

**Town Hall meeting 09/17/2014**

Start time 11:40

Vivek presented a briefing on the role of the User Executive Committee and its 2014 activities (slides attached). It included the presentation of student poster awards.

The floor was opened for nominations for the upcoming UEC election:

\* Gila Stein was nominated for an At-Large seat by Megan Robertson, seconded by Rafael Verduzco.

One slide was presented summarizing proposed By-Laws amendments to be voted on during fall election.

Followed by open-floor discussion (see attached slides).

Adjourned 12:00



# CNMS User Group Town Hall Meeting

15 September 2014

Vivek M. Prabhu

National Institute of Standards and Technology (NIST)

2014 User Executive Committee (UEC) Chair



## Agenda

- Introduction of 2014 UEC Members
- UEC Role
- UEC Activities in 2014
- UEC Election
  - Nominations from the Floor for 2015
  - Nomination form in your packet
- Proposed By-Laws amendment
- Poster Award Winners
- Open Floor Discussion

## 2014 UEC Members

<b>Chair</b>	Vivek M. Prabhu	(NIST)
<b>Vice-Chair</b>	Nazanin Bassiri-Gharb	(Georgia Tech)
<b>Secretary</b>	Milan Buncick	(Aegis Technologies Group)
<b>At-Large Members</b>		
	Molly Kennedy	(Clemson University)
	Nina Balke	(CNMS)
	Zheng Gai	(CNMS)
	Martyn McLachlan	(Imperial College, London)
	Megan Robertson	(University of Houston)
	Ray Unocic	(CNMS)
	Rafael Verduzco	(Rice University)
<b>Past Chair, ex officio</b>		
	Anthony Hmelo	(Vanderbilt University)

## Role of the UEC

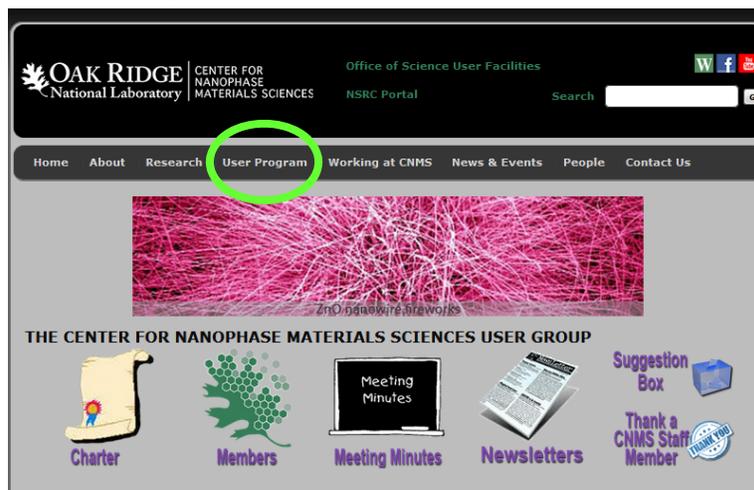
The purpose of the UEC is to provide a formal and direct channel for the exchange of information and advice between the management of the CNMS and the investigators who perform experimental and computational nanoscience-focused research at the CNMS.

The UEC will also serve as an advocacy group for the experimental and computational nanoscience-focused research activities at the CNMS.

## UEC Activities

- Monthly Teleconference calls
- User Newsletters
- National User Facility Org. (NUFO) Meeting June 9 & 10
- Planning the User Meeting
- Gather and analyze User Feedback
- UEC Elections

## Monthly Teleconferences & Meeting Minutes



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THE CENTER FOR NANOPHASE MATERIALS SCIENCES USER GROUP

Charter Members Meeting Minutes Newsletters Suggestion Box Thank a CNMS Staff Member

[http://www.cnms.ornl.gov/uec/about\\_cnmsug.shtml](http://www.cnms.ornl.gov/uec/about_cnmsug.shtml)

## User Newsletter

- Led by Viviane Schwartz (CNMS)
- Important dates
- Research Highlight
  - User
  - CNMS Staff
- Career Opportunities
- Honors & Awards

**August 2014 CNMS User Newsletter** <http://cnms.ornl.gov/>

Visit CNMS on Facebook!  
Check out our website!

