



Updates on friends and colleagues in the materials community

Nominees Needed for the TMS Board of Directors

TMS is soliciting nominees for positions on its Board of Directors. Four seats are open, and each involves a three-year term from 2012 through 2015. The available positions are:

- Vice President
- Programming Director
- Membership & Student Development Director
- Financial Planning Officer

Job descriptions for each of the positions are available on the Nominating Committee web page, which can be accessed through the "Committee Home Pages" tab on the TMS home page.

To nominate a candidate, a nomination form and supporting documents must be submitted. The form, as well as details on the process, is available to logged-in TMS members in the docu-

ment archive of the Nominating Committee web page. Nominations are due by January 31, 2011. Elections take place in August, and the new board members take office at the following annual meeting.

Seven new officers will be seated on the board of directors in 2011: Wolfgang Schneider, vice president; William J. "Jud" Ready, Information Technology Chair & Director; Carl M. Cady, Publications Chair & Director; David A. Shifler, Professional Development Chair & Director; Kevin Hemker, Public & Governmental Affairs Chair & Director; Adrian Deneys, Extraction & Processing Division Chair & Director; and Srinivas M. Chada, Electronic, Magnetic & Photonic Division Chair & Director.

A Tribute to Norman P. Louat

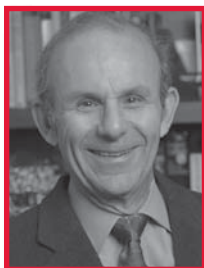
*By Richard A. Oriani
Professor Emeritus,
University of Minnesota*

A courtly gentleman of science, Norman P. Louat, died on October 8, 2010, after a long illness. Norm was born in Alberta, Canada. He pursued graduate studies at the University of Bristol, England, where he obtained his Ph.D. My first contact with him took place when he joined the staff of the E.C. Bain Laboratory for Fundamental Research in Monroeville, Pennsylvania. I quickly became aware of Norm's large breadth of technical interest and of the keen intelligence that he brought to bear on theoretical problems ranging over plastic deformation of metals, dislocation motion, fracture, grain growth, and precipitate coarsening. After leaving Bain Laboratory, his contributions became even more diverse, encompassing ultrafine superstrength materials, work hardening, computer modeling of cyclic deformation, and metal composites whose distributed phase is pressurized voids. An example of his innovative thinking is his patented concept of the "vortex engine," which constituted an air turbine to produce useful power from a power plant's waste heat.

A TMS member since 1993, Norm Louat is survived by his loving wife nee Heather McKenzie, daughter Penelope Heather, son-in-law Phillip Graham Williams, and grandchildren Charlotte Sophia and Georgina Victoria. Norm will be long remembered for his contributions to theoretical metallurgy and for his friendliness and good humor.

David Seidman Inducted into American Academy of Arts and Sciences

David N. Seidman, the Walter P. Murphy Professor of Materials Science and Engineering at Northwestern University, was inducted into the American Academy of Arts and Sciences at a ceremony on October 9. Founded in 1780, the Academy is an independent policy research center that conducts multidisciplinary studies of complex and emerging problems. Seidman is a member of the Academy's 230th class of Fellows, selected for their cutting-edge research and scholarship and exemplary service to society.



A 1997 TMS Fellow, Seidman is considered one of the world's leading authorities in atom-probe tomography, and is credited for designing the first atom-probe field ion microscope (FIM) with full computer control for high mass resolution, setting the standard for future instrument design. His research has led to major advances in the understanding of the behavior of vacancies and self-interstitial atoms in metals, particularly in connection with radiation damage and dislocation interactions. He will be giving the Institute of Metals Lecture and receiving the Robert Franklin Mehl Award for outstanding scientific leadership at the 2011 TMS Annual Meeting in San Diego, February 27–March 3.

In Memory of Elizabeth Judson

A private plane accident claimed the life of Elizabeth A. Judson, a member of the TMS Accreditation Committee, on October 26. Her husband, James, who was piloting the plane, also died in the crash. She was 51. The Judsons are survived by a son and daughter.

