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April 2017

Newsletter of the Eastern Analytical Symposium & Exposition



**BUILDING
OUR
ANALYTICAL
FUTURE**

2017 EASTERN ANALYTICAL SYMPOSIUM & EXPOSITION

NEW LOCATION

CROWNE PLAZA PRINCETON - CONFERENCE CENTER

PLAINSBORO, NJ

NOVEMBER 13-15, 2017



The year 2017 begins a new journey for EAS with our move to the Crowne Plaza Princeton - Conference Center in Plainsboro, NJ. We are very grateful for the past 25 years in Somerset, have many fond memories of the times we spent, and truly are appreciative of the consistency it afforded. However, over the past few years we have consistently heard feedback from our exhibitors and conferees that the facility no longer met the needs for EAS and that there was a desire to have the symposium under one roof. It has been years in the making and we are very excited to have identified the Crowne Plaza Princeton Conference Center which will allow us to have the entirety of the symposium (Exposition, Technical Program, and Short Courses) under one roof in a modern updated facility. Our hope is that there will be an increase in the level of interactions between conferees, speakers, exhibitors, and short course attendees. Please make sure to let everyone know about our change of venue.

The theme for EAS this year is "Building our Analytical Future" and hopefully you will recognize our desire to continue building Eastern Analytical Symposium into the premier analytical symposium. The theme design revolves around a blueprint, and as such, we are designing our program to offer a "blueprint" to the future of both EAS and analytical science as a whole. Our Plenary lecture on Monday will be given by our 2017 EAS Award for Outstanding Achievements in the Fields of Analytical Chemistry, Prof. Janusz Pawliszyn from the University of Waterloo. The lecture is open to all registered EAS attendees and all are encouraged to attend. Our Awards committee, led by Cecil Dybowski, is continuing the tradition of presenting awards to distinguished leaders in multiple areas of the analytical disciplines. The invited program is taking shape as shown in the following sections (pages 3-6) and we encourage everyone to submit their oral and poster presentations for consideration. As you have come to expect, EAS 2017 will continue to offer an impressive assortment of Short Courses, Workshops, and Exhibitors; see the following pages for more details.

We hope that you will take the opportunity to build your analytical future alongside Eastern Analytical Symposium. I look forward to interacting with all of you both online and in person in Princeton, NJ this November 13-15.

Justin Pennington
EAS President



TABLE OF CONTENTS

Message from the President.....	1
Plenary Speaker.....	2
Call for Papers	2
Invited Technical Sessions.....	3-6
Short Courses.....	7
2017 Awardees.....	8
Workshops & Seminars.....	9
Expo News	10
Exhibiting Companies.....	11
Facts & Stats.....	12
Corporate Sponsorships.....	13
Important Dates.....	13

2017 Registration Rates

	Before Oct. 1st	After Oct. 1st
Full Conferee	\$225	\$300
Exhibit-Only	\$100	\$100
Full-Time Student	\$30	\$30
High School Student with Seminar (must register for a seminar)	\$0	\$0
Half-Day Short Course (must register as full conferee in order to take course)	\$375	\$525
One-Day Short Course (must register as full conferee in order to take course)	\$575	\$775
Two-Day Short Course (must register as full conferee in order to take course)	\$850	\$1175

PLENARY LECTURE

EAS is pleased to announce that recipient of the EAS Award for Outstanding Achievements in the Fields of Analytical Chemistry **Prof. Janusz Pawliszyn**, University of Waterloo will be the Plenary Speaker for EAS 2017.



The primary focus of Professor Pawliszyn's research program is the design of highly automated and integrated instrumentation for the isolation of analytes from complex matrices and the subsequent separation, identification and determination of these species. The primary separation tools used by his group are gas chromatography, liquid chromatography and capillary electrophoresis coupled to a variety of detection systems, including a range of mass spectrometry techniques. Currently his research is focusing on elimination of organic solvents from the sample preparation step to facilitate on-site monitoring and in-vivo analysis. Several alternative techniques to solvent extraction are investigated including use of coated fibers, packed needles, membranes and supercritical fluids. Dr. Pawliszyn is exploring application of computational and modeling techniques to enhance performance of sample preparation, chromatographic separations and detection. The major area of his interest involves the development and application of imaging detection techniques for microcolumn chromatography, capillary electrophoresis and microchip separation devices.

[Visit our website for Prof. Pawliszyn's full biography.](#)

Join us to hear Prof. Pawliszyn's plenary address:
Monday, November 13, 2017, 4:30 pm

The lecture will be immediately followed by a reception;
all registered attendees of EAS are encouraged to attend.

