



Society of Applied Spectroscopy
New England Section

October Dinner Meeting Announcement

- When: Tuesday October 27, 2015
5:30 – 6:30 Social Hour
6:30 – 7:30 Dinner
7:30 – 8:30 Presentation & Discussion
- Where: **Radisson Hotel & Suites, Chelmsford, MA**
10 Independence Drive, Chelmsford, MA 01824 (978-256-0800)
- Speaker: Alex Scheeline
President, SpectroClick Inc.
Professor of Chemistry Emeritus, University of Illinois at Urbana-Champaign
- Title: **Handheld Spectrometers, and the Legacy of Howard Malmstadt**

Abstract:

Howard Malmstadt was a major contributor to the introduction of electronics and computers to analytical chemistry. From 1958-1972, his group alumni populated an entire generation of analytical spectroscopy faculty positions. Among the interests common to these alumni was measurement precision. The speaker's earliest research experience was seeing J. D. Ingle, Jr. (undergraduate with Malmstadt, Ph.D. with Malmstadt's former student S. R. Crouch) derive signal-to-noise expressions. Malmstadt believed in the unity of teaching, research, and service. One culmination of this legacy is a handheld spectrometer of unique design, bearing the marks of several Malmstadt alumni and their attitudes. After reviewing the origin of the handheld spectrometer, the characteristics of the instrument will be discussed. Attributes include light generation, collimation, dispersion, focusing, and detection. The consequences of cellcam optimization for Selfies and circumventing such limitations will be addressed. Finally, the aversion of many to the discipline of learning chemistry while desiring the fruits of instrumental analysis has led to development of a human/computer/instrument interface structure that promises to allow sample triage and citizen science by users who have little understanding of measurement science.

Speaker Biography:

Alexander Scheeline is Professor of Chemistry Emeritus in the Department of Chemistry, University of Illinois at Urbana-Champaign, President of SpectroClick Inc., a firm developing hand-held instrumentation, and Vice President of Anchor Science LLC, a materials development partnership.

Scheeline comes from Hollidaysburg, PA. He received his Bachelor of Science in Chemistry from Michigan State University in 1974, doing research in chemical kinetics under the direction of S. R. Crouch. His 1978 Ph.D. in chemistry was awarded by the University of Wisconsin-Madison for research on spark discharges under the direction of J. P. Walters. He was then a

National Research Council post-doctoral fellow at the National Institute for Standards and Technology, working with J. R. DeVoe and J. C. Travis on laser diagnostics of sparks.

He was on the chemistry faculty at the University of Iowa before moving to Illinois in 1981, continuing research in atomic emission spectroscopy and optical instrumentation, as well as working extensively on oscillatory chemical reactions, sensors for reactive oxygen species, chemical pedagogy, and ultrasonically levitated drops as microreactors. His group trained 15 Ph.D. students, 6 post-doctoral fellows, 7 masters students, and 61 undergraduates. He served briefly as a Program Officer at the National Science Foundation, and was active in operations and governance of FACSS and SAS. With the Analytical Sciences Digital Library, he was founding editor of JASDL, the Library's open access journal. Co-winner of two W. F. Meggers awards, he is a Fellow of the Society for Applied Spectroscopy. He currently focuses his work at SpectroClick.

Dinner Details: A plated meal with a choice of chicken or pasta, salad, bread, and dessert will be provided. Vegetarian Entrée is available on request. Coffee & Tea are included. Please RSVP to Mary Kate Donais at mdonais@anselm.edu with your choice of entrée.

Cost: SAS Members \$32; non-members \$37; full time students and unemployed members \$15. (Drinks not included). Please try to have a check or exact change.

Contact: We need to know if you are coming ahead of time. Please contact Mary Kate Donais at mdonais@anselm.edu to make a reservation. If you make a reservation and do not show, you must still pay for your meal, or else the chapter ends up paying for you! We will refuse to have you attend in the future if you reserve dinner and then do not attend and pay.

Directions to the **Radisson Hotel & Suites, Chelmsford, MA**
10 Independence Drive, Chelmsford, MA 01824 (978-256-0800)

In Chelmsford at Exit 34, Route 110 of I-495. Parking is available in front of both the Independence Bar & Grill Building and the Hotel main entrance.

