

## **CERMACS Workshop Schedule**

### **Wednesday, May 20**

#### **Workshop on Principles and Applications of Time-Resolved Spectroscopy**

Ultrafast lasers enable observation of atomic, molecular or lattice dynamics on a sub-picosecond time scale. The availability of femtosecond and even sub-femtosecond pulses of light over a wavelength range of a few nanometers up to 20 microns and into the Terahertz region goes hand in hand with the development of newer and more sophisticated techniques for time-resolved spectroscopy studies.

The Center for Chemical Dynamics in collaboration with Ultrafast Systems, Coherent, and Newport-Spectra Physics is organizing a workshop on [Wednesday, May 20th](#) about *Principles and Applications of Time-Resolved Spectroscopy*. This workshop is part of the Physical Chemistry general section to be held as part of the 2009 Central Regional Meeting of the American Chemical Society scheduled for May 20th to 23rd, 2009 in Cleveland, Ohio. The workshop will be open to all graduate students, postdoctoral researchers and principal investigators participating in the meeting and will be comprised of a series of short lectures and hands-on demonstrations.

Lectures on the instrumental techniques and their applications will be presented. The presentations will describe several variations of basic time-domain and pump & probe spectroscopy techniques, including THz spectroscopy, attosecond spectroscopy, time and frequency resolved studies and how these drive the requirement for advanced laser sources. Interactive hands-on demonstrations will be available for the attendees to participate in. Representatives of the Ultrafast Systems, Coherent, and Newport-Spectra Physics will be available to answer any questions and provide additional information about their equipments.

The Center for Chemical Dynamics is located in the Millis Science Center, Department of Chemistry at Case Western Reserve University. Reservations to participate in the workshop should be done before Monday, May 4th, 2009. Please, contact Prof. Carlos Crespo at 216-368-1911 or at carlos.crespo [at] case.edu to reserve a space for the workshop. Directions to/from the Conference/Workshop will be provided to individuals registered.

### **Wednesday, May 20**

#### *Morning*

8 a.m. – 9:30 a.m.      **Planning Your Job Search (ACS)**

Superior Room

Presenter: Richard Bretz



This one hour workshop addresses employment trends and professional values (self assessment). Then, the process of networking is explored: who is in your network, how to expand it. Strategies such as informational interviewing will be discussed.

9:00 p.m. – 10:30 a.m. **Patent Law for Chemists (Renner Kenner)**

Garfield Room

Facilitator: Tama L. Drenski

The basic principles of patent law that should be understood by chemists will be discussed by associates of Renner Kenner. Included will be a review of notebook requirements and preparation of an invention disclosure. Also included will be requirements for patentability, inventorship, and an overview of the U.S. patent process.

A brief overview on careers for chemists in intellectual property law will follow.

9:30 a.m. – 11:00 a.m. **Preparing a Resume (ACS)**



Superior Room

Presenter: Richard Bretz

Your résumé is a personal introduction and leaves an impression. In this one hour workshop you will learn which personal data format is right for your "marketing plan," and construct a winning résumé.

9:30 a.m.– 11:00 a.m. **SciFinder (CAS)**



Holden Room

Presenter: Larry Gallina

SciFinder, Chemical Abstract Service's computerized literature searching system, is now web-based! The desktop client has been phased out in favor of browser-based searching capabilities. This short workshop will review the changing face of SciFinder, with the goal of familiarizing attendees with its new functionality.

11:00 a.m. – 12:30 p.m. **Effective Interviewing (ACS)**



Superior Room

Presenter: Richard Bretz

Many job seekers think their work ends once an interview is secured. Think again! This one hour workshop will examine the entire interview process, types of interviews, frequently asked questions, and how to evaluate an offer.

## *Afternoon*

1:30 p.m. – 3:30 p.m. **Patent Law for Chemists (Renner Kenner)**

Holden Room

Facilitator: Tama L. Drenski

The basic principles of patent law that should be understood by chemists will be discussed by associates of Renner Kenner. Included will be a review of notebook requirements and preparation of an invention disclosure. Also included will be requirements for patentability, inventorship, and an overview of the U.S. patent process.