BUILDING OUR ANALYTICAL FUTURE

2017 EASTERN ANALYTICAL SYMPOSIUM & EXPOSITION

CALL FOR PAPERS

Oral Presentations: March 1–May 26

Poster Presentations: March 1–September 1

Online Submission at eas.org



NEW LOCATION

CROWNE PLAZA PRINCETON – CONFERENCE CENTER

NOVEMBER 13-15, 2017 | PLAINSBORO, NEW JERSEY, USA

2017 EAS Invited Technical Sessions

Preliminary List as of April 21, 2017

Note: List does **not** include contributed oral or poster Sessions – these will be posted in the EAS Preliminary Program. Contributed abstract submission deadlines are **May 26 for oral papers** and **September 1 for poster papers**. Submit at www.eas.org/submit

AWARD SESSIONS

EAS AWARD FOR OUTSTANDING ACHIEVEMENTS IN THE FIELDS OF ANALYTICAL CHEMISTRY

Sponsored by Bristol-Myers Squibb

Honoring Janusz Pawliszyn, University of Waterloo

Chair: Nicholas Snow, Seton Hall University

Growing Up with SPME, Nicholas Snow, Seton Hall University

Providing Rugged Methodology for Regulated Industries, Mary Ellen McNally, DuPont Crop Protection

Whole-Column Imaged Capillary Isoelectric Focusing (cIEF): From Academic Idea to Industrial Gold Standard, Jiaqi Wu, Protein Simple

Medical and Pharmaceutical Applications of Solid Phase Microextraction, Barbara Bojko, Nicolaus Copernicus University

EAS YOUNG INVESTIGATOR AWARD

Recent Advances in 2D-LC, Part 1: Fundamentals, Instrumentation, and Column Technology

Honoring Dwight Stoll, Gustavus Adolphus College

Chair: William Barber

Moving into the Mainstream – Reflections on Recent Developments in Two-Dimensional Liquid Chromatography, Dwight Stoll, Gustavus Adolphus College

Three-Dimensional and Higher Dimensional Separations, Mark Schure, Kroungold Analytical

Recent Developments in Active Temperature Control for Improved Chromatographic Performance, Stephen Groskreutz, University of Pittsburgh

A Research Adventure Behind Vacuum-Jacketed Chromatographic Columns: Curiosity, Theory, Development, and Applications, Fabrice Gritti, Waters

EAS AWARD FOR OUTSTANDING ACHIEVEMENTS IN CHEMOMETRICS

Sponsored by Eigenvector Research

Honoring Barry Lavine, Oklahoma State University

Chair: Steven Brown, University of Delaware

Mapping Polyethylene Reactor and Product Space Using Multivariable Analysis of Digital Distributions, Paul DesLauriers, Chevron Phillips Chemical Company

Stacking the Deck in Calibration: Better Models and Better Transfers with Stacked Calibration Methods, Steven Brown, University of Delaware

Investigation of Meteor and Meteor Impact Samples by Raman Spectroscopy and Multivariate Curve Resolution, Karl Booksh, University of Delaware

Multivariate Curve Resolution, Genetic Algorithms and Cross Correlation Library Searching in the Forensic Examination of Automotive Paints, Barry Lavine, Oklahoma State University

AWARD SESSIONS

EAS AWARD FOR OUTSTANDING ACHIEVEMENTS IN MAGNETIC RESONANCE

Sponsored by Bruker BioSpin and New Era Enterprises

Honoring Bernhard Blümich, RWTH Aachen University

Chair: Songi Han, University of CA-Santa Barbara

Shrinking NMR: From the Laboratory Floor via the Tabletop to the Pocket?, Bernhard Blümich, RWTH Aachen University

Compact NMR in Clinical Diagnostics, David Cistola, Texas Tech University

Automation of NMR with Machine Learning, Yi-Qiao Song, Schlumberger-Doll Research

Structure and Function in Metal Organic Frameworks are Informed by Portable Magnet Relaxometry, Thanks to Bernhard Blümich, Jeffrey Reimer, University of California-Berkeley

EAS AWARD FOR OUTSTANDING ACHIEVEMENTS IN SEPARATION SCIENCES

Sponsored by Agilent Technologies

Honoring Christopher Welch, Welch Innovation, LLC

Chair: Mirlinda Biba, Merck & Co.

The Practice and Consequences of Ultrafast LC and SFC, Daniel Armstrong, University of Texas-Arlington

High-Speed Enantioselective Chromatography as the Second Dimension in Multiple Heart-Cutting and Comprehensive 2D-RPLC Analysis, Erik Regalado, Merck & Co.

Innovative Approaches in High-Throughput Chromatographic Analysis in Support of Pharmaceutical Development Research, Kerstin Zawatzky, Merck & Co.

Recent Progress and Emerging Challenges in Pharmaceutical Separation Science, Christopher Welch, Welch Innovation, LLC

EAS AWARD FOR OUTSTANDING ACHIEVEMENTS IN MASS SPECTROMETRY

Honoring Scott McLuckey, Purdue University

Chair: Alice Pilo, Merck & Co.

Gas-Phase Ion/Ion Reactions: Oxidation and the Dehydroalanine Effect, Alice Pilo, Merck & Co.

Top-Down Proteomics for Clinical Assay Development, James Stephenson, Thermo Fisher Scientific

Characterization and Optimization of Ion Trapping Fields in Toroidal Coordinates, Stephen Lammert, PerkinElmer

The Study of Protein Folding and Unfolding via Theta-Tip Nano-Electrospray Ionization, Scott McLuckey, Purdue University

2017 EAS Invited Technical Sessions

Preliminary List as of April 21, 2017

AWARD SESSION *continued*

NEW YORK SECTION OF THE SOCIETY OF APPLIED SPECTROSCOPY GOLD MEDAL AWARD

Honoring: **Richard Van Duyne, Northwestern University**
Chair: Kathryn Lee, rap-ID

Nanoscale Chemical Imaging with Tip-Enhanced Raman Spectroscopy, Richard Van Duyne, Northwestern University

Translating SERS into a Robust Detection Platform for Uranium in Complex Matrices, Amanda Haes, University of Iowa

Polymer-Enabled Analytical SERS Sensing, Christy L. Haynes, University of Minnesota

Imaging Mass Spectrometry on the Nanoscale with Cluster Ion Beams, Nick Winograd, Penn State University

AMERICAN MICROCHEMICAL SOCIETY BENEDETTI PICHLER AWARD

Honoring: **Somenath Mitra, NJ Institute of Technology**
Chair: Robert Vetrechin

Session speakers to be announced

BIOANALYSIS

Analysis of Peptides and Proteins in Biological Samples in Support of Drug Discovery and Development

Chair: Wenying Jian, Janssen

Analytical Strategies and Challenges for Peptide Quantification Using LC-MS/MS in Support of GLP TK and Clinical PK Studies, Yang Xu, Merck & Co.

