

Member News



Steven Zinkle Named UT-ORNL Governor's Chair



Steven Zinkle

Steven Zinkle, a 2011 TMS Fellow, is the new University of Tennessee (UT)–Oak Ridge National Laboratory (ORNL) Governor's Chair. He will serve as Governor's Chair for Nuclear Materials, based in the Department of Nuclear Engineering at UT, with a complementary appointment in materials science and engineering.

The UT–ORNL Tennessee Governor's Chair Program is funded by the state of Tennessee and ORNL. It is designed to attract exceptionally accomplished researchers to boost joint university and laboratory research efforts in the fields of biological science, computational science, advanced materials, and neutron science.

Zinkle comes to UT from ORNL,

where he was a UT–Battelle Corporate Fellow and chief scientist for the laboratory's Nuclear Science and Engineering Directorate. He joined ORNL in 1985 as a Eugene Wigner Fellow, led the laboratory's nuclear materials and science technology group from 2001 to 2006, and directed the Materials Science and Technology Division from 2006 to 2010. His research aims to develop high-performance radiation-resistant materials for advanced nuclear fission and fu-

sion energy applications.

Zinkle was also recently named an editor of *Metallurgical and Materials Transactions E: Materials for Energy Systems*, a peer-reviewed journal, scheduled to debut in March 2014, that will focus on the science and technology of energy materials. It joins the long-established, peer-reviewed *Metallurgical and Materials Transactions A* and *B* family of journals published jointly by TMS and ASM International.

John Lewandowski Appointed to Professorship



John Lewandowski

John Lewandowski was formally inducted in September as the second Arthur P. Armington Professor of Engineering at Case Western Reserve University (CWRU), Cleveland, Ohio. He is also the director of CWRU's Advanced Manufacturing and Mechanical Reliability Center and professor of Mechanical and Aerospace Engineering. Established in 1968, the Armington professorship was created by the Armington family in memory of Arthur P. Armington, a Case Institute of Technology

1915 graduate. In January of this year, the CWRU board of trustees approved amending the professorship to establish a second chair.

Lewandowski joined CWRU as an assistant professor in 1986. His research and teaching interests encompass the areas of processing/structure/property relationships in ferrous and non-ferrous engineering materials; effects of superposed pressure on deformation/fracture; fatigue and fracture of intermetallics and composites, bulk metallic glass, and layered/laminated materials; deformation processing; blast-resistant materials; advanced engineered materials systems; fracture and fatigue behavior of biomedical materials; and failure analysis.

Oscar Marcelo Suárez Receives HENAAC Award



O. Marcelo Suárez

Oscar Marcelo Suárez, Professor of Materials Science and Engineering at the University of Puerto Rico-Mayagüez, was honored by the Hispanic Engineer National Achievement Awards Corporation (HENAAC) at its 25th Anniversary Conference in October. Suárez received HENAAC's 2013 Education Award recognizing him as an outstanding role model in science, technology, engineering, and mathematics (STEM). The HENAAC Awards are hosted by Great Minds in STEM, a national non-profit organization focused on increasing and supporting Hispanic participation in the STEM professions.

SECOND ICME CONGRESS STUDENT POSTER CONTEST WINNERS ANNOUNCED



TMS congratulates the following individuals who were named the winners of the student poster contest hosted by the Second World Congress on Integrated Computational Materials Engineering (ICME), held July 2013 at Salt Lake City, Utah. Contestants were judged on the content and overall impact of their posters, as well as their presentation skills. The poster contest winners are:

First Place: *Victor Chan, University of Michigan, Ann Arbor*
“Determination of the Characteristic Sizes of Complex Microstructures and Its Application to the Design of Composite Materials”

Second Place: *Peter Huffman, Iowa State University*
“Understanding and Predicting Fatigue Crack Growth from Physical Principles”

Third Place: *Mohsen Eshraghi, Mississippi State University*
“A Three-dimensional Lattice Boltzmann Model for Columnar Dendrite Growth”



TMS Member Profiles

Meet a Member: Marius Stan Breathes Life into Bogdan on *Breaking Bad*

By Lynne Robinson

By day, Marius Stan pioneers advanced models and simulations of materials in energy applications at Argonne National Laboratory as Senior Computational Scientist in the Nuclear Engineering Division.