**Support Staff**

- CNMS User Week September 22-26, 2014 (Agitation/Staffer)
- 2013 UEC Election Nominations open August (Johns/Johns/Johns)
- Call for Proposals Deadline October 22 (In announcement)

**Message from the UEC Chair**

Dear CNMS Users, we have two questions for you:

- Have you registered for the CNMS User meeting?
- Would you like to be more involved with the UEC?

We want as many "Yes!" as we can get. The CNMS User meeting registration deadline is rapidly approaching and there is still time for you to register and attend the meeting. For the first time the poster session will be judged with awards presented at the CNMS Town Hall for best student posters.

At the User meeting, we will have an open call for nominations for UEC at large members and positions (see more details inside this website). The requirements are given in the by-laws, but most importantly, the nominees must have had an active CNMS project within the past 3 years. A list of eligible users will be provided when the call for nominations is announced. Please feel free to nominate yourself or others directly to us before the meeting or at the meeting. Formal candidate statements will be collected at a later date for the on-line voting.

**CNMS in the News**

On June 26<sup>th</sup>, the UEC represented the CNMS at the 4th annual National User Facility Science Expo for the U.S. House of Representatives in the foyer of the Rayburn House Office Building, Capitol Hill Washington, D.C. Congressional staff and their representatives from more than 27 Congressional offices and 7 House and Senate Committees attended the Expo. The Expo displayed numerous hands-on and video demonstration items, including one from the CNMS. Microscopy groups, so that the visitors could see the research highlights from User facilities. Dr. Pat Demmer, the Acting Director of DOE's Office of Science, attended the event and can be seen along with the UEC chair and UEC members in the adjacent photo. In addition to

**Suggestion Box**

**Thank a CNMS Staff Member**

## New Equipment/ Capabilities

### January – ShaRE merger

A suite of world-class electron microscopy and atom probe tomography capabilities were added to CNMS and now users can take full advantage of the unparalleled capabilities for sub-Å imaging, chemical analysis, and in situ/operando S/TEM characterization.

### April

**Liquid cell microscopy** is an emerging in situ S/TEM based characterization technique that allows for the direct imaging and analysis of liquid phase phenomena at high spatial and temporal resolution.



FEI Titan S 60-300



Hitachi HF 3300 Nion



Ultra STEM 100



Submit your instrumentation/equipment suggestions

**Suggestion Box**

**Thank a CNMS Staff Member**

**Newsletters**

## National User Facility Organization (NUFO) Exhibition and Congressional Office Visits



Nazanin, Molly, Pat Dehmer (DOE Office of Science), Milan, Yves Idzerda (NUFO), Vivek  
UEC recommendations submitted to the CNMS Director and NUFO Director

## Congressional Offices\* Visited in D.C. *UEC Members: Nazanin, Molly, and Milan*

Describe in lay-language the importance of User facilities, such as CNMS



Senator Patrick Leahy (D-VT)

Rep. Trey Gowdy's office (R-SC)

Rep. Tim Scott's office (R-SC)

Senator Saxby Chambliss (R-GA)

Senator Johnny Isakson (R-GA)

Rep. John Lewis (D-GA)

Senator Richard Shelby (R-AL)

Senator Jeff Sessions (R-AL)

Rep. Mo Brooks (R-AL)

\*Offices within attendee district or by specific requests

# NUFO Science Exhibition & Demos



Hands-on demonstrations



CNMS video (Ray Unocic & team)