Assessing Drug-Target Engagement in Tissue Biopsies, Eugene Ciccimaro Jr., Bristol-Myers Squibb

Considerations for Assay Platform and Reagent Selection to Quantify Endogenous Protein Biomarker; a FGF21 Case Study, Yue Zhao, Bristol-Myers Squibb

Subunit-Level Analyses of Monoclonal Antibodies from In-Life Samples: A Whole-Molecule LC-MS Method for Quantitation, Quality Attributes, and Biotransformation, John Kellie, GlaxoSmithKline

Vibrational Characteristics of Biologics

Chairs: Anna Luczak, Varsha.Ganesh, Bristol-Myers Squibb

Plaque Detection Using Resonance Raman Spectroscopy, Robert Alfano, City University of New York

Concomitant Raman Spectroscopy and Dynamic Light Scattering for Therapeutic Protein Characterization, Chen Zhou, Eli Lilly

Use of Raman and Raman Optical Activity for the Structural Characterization of a Therapeutic Monoclonal Antibody Formulation Subjected to Heat Stress, Geetha Thiagarajan, Merck & Co.

Ligand-Receptor Binding Investigated by Tip-Enhanced Raman Spectroscopy, Lifu Xiao, University of Notre Dame

Vibrational Spectroscopic Imaging Applications to Investigate Exogenous Agent Perturbation and Spatial Distribution in Skin, Qihong Zhang, Rutgers University

CHROMATOGRAPHY

Recent Advances in 2D-LC, Part 2: Solving Real-World Problems in the Pharmaceutical and Chemical Industries, sponsored by the Chromatography Forum of the Delaware Valley

Chair: William Barber

Fast Chiral Chromatography as the Second Dimension in 2-D HPLC, Christopher Welch, Welch Innovation, LLC

Characterization of Synthetic Polymers Using Ultra-high Pressure Two-Dimensional Liquid Chromatography, Lu Bai, Dow Chemical

Expanding the Biologics CMC Analytical Toolkit with Two Dimensional Liquid Chromatography, Douglas Richardson, Merck & Co.

Application of 2D-LC-MS in Real-World Pharmaceutical Analysis, Cadapakam (CJ) Venkatramani, Genentech

Building the Future in Sample Preparation with Young Investigators, sponsored by the Chromatography Forum of the Delaware Valley

Chair: Mary Ellen McNally, DuPont Crop Protection

Improving Metabolite Coverage in Untargeted LC-MS Metabolomics, Dajana Vuckovic, Concordia University

Advances in Bioanalytical Sample Preparation, Jared Anderson, Iowa State University

The Role of Sample Preparation in Precision Medicine, Marcel Musteata, Albany College of Pharmacy and Health Sciences

What's the Matter with Sample Prep? Novel Approaches and Solutions, Roy Helmy, Merck & Co.

Emerging Frontiers in High-Throughput Analysis for Process Research & Development

Chair: Wes Schafer, Merck & Co.

Enabling High-Throughput Experimentation through High-Throughput Analysis, Wes Schafer, Merck & Co.

Reactivity-Based High-Throughput Analysis of Heavy Metals, Kazunori Koide, University of Pittsburgh

Asymmetric Reaction Screening with Chiroptical Sensors, Christian Wolf, Georgetown University

CULTURAL HERITAGE

Organized by the New York Conservation Foundation

Vibration Science and Technology in Cultural Heritage I

Chair: William Wei, Netherlands Institute for Cultural Heritage

Session speakers to be announced

Vibration Science and Technology in Cultural Heritage II

Chair: Andrew Lins, Philadelphia Museum of Art

Session speakers to be announced

Vibration Science and Technology in Cultural Heritage III

Chair: William Wei, Netherlands Institute for Cultural Heritage

Session speakers to be announced

Vibration Science and Technology in Cultural Heritage IV

Chair: John Scott, New York Conservation Foundation

Session speakers to be announced

2017 EAS Invited Technical Sessions

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ENVIRONMENTAL ANALYSIS

The Challenge of Testing for Mutagenic Impurities While Considering the Total Exposure

Chairs: James Stuart, University of Connecticut, Landon Greene, Bristol-Myers Squibb

Capturing Chemical Exposures: The Exposome and Human Health, Gary Miller, Emory University

Early Life Exposure to Environmental Chemicals and Health Trajectories, Manish Arora, Icahn School of Medicine at Mount Sinai

Volatile Genotoxic Impurity Determination in Oligonucleotide API at Sub-ppm Level, Dora Visky, Celgene Corporation

Novel Approaches to Identify Metabolite-Related Mutagenic Reactions, James Rusling, University of Connecticut

Monitoring Water Pollution to Prevent Future Flints

Chair: Satinder Ahuja, Ahuja Consulting

Impact of Flint Water Crisis on Public Safety, Ni Zhu, Virginia Tech

Combined Effect of Warming and Pollutants on Sex Determination, Bethany Decourten, University of North Carolina-Wilmington

Coal Use as a Cause of Water Quality Impairment, Larry Cahoon, University of North Carolina-Wilmington

Sustainable Pathways to Metals Contamination, Rakesh Sharma, Delhi University

Quality Data for Monitoring Pollution and Climate Change, organized by The Coblenz Society

Chair: Brandye Smith-Goettler, Merck & Co.

