



**MICROSCOPY SOCIETY
OF NORTHEASTERN
OHIO, INC.**

An affiliate society of the
Microscopy Society of
America and the
Microanalysis Society



MSNO FALL MEETING

Wednesday, October 23th, 2013, 4:30 – 8:30 p.m.

Kent State University

Liquid Crystals and Materials Sciences Building

1425 University Esplanade, Kent, Ohio 44242

Registration	4:30 – 5:30 PM	
Presentation 1 Dr. Owen Lovejoy Kent State University	5:30 - 6:15 PM	A New Kind of Ancestor: New Light on the Origins of the Human Clade
Dinner	6:15 - 7:15 PM	
Presentation 2 Dr. Peijun Zhang University of Pittsburgh	7:15 – 8:00 PM	3D Electron Microscopy: From Molecules to Cells
Business Meeting	8:00 – 8:30	

Dinner will be \$20 for members, \$25 for non-members and \$5 for student members, \$10 for student non-members. Preregistration is available at <http://www.msneo.org/meetings.html>, or registration and payment at the door will also be available. Preregistration is preferred so we can get a good head count.



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Dr. Owen Lovejoy (Kent State University):

A New Kind of Ancestor: New Light on the Origins of the Human Clade.

Although a host of anatomical and behavioral differences now distinguish humans from our nearest relatives, the great apes, our fossil record establishes that two cardinal characters, the elimination of canine dimorphism and the adoption of upright walking were primary to human origins, and that these long preceded any significant brain expansion beyond that of other hominoid primates. The newest addition to our knowledge of human natural history is *Ardipithecus ramidus*. The anatomy of this taxon is revolutionary and requires substantial revision of current theories about earliest human evolution. Our understanding of our own origins can play a significant role in understanding the probabilities of cognitive life elsewhere in the universe.

Dr. Peijun Zhang (University of Pittsburgh)

3D Electron Microscopy: From Molecules to Cells

Our research is focused on structure and function of macromolecular assemblies using three-dimensional cryo-electron microscopy (cryoEM), combined with biochemical, biophysical and molecular biology methods. CryoEM is a powerful tool for structure determination of large protein complexes and macromolecular assemblies at near native states, and their conformational changes to provide structural snapshots along dynamic processes. Research efforts in our lab are directed to two areas in biology: (I) HIV pathogenesis, particularly HIV capsid assembly, maturation, and interactions with host cell factors; (II) molecular mechanisms of signal transduction in bacterial chemotaxis. We also develop technologies to bridge the gap in single molecule imaging, by integrating optical and electron imaging methods (correlative microscopy), and working at the interface of nanotechnology and biology. I will present our recent results of 3D structural analysis of biological systems and also nano-materials.



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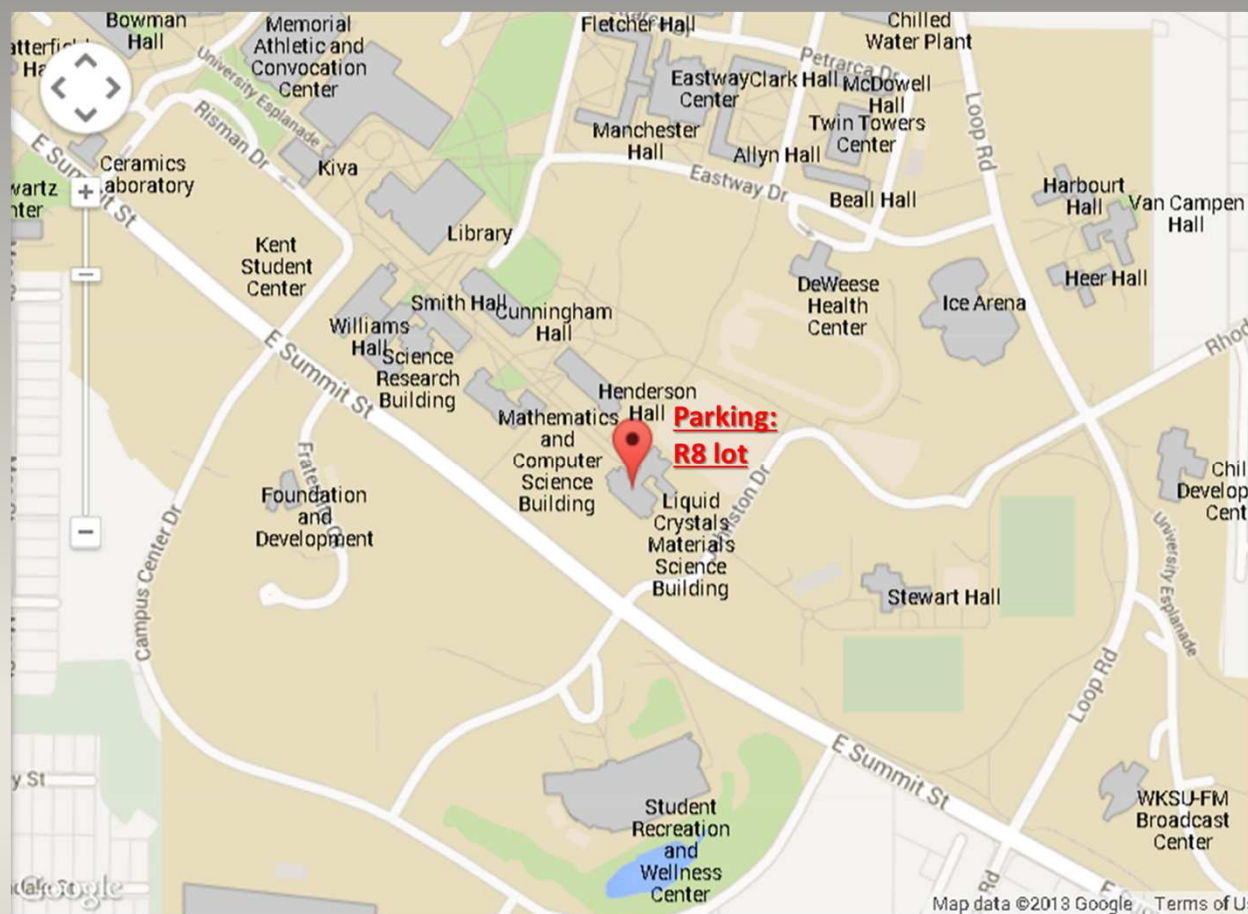


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Map and Parking:

Please use “1425 E Summit Street, Kent, OH 44242” to get to the Liquid Crystals and Materials Science Building, and use the “R8” parking lot.



Next Planned Meetings into 2014

2014 Feb 26th – The meeting will take place in Cleveland at the Medical History museum (<http://www.case.edu/artsci/dittrick/museum/>).

“2014 May 21” – Will be held at John Carroll University partnering with SAS/ACS/AVS. If you wish to give a talk or present a poster please contact Amir Avishai. (Amir.Avishai@case.edu) (**note change in date**)

We would like to remind you to check and join our [LinkedIn web group \(MSNO\)](#). Your feedback is important. Please fill our MSNO mailing list form that includes topics of interest. This will help us plan our future meetings.

Thank you,
MSNO board