Submit your demo ideas for 2015

NUFO Flickr account  
<https://www.flickr.com/nufo>



# 2014 User Meeting Planning

OAK RIDGE National Laboratory CENTRE FOR ADVANCED MATERIALS SCIENCES		Agenda	2014 CNMS User Meeting Oak Ridge National Laboratory Oak Ridge, Tennessee
4:00p	Tuesday, September 16	Poster Session and Student Poster Competition - SIG AFM and C-152	
5:45		The 8 <sup>th</sup> edition of RidgeScience Neuroscience Film Festival - SIG AFM and C-152	
7:00a	Wednesday, September 17	Registration Opens - Posters available for viewing	
		<b>PLENARY SESSION</b> 8:00 Plenary Session, 300 Chair: Hans Christian, CNMS Director Welcome and Announcements	
8:20		"Hierarchical 3-D Nano-architectures for Electrostatics, Batteries, and Lightweight Structural Materials" - Gabe Green, California Institute of Technology	
9:00		"Accelerated Materials Discovery by Combining High-Throughput Computation and Experiments" - Gertfried Ceder, Massachusetts Institute of Technology	
9:30		Break	
10:10		New Capabilities for Users at CNMS   Chair: Yoon Park, NIST	
10:15		"Analysis and Visualization Strategies for Large Data Sets," Alex Belkovich	
10:25		"Probing Magnetism with an Electron Microscope," Juan Carlos Idrobo	
10:45		"Advanced atom Probe Tomography for Nanoscience Applications," Jonathan Pospisil	
10:55		"Beam-Induced Direct Writing of Nanostructures using the CNMS Helium Ion Microscope," Adam Reshman	
11:10		Panel Session: Q&A with CNMS Senior Staff	
11:30		User Group Town Hall Meeting Inviting attendance of Student Poster Award winners	
12:00p		Lunch on your own. Posters available for viewing	
		<b>Track A (CLO, C-156)</b> Chair: Harry McLauchlan and Sergio Robertson	<b>Track B (Shellrooms)</b> Chair: Anthony Stroob and Ray Unocic
1:30		INVITED: "Using Impurities of Nitro-Quin Imidazole for Functional Polymer Films," Gabe Green (U. Houston)	INVITED: "Characterizing Interfacial Effects in Ferro-Electric Thin Films using Aberration-Corrected STEM," Robert Kile (U. Illinois, Chicago)
2:00		"In Situ Study of Phase Transitions and Morphological Evolution in Solution-Processed Binary Organometal Halide Perovskite Photovoltaics," Jie Yang (CNMS)	"Studies on Multiferroic and Magnetoelectric Properties of PbTiO <sub>3</sub> /BaTiO <sub>3</sub> and PbTiO <sub>3</sub> /BaTiO <sub>3</sub> /BaTiO <sub>3</sub> Structures," Jitendra Prasad (U. North Texas)
2:30		"Rapid and Sensitive Detection of Organic Pollutants," Cheng Chang (U. Tennessee)	"Olefinic Silyl Ether Reactivity for Broadband Laser Polarization Conversion and Optical Vortex Generation," Fanrong Yang (Humboldt U.)
2:45		"A Bridge Between DNA Nanotechnology and Inorganic Nanotechnology," Guohua Wang (U. Hong Kong)	"In-Situ Stable, Lithium Superionic Conductors," Gopesh Sahu (CNMS)
3:00		Break	
3:20		INVITED: "Crafting Functional Nanocrystals by Capitalizing on Surface-Block Copolymer as Nanoreactors," Zhigang Liu (Georgia Tech)	INVITED: "Controlable Complex Oxide Nanoreactors," Ping Yin (USTC, China)
3:50		"Detection of Aberrant B1 by Antisense-Raised Biosensor using Pd/Mn Oxidation as Immobilization Platform," Kailin Xue (U. Hong Kong)	"Electronic Properties of Binary Graphene Through Coupled to Interlayer Stacking and the External Field," Changshun Park (CNMS)
4:10		"Synthetic Betalite in Biorelated Ag Nanoparticles," Ashish Rastogi (U. Tennessee)	"Electronic Properties of Rhenium Doped Tungsten Disulfide Nanolayers," Elizabeth Cruz (U. Pennsylvania State U.)
4:30		"In-Situ-Focused Femtosecond Laser Streaking of Funded Slits," Brian Carlsfeld (U. Tennessee Space Institute)	"Controlled Vapor Phase Growth of Photorefractive Two-Dimensional Gallium Crystals and Van der Waals Heterostructures," Ruben Li (CNMS)
4:55		"Hydrophilic Graphene Superhydrophobic Coatings," John Simpson (U. Tennessee)	"Origins of Electromechanical Strain Anisotropy from In-Situ X-ray and Neutron Diffraction," Jacob James Smith (Carolina State U.)
5:10		Adjourn	

- Organized for broad interest
- **New** Capabilities talks
- **New** Panel Discussion
- **Return of** RidgeDance
  - Thanks to Chris Rouleau and team
- **New** Poster Awards