Simulation of the Entire Pathway from Atmospheric CO₂ into Oceans into Microalgal Biomass, Frank Vogt, University of Tennessee

Exploring the Multidimensionality of High-Resolution Photoluminescence Spectroscopy for the Environmental Analysis of Polycyclic Aromatic Compounds, Andres Campiglia, University of Central Florida

FORENSIC ANALYSIS

Cannabinoids

Chair: Michelle Peace, Virginia Commonwealth University

The Natural State, Aron Lichtman, Virginia Commonwealth University

The Evolution of Synthetic Cannabinoids, Aron Lichtman, Virginia Commonwealth University

These Aren't Your Grandfather's Cannabinoids, Justin Poklis, Virginia Commonwealth University

Today's Marijuana and MJ Products, Michelle Peace, Virginia Commonwealth University

Breaking Bad Chemistry: The Forensic Response to Clandestine Labs

Chair: Thomas Blackwell, US Drug Enforcement Administration

Clandestine Labs: A Walk Through Time, Ed Kovacs, US Drug Enforcement Administration

Chemistry of Clandestine Labs, Jarrod Wagner, Oklahoma State University

FORENSIC ANALYSIS (continued)

Research from our Emerging Forensic Scientists

Chair: Monica Joshi, West Chester University

Session speakers to be announced

LABORATORY ANALYSIS

In- or Out-Sourcing. That is the Question

Chair: Dennis Swijter, ALMA

Comparative Review of Keeping Special Microbiology in a Hospital Lab vs. Out-Sourcing to Reference Labs, Margaret Blaetz, Best Care Laboratories

Lab Workload Strategies: The In-Sourcing vs. Outsourcing Question, Kelley Copeland, Pace Analytical

Learnings from the 2016 National Burn Repository Report, Pascual Laguerre, Cintas Corporation, Brian Foy, DuPont

Best Ways to Interact with an Outsourcing Partner, Scott Hanton, Intertek

MASS SPECTROMETRY

Desorption Mass Spectrometry

Chair: Barbara Larsen, DuPont

Fundamentals and Applications of Matrix-Assisted Ionization: Zerp Energy Input Ionization, Charles McEwen, University of Sciences

Imaging Mass Spectrometry in Drug Development: Visualizing Tissue with a Molecular Lens, Reid Groseclose, GlaxoSmithKline

Improving Quantitation through a Fundamental Understanding of the MALDI Sample Preparation Process, Kevin Owens, Drexel University

Industrial Applications of Bruker™ MALDI-TOF Biotyper™ for Micro-organism Identification Suzanne Singles, DuPont

Innovations and Applications in Mass Spectrometric Analysis

Chair: Jim Shen, Bristol-Myers Squibb

Mechanistic Study of the Gas-Phase In-Source Hofmann Elimination of Doubly Quaternized Cinchona-Alkaloid Based Phase-Transfer Catalysts by (+)-Electrospray Ionization/Tandem Mass Spectrometry, Huaming Sheng, Merck & Co.

Implementation of an Agilent 6230B LC-TOF for the Dual Work Flow HRMS Analysis of ADCs and Small Molecules in a Walk-Up Environment, Michael Peddicord, Bristol-Myers Squibb

MICROSCOPY

Forensic Microscopy XI "What is it? Who does it?"

Chair: Thomas Kubic, John Jay College

The Forensic Microscopy of Dyed Beaver Furs, Michelle Miranda, SUNY - Farmingdale

Microscopy of Explosives, Peter Diaczuk, Penn State University

Forensic Analysis of Blue Glass Chips by Microspectroscopy and X-Ray Spectroscopy, Tiffany J. Millet, John Jay College, Mircea Comenescu, Graduate Center - City University of New York

More Micro Raman Spectroscopy of Organic Gun Shot Residues and Explosive Residues, Jennifer Leonard, Graduate Center - City University of New York

2017 EAS Invited Technical Sessions

Preliminary List as of April 21, 2017

MICROSCOPY *continued*

Industrial Applications of Atomic Force Microscopy (AFM)

Chairs: Amanda Mann, Matthew Lamm, Merck & Co.

Oil Reservoir Properties at the Nano-Scale: Using AFM in a Bulk Characterization Industry, Shannon Eichmann, Aramco Services Company

Atomic Force Microscopy of Polymer Systems: From Morphology to Properties to Chemical Imaging and Spectroscopy, Gregory Meyers, Dow Chemical

AFM in Pharmaceutical Formulation Development, Matthew Lamm, Merck & Co.

Atomic Force Microscopy and Nano-IR Characterization of Composites, William Haseltine, Solvay

NMR SPECTROSCOPY

Solid-State NMR of Natural Products: Life without Labels

Chair: Youngchao Su, Merck & Co.