But, on the occasional Sunday evening, Stan has been known to millions of television viewers as Bogdan Wolynetz, the mean-spirited, non-criminal nemesis of Walter White in the acclaimed AMC series, *Breaking Bad*.

Breaking Bad, which aired its series finale earlier this fall, traces Walter’s moral descent from a terminally ill high school chemistry teacher to a ruthless purveyor of methamphetamine. The drama has garnered rave reviews for its unflinching exploration of the nature of evil at the darkest corners of human desperation. Bogdan, in the show’s pilot episode, is the Romanian owner of the A1A Car Wash in Albuquerque, New Mexico, where Walter works part-time to make ends meet. Bogdan taunts and

humiliates Walter early on, but later in the series, Walter exacts revenge by swindling Bogdan out of his car wash—and in a particularly memorable scene, his treasured first-earned dollar bill—so that he can use it for a front for his burgeoning drug business.

Although not as damaged as some characters on the show, Bogdan shares nothing beyond a Romanian accent and impressive eyebrows with the scientist who portrays him—at least on the surface, Stan notes jokingly. “Starting with the script, it is not that difficult, I have found, to reflect a wide range of emotions or reach a certain state of mind. The difficult part is to do that in front of the camera without losing the ‘just be natural’ aspect,” Stan explains. “In other words, Bogdan is part of me—not my daily self, but the occasional one.” He pauses with a smile. “Now, this thought is worrisome!”

Stan was “discovered” for the part of Bogdan while accompanying his teen-

age children to a casting call for *Breaking Bad* extras when he worked in New Mexico as Deputy Group Leader of the Computational Physics Group for Los Alamos National Laboratory. He had no intention of auditioning for a role, but when the show’s producers caught sight of him, they apparently knew that they had found their Bogdan. Stan shot his initial scene, and then, much to his surprise, was asked to reprise his role for a scene or two every year, even after he moved to Chicago.

“I did not have any experience with acting prior to this, but I have an ability to withstand the pressure on the set,” says Stan. “For some reason, I apparently look and behave the same in ‘real life’ as I do in the presence of the cameras, lights, and microphones—not to mention the people who constantly give me directions.”

Of the many individuals who helped shape Bogdan into a character, Stan says he was particularly attentive to the feedback of the show’s writers. “I watched their reaction more than anybody else’s,” he recalls. “One of them told me once, ‘This is exactly how I imagined Bogdan saying that line.’ This made me very happy, as you can imagine. It was a remarkable feeling, to all be engaged in creating a virtual world, with virtual characters like Bogdan, who then take on a life of their own.”

Now that *Breaking Bad* has concluded as a series, Stan is open to other roles, provided that the “characters are interesting and somehow unconventional.”

“People remember Bogdan because he is different—the eyebrows, the accent, the mischievousness,” Stan says. “I’ll keep the eyebrows and take on a comedy character next time.”



Above: Marius Stan (right) as Bogdan with Bryan Cranston as Walter White in a pivotal scene from *Breaking Bad*’s season four episode, “Cornered.” (Photo: Ursula Coyote/AMC © by AMC Networks.)

Inset Photo: In addition to his work at Argonne National Laboratory, Stan is Senior Fellow, Computation Institute, at the University of Chicago, and Senior Fellow, Institute for Science and Engineering, at Northwestern University. The “drive to create something that people value” is one of the ties that Stan sees between his contributions as a scientist and his role as an actor. “I want to change the world, but not at the planetary scale,” he said. “If I can make an impression in the mind of a few scientists or movie goers, I am quite content.”

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 Lynne Robinson at lrobinson@tms.org.