Welcome to the January issue of momentUM. This month we are very excited to welcome the Electron Microbeam Analysis Laboratory (EMAL) to NCRC. This move puts EMAL just around the corner from the Medical School Microscopy and Image Analysis Lab (MIL), encouraging researchers at the two facilities to collaborate and share advanced equipment.

The NCRC Art Program has also put up two new wonderful exhibitions: Lucille Nawara: Forest Reflections and Jennifer Belair: Two Faces. Next time you find yourself at or around NCRC, stop in to one of our art galleries to view their work inspired by the beauty of nature and mixed media.

David Canter, Executive Director, NCRC

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Electron Microbeam Analysis Laboratory Moves to NCRC

Encouraging researchers at the two facilities to collaborate and share advanced equipment

The construction of the new Electron Microbeam Analysis Laboratory facilities in Building 22 has advanced rapidly, with occupation of the space beginning last December. The first instrument to be installed has a spatial resolution of the order of 60 picometers and is capable of detecting single atoms in materials. The JEOL 3100R05, built and tested at JEOL’s factory demonstration and certification laboratories in Akishima, Japan, is a dual Cs-
transmission electron microscope.

More than 600 researchers from a variety of disciplines use EMAL to precisely characterize the structure and chemical composition of materials at the nanoscale, and the lab is currently visited by 120 users per week at its location in the Space Research Building on the U-M North Campus.

The new location’s field and vibration characteristics are far superior to those at the current facility, which is 25 years old. John Mansfield, who manages the North Campus EMAL, says, “The EMAL staff and I are excited by the move to NCRC, the new space promising to provide much-needed space to comfortably house our state-of-the-art equipment in a much-improved low vibration and low field environment.”

The move also puts EMAL just around the corner from the Medical School Microscopy and Image Analysis Lab (MIL), encouraging researchers at the two facilities to collaborate and share advanced equipment.

“The Medical School has had a longstanding relationship with the College of Engineering, and we are excited to partner again with them for the EMAL’s move to NCRC,” said Steven L. Kunkel, PhD, Senior Associate Dean for Research and Endowed Professor in Pathology Research. “This is another example of how we are able to come together to solve problems and provide resources to both schools, as well as the research community at large.”

Two New Art Exhibitions at NCRC
Lucille Nawara & Jennifer Belair
Lucille Nawara: Forest Reflections

Lucille Procter Nawara was born into a family of musicians but always knew she would be an artist. While growing up she spent much of her time surrounded by nature where she explored forest pools and brooks filled with rapids or climbed the granite boulders of the White Mountains in New Hampshire with her siblings. These memories of wild and remote landscapes, waterfalls and the ocean still influence her work today. When not exploring the outdoors, she enthusiastically studied drawing and music. As the daughter of two composers and music teachers, she followed their lead and trained on the violin for many years and played in a number of chamber groups.

In college Nawara focused on the visual arts. She studied at Smith College, Boston University and the University of Illinois, where she received her MFA. She taught at Wayne State University and at the Cranbrook Academy of Art, as well as at other Michigan colleges for twenty years.

Although art was and continues to be her mainstay, Nawara ventured into new professional explorations. She directed the Nawara Gallery in Walled Lake, Michigan; started a landscape design business; and served in art politics in the Detroit area.

She has exhibited across the United States and Michigan, received two grants from the Michigan Council for the Arts, as well as a National Parks Artist Residency to explore landscape painting at Sleeping Bear Dunes State Park. Once again, she was surrounded by the rugged natural world.

Thomas Cole, Frederick Church, Johannes Vermeer, Odilon Redon, Gustave Courbet, Vincent Van Gogh, Pierre Bonnard, Hans Holbein, Albrecht Durer, Rembrandt van Rijn, John Ruskin have been her main sources of inspiration. She considers her work a long meditation on nature in solitary, primeval places of great beauty.

NCRC, Building 18 Lobby, Rotunda Gallery
January 16 through May 2, 2014

Emerging Art Series - Jennifer Belair: Two Faces

Jennifer Belair is a mixed media artist living and working in Detroit. She recently graduated with an MFA from Wayne State University. Her concentration is in print media. Her work focuses on the interior spaces of the mind and challenges our visual vocabulary of that which we cannot depict.

In the exhibition Two Faces, the work examines the importance of communication in our personal relationships. This work challenges perceptions of ourselves and those around us. This body of work is introspective and examines the multiple faces that exist. The figures are different versions of “the self” that live within all of us. The relationship to ourselves and those around us change greatly throughout our lifetime. We change both internally and externally but sometimes we do not realize this until time reveals it to us. In our fast paced reality it can be difficult to slow down and make observations. Jennifer asks herself, “What is the real importance behind understanding my true self or the self that exists
in the subconscious?"

NCRC, Connections Gallery (near tunnel)
January 16 through May 2, 2014

These exhibition is presented by NCRC Art as part of the Emerging Art Series.
Exhibition Hours are Monday through Friday, 9:00am - 5:30pm

NCRC Metrics: Did You Know?

Since the acquisition of NCRC, several U-M administrative departments and research programs, as well as external groups have moved to this site. This animation visually demonstrates the growth in the occupancy of the site over the last 3 and a half years. NCRC has been working with the Medical School Office of Space Information, Analysis and Planning to use geo-spatial information tools such as ArcGIS, to enable effective space planning and management. One of the advantages of this tool is the ability to model space in 3D, as shown in the animation.

Animation provided by: Sucheta Kulkarni, Geo-Spatial Information Manager, U-M Medical School
<table>
<thead>
<tr>
<th>Number of Occupants</th>
<th>Space Usage</th>
<th>Key Facts</th>
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