Nanometer-Scale NMR Characterization of Functional Polymer Systems and Pharmaceutical Dispersions, Klaus Schmidt-Rohr, Brandeis University

Electron Decoupling with Dynamic Nuclear Polarization and Frequency Tunable Gyrotrons, Alexander Barnes, Washington University-St. Louis

Multinuclear Quantitative Solid-state NMR of Crystalline and Disordered Pharmaceutical Solids, Joe Lubach, Genentech

Solid-State NMR Crystallography of Pharmaceuticals Utilizing Proton-Detected Techniques under Ultrafast Spinning, Xingyu Lu, Merck & Co.

New Frontiers in Solid Analysis Spectroscopy

Chair: Lydia Breckenridge, Bristol-Myers Squibb

Laser Induced Breakdown Spectrometry vs. X-Ray Fluorescence, Sharla Wood, Bristol-Myers Squibb

Nuclear Magnetic Resonance, Yongchao Su, Merck & Co.

Laser Induced Breakdown Spectrometry/Laser Ablation, Matthieu Baudelet, University of Central Florida

Matrix-Assisted Laser Desorption Ionization, Sarah Trimpin, Wayne State University

NMR Small Molecules

Chair: Dewey Barich, GlaxoSmithKline

Session speakers to be announced

PHARMACEUTICAL ANALYSIS

Challenges of Lifecycle Management for Method Validation

Chairs: Kim Huynh-Ba, Pharmalytik and Karen Lucas, Janssen

Lifecycle Management of Analytical Methods for Biotechnology Products: A Regulatory Perspective, Rashmi Rawat (*Invited*), US Food & Drug Administration

Lifecycle Management of Methods in Animal Health, John Hayes, Merck & Co.

Lifecycle Management of Analytical Methods for Cleaning Verification Support, Mariann Neverovitch, Bristol-Myers Squibb

Lifecycle Management: USP Perspectives, Gregory Martin, Complectors Consulting

Analytical Challenges in Assessment of Drug Formulation Performance and In-Vitro Drug Release

Chair: Xujin Lu, Bristol-Myers Squibb

Dissolution Testing from Biorelevant to Quality Control - Challenges and Gaps, Jian-Hwa Han, Abbvie

Linking Dissolution Method Development and Clinical Relevance - When is a Method Appropriately Discriminating, Andre Hermans, Merck & Co.

Using In-Vitro Dissolution to Support Post Approval Changes - Global Regulatory Expectatio, Amy Bu, Bristol-Myers Squibb

Bridging Biopredictive and QC Methods - Framework and Approaches, David Curran, GlaxoSmithKline

SPECTROSCOPY

Spectroscopic Applications of PAT in the Field of Biologics and Vaccines, organized by The Coblentz Society

Chair: Brandye Smith-Goettler, Merck & Co.

Process Control Using Real Time Molecular Weight Light Scattering, Bhunit Patel, Merck & Co.

Raman-Based Nutrient and Metabolite Control in Bioprocessing Optimizes Product Quality and Peak Viable Cell Density, Karen Esmonde-White, Kaiser Optical Systems

To be announced, John Bobiak, Bristol-Myers Squibb

Spectroscopy for Counterfeit Detection, organized by The Coblentz Society

Chair: Brandye Smith-Goettler, Merck & Co.

Determination of Adulterated Neem and Flaxseed Oil Compositions by FTIR Spectroscopy and Multivariate Regression Analysis, Sayo Fakayode, North Carolina A&T State University

Field-Deployable Applications of Raman Spectroscopy for Screening of Unapproved and Counterfeit, Jason Rodriguez, US Food & Drug Administration

Ultrasensitive Spectroscopy, organized by NY/NJ SAS

Chair: Gene Hall, Rutgers University

Session speakers to be announced



2017 PRELIMINARY LIST OF SHORT COURSES

EAS short courses are designed to help the practicing analyst develop new skills and enhance knowledge. Taught by experts, the short courses emphasize practical knowledge of a variety of important topics to help one keep current with best practices and new techniques. Whether you want to learn of a new analytical technology, understand new regulations, explore a new analytical field, or just brush up a new concept in your area of expertise, there is a course for you. EAS will be offering half-day, one-day and two-day courses.

Mariann Neverovitch, 2017 Short Course Chair

[Click on course title to link to course description](#)

