLIRSPEC)

Chair: Matthew Baker

19CHEM01: New Frontiers in Chemometrics

Chair: Federico Marini

19FORENS02: Food Forensics

Chairs: Betsy Jean Yakes, Luis Rodriguez-Saona

19IRO5: Quantum Cascade Lasers

Chair: Bernhard Lendl

19IRO9: Recent Advances in Using Molecular Spectroscopy for PAT

Chair: Mike George

19MASS03: Identification of Peptide Isomers with Mass Spectrometry

Chair: Ryan Julian

19PMA07: Metabolic Screening and Small Molecule Detection

Chair: Katherine Hollywood

19RAM03: Nano Raman

Chair: Andrew Whitley

19RAM07: SERS II

Chairs: Colin Campbell, Roy Goodacre, Duncan Graham

19SPSJ03: Near Infrared Spectroscopy I

Chair: Shigeaki Morita

11:00 am – 11:45 am Poster Session and Break

11:30 am – 12:45 pm Exhibit Hall Activities

“What’s Hot” Vendor Presentations (11:30 am - 1:20 pm)

Complimentary Lunch (12:00 - 12:30 pm)

1:30 pm – 3:10 pm Afternoon Symposia

19AES08: Biological and Pharmaceutical Applications

Chairs: Wenwan Zhong, Mike Beauchamp

19ATOM3: Atomic Spectroscopy Techniques for Nuclear Applications

Chair: Benjamin Manard

19AWD08: ANACHEM Award Symposium Honoring Robert Kennedy

Chair: Robert Kennedy

19BIM04: Spectroscopy and Precision Medicine

Chair: Michael Walsh

19IR10: Recent Advances Using Molecular Spectroscopy for Pharmaceutical Research

Chair: Mike George

19LIBS02: LIBS for Industry 4.0

Chair: Francois Doucet

19LIBS05: Archaeology and Anthropology

Chair: Matthieu Baudelet

19RAM08: SERS III

Chairs: Duncan Graham, Colin Campbell, Roy Goodacre

19RAM17: Raman Spectroscopy for Security and Forensics Purposes

Chair: Igor Lednev

19SPECIAL02: SAS Session: Microplastics in the Environment I

Chairs: Andrew Whitley, Shelly Moore

19SPR02: Sensing with Plasmonics

Chairs: Amanda Haes, Jean-Francois Masson

19SPSJ04: Near Infrared Spectroscopy II

Chair: Shigeaki Morita

3:10 pm – 3:50 pm Poster Viewing and Break

3:50 pm – 5:30 pm Afternoon Symposia

19AES06: AES: Leaders in the Field

Chairs: Sagnik Basuray, Adam Woolley

19ATOM9: High End ICP-MS Instrumentation

Chair: Johanna Irrgeher

19CHEM03: Chemometrics at Work in Industry

Chair: Barry Wise

19CTP03: Solving Developing World Chemistry Challenges: Where Are We Now?

Chair: Diane Parry

19IRO6: Mid-IR Frequency Combs

Chair: Bernhard Lendl

19LIBS08: LIBS Elemental Imaging

Chair: Vincent Motto-Ros

19PAT06: PAT Enabled Flow Chemistry and Continuous Manufacturing

Chairs: Jim Rydzak, Savitha Panikar

19PMA09: Pharmaceutical Forensics: Applying Analytical Science to Safe Manufacturing, Supply, and Screening

Chairs: Ravi Kalyanaraman, Scott Huffman

19RAM12: Emerging Raman

Chairs: Pavel Matousek, Duncan Graham, Ian Lewis

19RAM16: Stand-off Raman

Chair: Nathaniel Gomer

19SPECIAL05: SAS Session: Microplastics in the Environment II

Chair: Andrew Whitley

19SPR06: Rising Stars in Plasmonics

Chair: Jean-Francois Masson

7:00 pm SAS Awards Ceremony: Followed by SAS Invite-only Reception at 8:00 pm

WEDNESDAY, OCTOBER 16

7:45 am – 9:00 am Plenary Session

Chair: Mary Kate Donais

8:00 am Lester W. Strock Award

Remote LIBS, Raman and Hyperspectral Raman Imaging Using a Monolithic Spatial Heterodyne Spectrometer

S. Michael Angel, University of South Carolina



8:30 am AES Electrophoresis Mid-Career Award

Digitizing Endocrine Tissue Secretions into Nanoliter Droplets for Analysis of Hormones and Metabolites at High Temporal Resolution

Christopher J. Easley, Auburn University



9:15 am – 10:55 am Morning Symposia

19ATOM04: Atmospheric Pressure Glow Discharge Spectroscopies I (Instrumentation)