Judson earned her B.S. in ceramic engineering from Alfred University, and her M.S. and Ph.D. in ceramic engineering

from the Georgia Institute of Technology. She lived in Roswell, Georgia, where she served as program manager for VIDP. At the time of her death, she was a consultant to the University-Industry Demonstration Partnership of the National Academies, developing a negotiation tool for sponsored research agreements between companies and universities. She was also a member of the boards of trustees of Alfred University and Southern Catholic University.



TMS Member Profiles

Meet a Member: Michael Fank Rekindles Interest in University Foundry

By Lynne Robinson

Bright-white liquid fire flows into the black sand, freed from a crucible guided by a human form resembling a silvery-suited space traveler from 1950s science fiction. It's a typical scene at Foundry Fun Night at the University of Wisconsin (UW)-Madison, where undergraduate students don protective gear to get up close and personal with the science of molten metal.

Michael Fank, UW-Madison senior and TMS 2010 Light Metals Division Scholarship winner, has been the driving force behind the Fun Nights since discovering the university's shuttered and forgotten foundry in his freshman year. "The foundry has been in existence for more than 30 years," said Fank. "In some order of events, it had lost its funding, the directing professor, and student interest, and was shut down in the '90s. I've been told that prior to this, the foundry was always packed and you had to schedule time weeks in advance to use it."

Fank said interest in the old foundry was rekindled when he and his classmates decided to open it for an investment casting display for the Spring 2007 Engineering Expo, a student-

organized, three-day community event sponsored by the UW-Madison College of Engineering. "A professor at the time had worked with the art department to create a new process that cut mold making from days to hours. Our project was to demonstrate this new process to attendees," said Fank. "It was the first time in many years that the Materials Science and Engineering (MSE) department had used the foundry and we noticed a lot of interest in it. So, we decided to try to re-open it for undergraduate student use."

The first step in restoring the foundry was "simply cleaning it up," said Fank. It soon became clear that other repairs and supplies were needed, including a lining for the tilt furnace, crucibles, and scrap metal. Fank and his team tried approaching potential donors with mixed results, but still managed to get the foundry in good enough working order to launch Foundry Fun Nights less than six months after the demonstration at the Engineering Expo.

The first Fun Night, said Fank, was a modest gathering of four students. Since then, it has evolved into a regular event attracting more than 15 under-

graduate foundry users at a time. "It's nice to get a chance to actually see the theory in action that you've been learning about in class," Fank said about the growth in popularity.

Each Fun Night opens with a safety meeting—even for regulars—and then the assembled students develop patterns for the evening's foundry creations. A batch of reusable "green sand" is mixed to prepare pressed sand molds that are placed in a jacket and filled with aluminum melted in the foundry furnace. "When the molds don't fill properly or other problems occur, we get the opportunity to use what we know about materials science and try and fix the problem," said Fank.

Although Foundry Fun Nights have been going strong for three years, equipment and resources are still limited, despite Fank's continued efforts to secure donated supplies. "We simply make due with what we have," he said. "The material we melt was left over from aluminum solidification research done by a professor who has since retired. And, we use our old crucibles and don't worry about the impurities we are adding to our melt. The focus of the night is really just about getting hands-on experience with the casting process."

Majoring in both chemistry and MSE, Fank said that he's also glad he's had a chance to introduce other students to something he's known all along: "I've always thought molten metal really looks cool. It's hot and dangerous and every little boy's dream," he said. "So, working in the foundry always seems more like fun than work."

Each month, *JOM* profiles a TMS member and his or her activities both in and out of the realm of materials science and engineering. To suggest a candidate for this feature, contact Maureen Byko, *JOM* editor, at mbyko@tms.org.



Figure 1. Fank pours bronze into an investment mold at UW-Madison's Spring 2007 Engineering Expo. The event helped to renew interest in the university's foundry, which had been shut down in the 1990s.



Figure 2. Fank (left) and Rachel Dressler, a UW-Madison student, prepare a sand mold during a recent Foundry Fun Night.