# of days	Course Names	Instructors
2-day	Modern HPLC/UHPLC for Practicing Scientists Part 1 &/or Part 2: Fundamentals, Best Practices & Applications (NEW!)	Dr. Michael W. Dong, MWD Consulting
2-day	Quality by Design (QbD): A New Paradigm for the Analytical Laboratory Part 1 &/or Part 2	Dr. Zenaida Otero Gephardt, Rowan University
2-day	Practical Gas Chromatography	Dr. Eugene Barry, University of Massachusetts Dr. Thomas Brettell, Cedar Crest College
2-day	Troubleshooting Chromatographic Systems	Dr. Merlin K.L. Bicking, ACCTA, Inc. Dr. Douglas E. Raynie, SD State University
2-day	LC/MS: Theory, Instruments, and Applications	Dr. Guodong Chen, Bristol-Myers Squibb Dr. Ragu Ramanathan, Pfizer
2-day	How to Develop Validated HPLC Methods: Rational Design with Practical Statistics and Troubleshooting	Dr. Brian Bidlingmeyer, Analytical Acumen Inc. Dr. Stanley Deming, Statistical Designs
2-day	Chemometrics without Equations Part 1 &/or Part 2	Dr. Donald Dahlberg, Lebanon Valley College Dr. Neal Gallagher, Eigenvector
1-day	PAT/QbD: Enhancing Effectiveness in the Analytical Laboratory (NEW)	Dr. Zenaida Otero Gephardt, Rowan University
1-day	Analytical Development for Generics and Over-the-Counter Products (NEW)	Dr. Satinder Ahuja, Ahuja Consulting
1-day	A Systematic Way for Analytical Chemists to Prepare for a Quality Audit or Regulatory Inspection (NEW)	Ms. Kim Huynh-Ba, Pharmalytik
1-day	Update on New Analytical Requirements of USP General Chapters (NEW)	Mr. Gregory Martin, Complectors Consulting
1-day	Introduction to Atomic Force Microscopy (AFM) for Industrial Applications (NEW)	Dr. Dalia Yablon, SurfaceChar
1-day	Introduction to Basic Light and Electron Microscopy for Pharmaceutical Industry Quality Scientists (NEW)	Dr. Thomas Kubic, TAKA Instructional Agency
1-day	Evaluation of Trace / Ultratrace Impurities in Pharmaceuticals (NEW)	Dr. Satinder Ahuja, Ahuja Consulting
1-day	Getting the most from GC and GC/MS	Dr. Gregory Slack, Clarkson University Dr. Nicholas Snow, Seton Hall University
1-day	Interpretation of Mass Spectra with Practical Solutions to Problems	Dr. Mike Lee, Milestone Development
1-day	Introduction to GLP Regulations and Bioanalytical Method Validation by LC-MS/MS	Dr. Perry Wang, LC-MS Technical Expert
1-day	LC-MS Method Development for Small Molecule Pharmaceuticals	Dr. Perry Wang, LC-MS Technical Expert
1-day	Keeping Your Analytical Procedures in Compliance with the FDA: Validation, Documentation, Investigation	Ms. Kim Huynh-Ba, Pharmalytik
1-day	Introduction to Vibrational Spectroscopy for Real Time Analysis	Dr. John M. Wasylyk, Bristol-Myers Squibb Dr. Peter J. Larkin
1-day	The Chemistry of Drug Degradation	Dr. Gregory Sluggett, Pfizer Dr. Todd Zelesky, Pfizer Dr. Shane Eisenbeis, Pfizer
1-day	Lifecycle Approach to Analytical Methods: Incorporating QbD Concepts into Method Development, Validation, Verification and Transfer	Mr. Gregory Martin, Complectors Consulting
1-day	Two-Dimensional Liquid Chromatography for Pharmaceutical Analysis	Dr. Dwight Stoll, Gustavus Adolphus College
½ -day	Introduction to Drug Discovery/Development Process (NEW)	Dr. Michael W. Dong, MWD Consulting

2017 EAS Workshops & Employment Bureau

EAS is committed to your professional development, as well as the enhancement of knowledge. Our workshops include topics to help develop your professional skills, as well as to hone other skills critical for career success. These workshops such as “**Recruiters’ Secrets for Winning the Interview**,” and “**Optimize your LinkedIn® Profile for the Best & Most Opportunities**,” will provide insight into the best techniques for presenting your background and relevant experience using both social media and traditional resume formats.

NEW for this year – Update your LinkedIn Photo as part of the LinkedIn Workshop!! Pre-registration and a nominal fee are required – register early, attendance is limited!

Skills such as these are essential today, and EAS is the place to begin or continue developing them. We offer workshops each day, and this year’s selection is outstanding! Workshop descriptions and registration details will be posted on the EAS website in early June -stay tuned!

An **Employment Bureau** is available to provide ample opportunity for employees to meet prospective employers. The Employment Bureau is free to all registered attendees. Visit our website for more details and job seeker forms. www.EAS.org

Sue Evans Norris
Workshop & Employment Bureau Chair

Undergraduate and Graduate Student Awards

EAS annually offers awards to recognize and encourage scientific promise and research talent in **undergraduate chemistry students**. The awardees should be students who are already involved in research, in the field of analytical chemistry.

EAS will also be offering an award to **GRADUATE STUDENTS** who show outstanding talent for scientific research. This award will be open to graduate students who have been significantly involved in a research project at the graduate level for a minimum of a year, and who will not have graduated by the Fall 2017 semester.

Winners will receive an all-expense paid trip to the EAS, be presented with plaques at an award luncheon, and have an opportunity to present their research project in a poster session. In addition, they will be able to participate in all the usual activities of a world-class scientific convention and meet distinguished members of their future profession. Professors who nominate students will receive free full-conferee registration for the EAS.

All nominations are due by **April 30, 2017** and should be submitted by e-mail to student.awards@eas.org or grad.awards@eas.org. Visit our website for details on how to nominate an undergrad and graduate student.

2017 Student Seminars

The Eastern Analytical Symposium has an Outreach Program for high school chemistry and science teachers, collegiate undergraduates, as well as high school students.

On Sunday, November 12th, EAS will hold a **Free** professional development seminar offered exclusively to **high school teachers** on **POGIL Introductory Workshop for High School Science Teachers**.

EAS will also offer one Outreach Seminar each day, Monday, November 13 through Wednesday, November 15 for college undergraduate students and high school students. Each seminar will have recognized leaders from academia and industry presenting perspectives on careers in chemistry and fields of interest. More details on these seminars will be available in June.