Chair: R. Kenneth Marcus

19AWD05: Lester Strock Award Symposium Honoring S. Michael Angel

Chair: S. Michael Angel

19AWD07: AES Mid-Career Award Symposium Honoring Chris Easley

Chairs: Jason Dwyer, Chris Harrison

19BIM05: Vibrational Spectroscopy: Toward Clinical Applications

Chairs: Karen Esmonde-White, Fay Nicolson

19CHEM04: Chemometric Opportunities in the Forensic Sciences

Chair: Rabi Musah

19FORENS05: Enabling Methods for Challenging Forensics Applications

Chair: Greg Klunder

19IRO7: Time-resolved IR and 2D-IR Spectroscopy

Chair: Mike George

19LIBS04: Molecular Signal in LIBS

Chair: Michael Goff

19PAT05: Advances in On-line Process Analysis

Chair: Alison Nordon

19PMA08: Artificial Intelligence in Pharma

Chairs: Steve Buckley, Peter Harrington

19RAM01: Low Frequency Raman

Chair: Anjan Roy

19RAM13: Biomedical Raman (CLIRSPEC)

Chair: Nick Stone

11:00 am – 11:45 am Poster Viewing

11:30 am – 12:45 pm Exhibit Hall Activities

“What’s Hot” Vendor Presentations (11:30 am - 1:20 pm)

Complimentary Lunch (12:00 - 12:30 pm)

1:30 pm – 3:10 pm Afternoon Symposia

19AES05: Biosensors

Chairs: Erin Henslee, Rucha Natu

19ATOM05: Atmospheric Pressure Glow Discharge Spectroscopies II (Applications)

Chair: R. Kenneth Marcus

19CHEM05: Unraveling Sample Matrix Effects with Chemometrics

Chair: John Kalivas

19CTP04: Deviations from the Beer-Lambert Law: New Perspectives and Solutions

Chair: Jürgen Popp

19FORENS03: Forensic Analysis in the Lab and at the Crime Scene

Chair: Igor Lednev

19IRO8: Recent Advances in Chemical and Material Detection Using Molecular Spectroscopy

Chair: Mike George

19LIBS11: 2019: International Year of the Periodic Table at the Speed of Light (New Methodology)

Chair: Kheireddine Rifai

19PAT03: Industrial Applications of Vibrational Spectroscopy

Chairs: Mark Rickard, Xiaoyun Chen

19PMA11: Spectroscopy for Pharmaceutical Applications

Chairs: Shengli Ma, Raphael Fish

19RAM05: Portable Raman

Chair: Neil Shand

19SPECIAL01: SAS Session Commemorating John Jackovitz

Chair: Robert Lascola

19SPR05: Multimodal and Multifunctional Plasmonics

Chair: Wei-Chuan Shih

3:10 pm – 3:50 pm Poster Viewing and Break

3:50 pm – 5:30 pm Afternoon Symposia

19ATOM06: Atmospheric Pressure Glow Discharge Spectroscopies III (Molecular)

Chairs: Jacob Shelley, Steven Ray

19AWD09: AES Lifetime Achievement Award Session Honoring Hsueh-Chia Chang

Chairs: Satyajyoti Senapati, Gongchen Sun

19CHEM06: Sample and Variable Selection: Memorial Session Honoring Frank Vogt

Chair: Barry Lavine

19CTP02: Women in Analytical Chemistry

Chair: Rina Dukor

19LIBS07: Innovation in Instrumentation

Chair: Francois Doucet

19MASS01: MS Characterization of Proteins, Protein Complexes, and Therapeutic Proteins

Chair: Joseph Loo

19PAT04: Online Analysis of Industrial Processes and Reactions

Chairs: Anna Sandlin, J.D. Tate

19PMA04: Advanced Spectroscopic Techniques in Pharma

Chair: Sergey Arzhantsev

19PMA06: Counterfeits Food Products and Dietary Supplements

Chair: Sulaf Assi

19RAM10: Raman Imaging/Microscopy

Chairs: Katsumasa Fujita, Duncan Graham

19RAM19: Raman with Spatial Light Modulators

Chair: Ioan Notingher

19SPR04: Plasmon-enhanced Techniques

Chair: Gregory Wallace

6:30 pm SciX Gala – A Night at the Oscars

THURSDAY, OCTOBER 17

7:45 am – 9:00 am Plenary Session

Chair: Mary Kate Donais

8:00 am



Applied Spectroscopy William F. Meggers Award

Reflectance Spectra of Solids & Liquids -

Easier to Obtain, Harder to Interpret:

The Case for the Optical Constants

Tim J. Johnson, Pacific Northwest National Laboratory

8:30 AM



Coblentz Society Craver Award

Have Fun & Impact with in situ Spectroscopy in the Chemical Industry

Xiaoyun “Shawn” Chen, Dow Chemical Company

9:15 am – 10:55 am Morning Symposia

19ATOM7: Atomic Spectroscopy Techniques for Nano & Bioanalysis

Chairs: Martin Resano, Jose Manuel Costa-Fernandez

19AWD04: William F. Meggers Award Symposium Honoring Tim Johnson

Chair: Tim Johnson

19BIM06: Machine and Deep Learning for Biomedical Diagnostics

Chairs: Thomas Bocklitz, Rohith Reddy

19CHEM07: Chemotyping Complex Materials by Chemometrics

Chair: Mengliang Zhang

19FORENS04: Environmental Forensics

Chair: Mark Cejas

19LIBS10: Environmental Monitoring

Chair: Cassiana Nomura

19PAT01: SAS PAT Technical section: PAT in the Pharmaceutical Industries Session I

Chair: Jim Rydzak

19PMA05: Atomic Spectroscopy Applications in Pharmaceuticals

Chair: Sharla Wood

19RAM02: Raman Spectroscopic Sensing

Chair: Torsten Frosch

19RAM15: Spatially Offset Raman Spectroscopy (SORS)

Chair: Pavel Matousek

19SPECIAL06: SAB Special Session

Chairs: Sara Tufi, Alessandro De Giacomo

11:00 am – 11:45 am Poster Viewing

1:30 pm – 3:10 pm Afternoon Symposia

19ATOM08: Atomic Spectroscopy Techniques for Clinical/Medical

Chair: C. Derrick Quarles Jr.

19AWD11: Clara Craver Award Symposium Honoring Shawn Chen

Chair: Xiaoyun "Shawn" Chen

19BIM07: New Frontiers in Biomedical Analysis

Chair: TBA

19CHEM02: Exploiting Spatial & Spectral Information in Hyperspectral Images

Chair: Thomas Bocklitz

19IRO1: Optical Photothermal Infrared Spectroscopy I

Chairs: Curtis Marcott, Andrea Centrone

19LIBS06: Forensics and Security

Chair: Jose Almirall

19MASS05: Mass Spectrometry of In-tact Proteins and Protein Complexes

Chair: Kermit Murray

19PAT02: SAS PAT Technical section: PAT in Biopharmaceutical Industries Session II

Chairs: Daniel Hill, Dan Hill

19PMA10: Enable Intensified Downstream Manufacturing by Advanced Online Sensor Technologies

Chair: Richard Wu

19RAM04: Industrial Raman

Chair: Karen Esmonde-White

19RAM14: Transmission Raman Spectroscopy

Chair: Mark Mabry

19SPR03: Plasmon and Imaging: Catalysis

Chair: Zachary Schultz

3:10 pm – 3:50 pm Poster Viewing and Break

3:50 pm – 5:30 pm Plenary Session: Innovation Award Symposium

Chair: Mary Kate Donais

Accelerated Restricted Boltzmann Machines

Peter Harrington

Molecular Basis for Chirality-regulated A β Self-assembly and Receptor Recognition Revealed by Ion Mobility-mass Spectrometry

Gongyu Li

Chemical Approaches to Improve Nanopore Single-Molecule Sensing

Jason Dwyer

Enhancing Enantioselective Absorption with Plasmonic and Dielectric Metasurfaces

John Abendroth

FRIDAY, OCTOBER 18

7:30 am – 8:00 am Continental Breakfast

8:00 am – 10:30 am Plenary Session: Innovation Award Winner, SciFri, and 2020 Preview

Chair: Garth Simpson

8:00 am Announcement of 2019 Innovation Award Winner

8:15 am SciFri Plenary Presentations

Christy Landes, Rice University | Randy Bartels, Colorado State University | Dor Ben-Amotz, Purdue University

10:00 am Preview of 2020 Conference; Linda Kidder Yarlott and Mary Kate Donais



Join Us For The Following Special Events

at our

SAS National Meeting

during **SciX**

in Palm Springs, CA

All events in the Renaissance Hotel
unless otherwise noted.

- Sunday, 10/13 at 12:00pm, **SAS Members Only Special Event***: San Andreas Fault Jeep Tour and Lunch
- Sunday, 10/13 at 7:00pm, **SAS Student Poster Competition and SciX Opening Mixer**
- Monday, 10/14 at 8:00pm, **SAS Student Members Only* Event**: Downtown Palm Springs
- Three special SAS Sessions: • **Commemorating John Jackovitz** • **Microplastics in the Environment 1&2**
- Tuesday, 10/15 at 7:00pm, **SAS Awards Ceremony**
- Tuesday, 10/15 at 8:00pm, **SAS Wine and Cheese Celebration with Special Entertainment**:
Renaissance Palm Springs (This event is open to SAS members only* from 8:00-9:30pm. Doors will open at 9:30pm to non-members.)

*Not an SAS Member, but want to be part of our Member's Only events?
Visit www.s-a-s.org or call 301-694-8122 to join today!



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