A panel discussion on careers for chemists in intellectual property law will follow.

1:30 p.m. – 5:00 p.m. **Individual Resume Review Appointments (ACS)**  
Superior Room



**ACS Careers Consultants** will be available to provide resume reviews and career assistance. Individual 30 minute resume reviews will be offered. You must bring a copy of your resume. Sign-up will be available at meeting registration.

### **Thursday, May 21**

*Morning*

8:00 a.m. – 9:30 a.m. **SciFinder (CAS)**  
Carnegie Room  
Presenter: Larry Gallina



SciFinder, Chemical Abstract Service's computerized literature searching system, is now web-based! The desktop client has been phased out in favor of browser-based searching capabilities. This short workshop will review the changing face of SciFinder, with the goal of familiarizing attendees with its new functionality.

9:30 a.m. – 11:30 a.m. **Interview Skills/Mock Interviews**  
Carnegie Room  
Presenters: Natalie Karsti and Chris Ciolli



This presentation will focus on how to prepare for phone and on-site interviews. It will also discuss the thought process that employers use to screen out the best candidates and the behavioral-based questions that are becoming more important in today's interview process. Negotiation techniques will also be briefly discussed. The presentation will be thirty minutes long followed by a fifteen minute question-answer session. An hour long "mock interview" session will follow the presentations, which will be dedicated to work with attendees one-on one to provide coaching and guidance on interviewing techniques.

*Afternoon*

1:00 p.m. – 4:00 p.m. **Transport Phenomena and Multiphysics Workshop (COMSOL, Inc.)**



Rockefeller Room

Presenter: Linus Andersson

In this workshop, we will demonstrate the COMSOL Multiphysics simulation software and its applications within transport phenomena. The optional second half of the workshop will be a hands-on exercise at the computer. Please note that in order to participate in the hands-on session, attendees will need to bring a laptop computer with them.

Areas covered will be simulations of:

- Coupled nonlinear multiphysics
- Momentum transport: Navier-Stokes and Porous media flow
- Mass transport and diffusion-convection-migration phenomena
- Heat transfer

1:30 p.m. – 3:30 p.m. **Tools for Entrepreneurs (Kauffman Foundation)**

Carnegie Room

Presenter: Todd Smith

Thinking about starting a business? Already have a business? A representative of the Kauffman Foundation, the largest foundation dedicated to advancing entrepreneurship in America, will share a variety of relevant, practical "just-in-time" information, tools, and resources to assist aspiring and existing entrepreneurs who are building companies that innovate and create jobs and wealth. This session will include interactive exercises and facilitated discussions around starting and running high-impact companies. If you have a business idea or already lead a business, bring your thirty-second elevator pitch to share.

**Saturday, May 23**

*Afternoon*

1:00 p.m. – 3:00 p.m. **Spectroscopy for Kids Workshop**

Van Aken Room

Presenters: Mr. Roy G. Biv (a.k.a. Ken Street), his evil nemesis Dr. Vib Gyor, and noted sidekick Sara or Clemens

Q. What do a rainbow, Rembrandt's palette, a light bulb and the fiber optic phone network have in common?

A. Come learn about spectroscopy and see the light!

The distinguished Roy G. Biv is a spectroscopist – can you say spectroscopopituitssst? A spectroscopist deals with the many types of interactions between light and matter. While in his (her) job, these interactions involve complex instruments and often rely on advanced mathematics, physics, and chemistry. However, many of these interactions occur about us every day and are readily observed by us on a daily basis.

In the presentation, we will cover from kindergarten through high school level demonstrations which can be customized for any particular audience level. We will learn interesting acronyms like how to remember the colors of the rainbow and in correct order! We will disperse white light and learn why green is green and red is red (there is homework for this so you had better come early!). Mr. Biv will then present his famous exhibit of Spectroscopy Art!

In closing, Dr. Gyor will show other exciting things like fluorescence, phosphorescence, and electrify the audience with atomic spectroscopy in a light bulb. There will be a laser safety lecture (must have a safety demo in every good lecture, although the quiz is only for adults in the audience!). Vib will also tie light in a knot and make things disappear before your very eyes.