Registration for the Outreach Seminars is required to reserve a space. High school students attending with their teacher may register for a Seminar for free. Information on seminar descriptions and schedules will be posted on our website as soon as they are finalized. Registration will open in early July.

Please contact Eastern Analytical Symposium at asneas@eas.org or visit our website at www.EAS.org for more information.

Shirley Fischer-Drowos
Seminar Chair

EAS Awards Program

Cecil Dybowski, 2017 EAS Awards Chair

Each year the Eastern Analytical Symposium honors Analytical Chemists who have distinguished career achievements. The recipients of these awards advanced these fields by superior work in developing theory, techniques or instrumentation. This year scientists in six areas of endeavor, will be presented awards.



Prof. Janusz Pawliszyn
University of Waterloo
*EAS Award for Outstanding
Achievements
in the Fields of Analytical Chemistry*



Prof. Bernhard Blümich
RWTH Aachen University
*EAS Award for Outstanding
Achievements in Magnetic Resonance*



Prof. Barry Lavine
Oklahoma State University
*EAS Award for Outstanding
Achievements in Chemometrics*



Dr. Christopher Welch
Welch Innovation, LLC
*EAS Award for Outstanding
Achievements in Separation
Science*



Prof. Scott McLuckey
Purdue University
*EAS Award for Outstanding
Achievements in Mass Spectroscopy*



Prof. Dwight Stoll
Gustavus Adolphus College
EAS Young Investigator Award

Two other awards will be presented at the Annual Symposium in November under the auspices of the EAS sponsoring organizations



Prof. Richard Van Duyne
Northwestern University
*NY/NJ Section of the
Society for Applied Spectroscopy
Gold Medal Award*



Dr. Somenath Mitra
NJ Institute of Technology
*American Microchemical Society
Benedetti-Pichler Award*

EAS Awards are selected by independent juries of experts in these respective fields from nominations received by the Award Committee from the scientific community at large or by the jury members. Each award consists of an honorarium, travel expenses to EAS, a plaque, and the opportunity for the Awardee to present his or her work at EAS at an Award Symposium in his/her honor. Visit our website for full biographies for each Awardee.

Persons wishing to make a nomination for any of the awards given by EAS should send complete documentation of the candidate (nominating letter summarizing achievements, curriculum vita or resume, a statement of the nominee's willingness to present an address as part of an EAS Award Symposium, and arrange for at least one seconding letter) electronically (**single PDF file is preferred**) to: awards@eas.org. The length of the nomination packet should be commensurate with the nominee's accomplishments, but should be limited to six to eight pages. The deadline for all 2018 award nominations is September 1, 2017.

Build Your Analytical Future at the 2017 EAS Expo

Sheree R. Gold, Exposition Director

Visitors to the 2017 Eastern Analytical Symposium & Exposition will experience a meeting deliberately choreographed to maximize interaction between meeting attendees and exhibitors. Having the exposition, technical program, short courses, workshops, employment bureau, and seminars all under one roof will allow attendees to flow easily from one function to another, making productive use of their time at the show.

Our newly reconfigured registration area will make obtaining your badge and registration materials quick and painless. Once you have received your badge and meeting materials, you will discover the exposition a few steps away in four separate rooms. The Lakeside Terrace Ballroom on the right side of the hall, and the Madison, Wilson, and Einstein rooms on the other side, all contain a mixture of standard booths and tabletop displays allowing attendees to easily move from one exhibitor to another. The 25 booths and 65 tabletop displays (see preliminary list of Exhibiting Companies on next page) represent a major departure from previous years when almost all exhibitors were in standard booths located in one large exhibit space. This new arrangement provides a relaxed environment for attendees and exhibitors to interact and discuss analytical instrumentation, products, services, and supplies. Instrument demo rooms, hospitality suites, and exhibitor seminar rooms are conveniently located in rooms on the first, second, and third floors of the conference center easily accessible to both exhibitors and attendees. Networking events like the Plenary Lecture and mixer on Monday afternoon and a mixer on Tuesday afternoon will allow everyone, attendees and exhibitors alike, to benefit from the relaxed environment, discovering practical solutions to analytical problems while socializing with friends, customers, and colleagues.

For information on exhibiting at the 2017 EAS, please contact me at [610-742-4981](tel:610-742-4981) (cell) or easinfo@aol.com. I look forward to seeing you all in November, as we work together Building Our Analytical Future.



**BUILDING
OUR
ANALYTICAL
FUTURE**
2017 EASTERN ANALYTICAL SYMPOSIUM & EXPOSITION

NEW LOCATION

CROWNE PLAZA PRINCETON - CONFERENCE CENTER
PLAINSBORO, NJ
NOVEMBER 13-15, 2017

A Special EAS Mixer

in the Exposition Area

Tuesday, November 14, 2017

from 4:00 to 5:30 pm

Mix, mingle, and meet with your colleagues! Enjoy free refreshments while visiting our exhibitors to learn about the latest in analytical instrumentation, supplies, and services. This Exposition Mixer is a wonderful opportunity to touch base with technology and a fun way to end the day at EAS. This event is open to all registered attendees.

More details will follow in the Preliminary Program and Final Program.