We would like your feedback & suggestions  
 Web & email



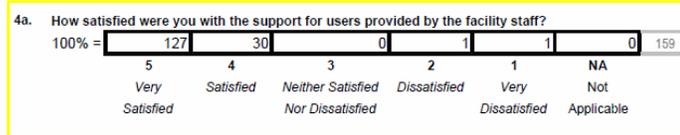
## Gather and analyze User Feedback

2013 Annual User Satisfaction

Survey 95 % Satisfied/Very satisfied across 4 categories

Summarized for CNMS Director

Written comments (requests, acknowledgements, suggestions)



2014 Annual User Satisfaction Survey (**check your in box!**)

Additional methods to communicate (24/7):

- Email: [cnms-uec@ornl.gov](mailto:cnms-uec@ornl.gov)
- And anonymously



## Open Call for Nominations: 2015 UEC

Nomination form in your packet

### At Large

Sung S. Ambrose Seo

Eric Formo

Enrique Gomez

Bryan Vogt

Vic Lin

Sandip Niyogi

Rafael Verduzco\*

Megan Robertson\*

U. Kentucky

U. Georgia

Penn State

U. Akron

General Motors

Intermolecular Inc.

Rice U.

U. Houston

### Vice Chair

Molly Kennedy\*

Clemson U.

\*Current UEC term expiring

## By-Laws amendment\*:

### V. EXECUTIVE COMMITTEE AND OFFICERS

#### A. Executive Committee.

1. Members of the Executive Committee shall serve out their terms before seeking election to an officer position such as Chair, Vice-Chair or Secretary.
2. In the event of a tie in the number of votes the full UEC membership shall vote among the tied candidates to determine who will serve on the committee. This vote will take place within one week of the close of the election.
3. In the event that a Executive Committee member resign or is unable to complete their term the ex-Chair shall agree to fill that vacancy for the remainder of the term.

*\*Proposed (10/13), Sub-Committee formed, passed by UEC (6/4/14)  
Moves to User electronic ballot (2/3 majority) in October*

## 1<sup>st</sup> CNMS Student Poster Competition

\*\*certificate and CASH award gift card – sponsored by CNMS

<b>GOLD Steven Brewer</b>	<b>Georgia Institute of Technology</b> <i>Poster # 27, Direct Deposition of Ferroelectric PZT Films on Glass &amp; Polymer Substrates</i>
<b>SILVER Ryan Nicholl</b>	<b>Vanderbilt University</b> <i>Poster #23, Entropic Softening of Graphene</i>
<b>BRONZE Danielle Lincoln</b>	<b>University of Tennessee</b> <i>Poster# 3, Capillary driven transport and dispersion in hierarchically porous phases formed by conformal deposition of petal like carbon on silicon pillar arrays</i>
<b>FINALISTS</b>	
<b>Yan Jin</b>	<b>University of Kentucky</b> <i>Poster # 22, Quantitative Understanding 3-D Effects of Constituent Particles on Fatigue Crack Initiation in High Strength Aluminum Alloys by FIB</i>
<b>Humaira Taz</b>	<b>University of Tennessee</b> <i>Poster #17, In-situ investigation of chemical bath deposition of CdS via localized surface plasmon resonance (LSPR) spectroscopy</i>
<b>Jilai Ding</b>	<b>Georgia Institute of Technology</b> <i>Poster #28, Study of Ionic Dynamics in Nanostructured Ceria through Lateral Electrochemical Measurements and Finite Element Modeling</i>

## Open Discussion

- User meeting format?
- Joint CNMS / Neutron Science meeting?
- Industry Users Needs or Comments?
- UEC Business proposals from the floor?
- Proposals for outreach?
- Lab coats underneath clothes to keep them clean.  
Good idea? Discuss.



## Navigate to User Group webpage

<http://www.cnms.ornl.gov>

A screenshot of the Oak Ridge National Laboratory Center for Nanophase Materials Sciences website. The header includes the logo, 'Office of Science User Facilities', 'NSRC Portal', and social media icons. A navigation menu at the top has 'User Program' circled in red. Below the menu is a section titled 'Upcoming Events and Latest News' with several bullet points and a 'Submit your ideas for improving CNMS' link. A small image of 'Two-Dimensional Graphene Flowers and Large Crystals' is visible in the bottom left of the content area.