Build Your Analytical Future at the 2017 EAS With These Exhibiting Companies

Last updated April 17, 2017

Activated Research	MicroSolv
Agilent Technologies	MilliporeSigma
American Laboratory	Metrohm USA
American Pharmaceutical Review	Mettler Toledo
Analytik Jena	New Era Enterprises
Arizona Instrument	New York Microscopical Society
Bruker Corporation	NJ Mass Spec Discussion Group
B&W Tek	Omicron Scientific
CEM Corporation	Oxford Instruments
Chromatography Forum of DE Valley	Parker Hannifin
Coblentz Society	PerkinElmer Inc.
Defiant Technologies	Power 4, LLC
Distek	Quantum Analytics
Dissolution Technologies	Reichert Technologies
Elemental Scientific	Restek
Entech Instruments	Rigaku Americas Corp.
ES Industries	Rudolph Research Analytical
Evolution Scientific	Sciex
Gerstel	Shimadzu Scientific Instruments
Gibraltar Laboratories	Spectrum Chemical Mfg. Company
Hi Scientific	Spex Sample Prep
INFICON	Sotax
JEOL	TA Instruments
Kinesis	Thermo Fisher Scientific
Lab Manager/LabX	US Pharmacopeial Convention
LCGC and Spectroscopy Magazines	Viavi Solutions
LGC Standards	VUV Analytics
Logan Instruments	Waters Corporation
Macherey-Nagel	Wyatt Technology
Mac-Mod Analytical	YMC America
Microliter	ZirChrom Separations

Limited exhibitor space remains for the 2017 EAS at the Crowne Plaza Princeton - Conference Center.
For information, please contact Sheree R. Gold, Exposition Director at 610-742-4981 or easinfo@aol.com

The 2016 Eastern Analytical Symposium – Facts and Statistics

Table I

2016 Registration at a Glance

Total	2005
Full Conferee	1088
Exhibitor Personnel	450
Expo-Only	467

Table II

Employer Category of Those Attending the 2016 EAS

Category	Number
Total Responding	1222
Industry	812
Academic (Student)	228
Academic (Faculty)	67
Other	46
Government	30
Self-Employed	23
No Response	12
Retired	4

Table III

Primary Job Responsibility of Those Attending the 2016 EAS

Total Responding	1222
Chemist/Scientist	564
Student	228
Lab Manager	83
Sales/Marketing	62
Group Leader	51
Other	50
Lab Director	49
Instructor/Professor	41
Administration	39
Technician	31
No Response	19
Purchasing	5

Table IV

Primary Techniques/Interest of Those Attending the 2016 EAS*

Total Responses	2808
Chromatography – Liquid/High Pressure Liquid	450
Chromatography – Gas	292
Chromatography – General	261
Spectrometry – Mass	245
Spectroscopy – General	123
No Response	100
Spectroscopy – Infrared/Mid-infrared/Raman	98
Microscopy	67
Lab Automation	65
Wet Chemistry	65
Spectroscopy – Ultraviolet/Visible	48
Other	47
Spectroscopy – Magnetic Resonance	45
Laboratory Information Management	36
Sampling	32
Chromatography – Size Exclusion	31
Thermal Analysis	29
Chemometrics	28
Chromatography – Ion	27
Chromatography – Other	23
Electrochemistry	21
Surface Analysis	18
Capillary Zone Electrophoresis	18
Spectroscopy – Atomic Absorption/Emission	17
Chromatography – Thin Layer	15
Spectroscopy – Fluorescence	14
Electrophoresis	11

*Respondents could select a maximum of two techniques/interests

Table V

Primary Applications of Those Attending the 2016 EAS

Total Responses	2553
Pharmaceutical Analysis	583
Lab Instrumentation	345
Biotechnology	243
Forensic Analysis	174
Environmental Analysis	154
Food Science	145
Polymer Analysis	134
Education	119
Flavors/Fragrances	108
Process Analysis	98
Cosmetics	94
ISO/GMP	90
No Response	86
Microscale/Nanoscale Analysis	54
Hazard Analysis	49
Other	40
Heritage Conservation	37



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Corporate Sponsors actively participate in the Eastern Analytical Symposium and Exposition. There are numerous opportunities for Corporate Sponsorship of technical sessions, awards, and other activities at the 2017 EAS as well as advertising opportunities in our Final Program. For information, please contact the EAS Executive Secretary at askeas@eas.org

2017 EAS

November 13-15, 2017

Plainsboro, NJ

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EXPOSITION DIRECTOR

Sheree Gold at easinfo@aol.com

EXECUTIVE SECRETARY

Bernadette Taylor at askeas@eas.org



IMPORTANT DATES

March 1	Abstract submission opens for contributed oral and poster abstracts
May 26	Abstract submission deadline for contributed oral abstracts
June 15	Invited speakers abstract submission opens
June 30	Presenters of invited presentations are contacted by email with Session schedules & instructions for the submission of final abstracts
July 1	Presenters of contributed oral presentations are contacted by email with session schedules and presentation guidelines
July 15	Registration opens
July 31	Deadline for receipt of final abstracts for invited presentations
Aug. 1	Preliminary Program posted on www.EAS.org
Sept. 1	Abstract submission deadline for contributed poster abstracts
Oct. 1	Deadline to register for 2017 EAS at a reduced price
Nov. 1	Deadline to cancel registration and still receive a refund
Nov. 13-15	56th Eastern Analytical Symposium & Exposition at the Crowne Plaza Princeton-Conference Center, Plainsboro, NJ

How to contact us....

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