

Member News



Updates on friends and colleagues in the materials community

Diana Lados Recognized by Business Journal



Mass High Tech, a New England business journal, has named Diana Lados, director, Integrative Materials Design Center, Worcester Polytechnic Institute (WPI), as one of its 2012 "Women to Watch." The program recognizes women who work in technology and life sciences in New England

as thought leaders in their fields and shapers of the future of their industries. Lados is the only academician on this year's list of 20 women.

Lados also recently received a National Science Foundation (NSF) CAREER Award, the most prestigious NSF recognition for early career faculty members. The \$525,000 grant will support Lados's work in increasing the use of lightweight metals in transportation applications. Her specific research goal is to develop new methods

and tools that will enable designers to more accurately predict the lifespan of light metals used in high-integrity, fatigue-critical applications, while also permitting metals producers to develop new alloys and processes designed for current and future applications where light metals are not extensively used today.

Finally, WPI announced in February that Lados has been promoted to associate professor of mechanical engineering.

Nikhilesh Chawla Named Fulton Professor



Arizona State University (ASU) recently announced Nikhilesh Chawla as the Fulton Professor of Materials Science and Engineering.

Chawla is a professor in the School for En-

gineering of Matter, Transport and Energy. In 2010, he served as acting chair of the materials science and engineering program. Prior to joining ASU in 2000, he was a postdoctoral fellow jointly at Ford Motor Company and the University of Michigan, and a senior development engineer at Hoeganaes Corporation. His research involves the mechanical behavior and model-

ing of advanced materials at bulk and small length scales, including four-dimensional materials science, lead-free solder alloys, composite materials, and nanostructured materials.

Chawla served on the TMS Board of Directors from 2008–2011, is a past chair of the Young Leaders Committee, and was the recipient of the 2006 TMS Early Career Faculty Fellow Award.

TMS Members Honored as 2012 MRS Fellows

TMS congratulates the following TMS members who will be recognized as Fellows of the Materials Research Society (MRS) at the 2012 MRS Spring Meeting. They are being honored as MRS members who are notable for their distinguished accomplishments and outstanding contributions to the advancement of materials research throughout the world.

William W. Gerberich is a professor in the Department of Chemical Engineering and Materials Science at the University of Minnesota. A 2009 TMS Fellow and member since 1962, Gerberich's current research focuses on fracture micromechanics and interfacial defects.

Mark C. Hersam is a professor of both materials science and engineering and chemistry at Northwestern University. Among his many awards and honors, he was the recipient of the TMS Robert Lansing Hardy Award in 2006, joining TMS in 2002. His research ex-

plores nanomaterials for electronics, sensing, and energy.

Lionel C. Kimerling is the Thomas Lord Professor, Department of Materials Science and Engineering, and director, Microphotonics Center, at the Massachusetts Institute of Technology. Inducted as a TMS Fellow in 2000 and recipient of the TMS John Bardeen Award in 1999, Kimerling has had a fundamental impact on the understanding of the chemical and electrical properties of defects in semiconductors and in the use of this knowledge in materials processing and component reliability. He joined TMS in 1972.

Amiya K. Mukherjee is a Distinguished Professor in the Department of Chemical Engineering and Materials Science at the University of California, Davis. A TMS member since 1965, Mukherjee's research interests include: processing and properties of nanocrystalline ceramics; characterization of nanocrystalline materials;

superplastic deformation in intermetallic alloys; and physical mechanism of superplastic flow.

Christopher J. Palmström is a professor in the Department of Electrical and Computer Engineering, University of California, Santa Barbara. His general research interests encompass the heteroepitaxial growth of novel materials and structures to form the basis for making new electronic, optoelectronic, magnetic, and micromechanical devices. He joined TMS in 1990.

George M. Pharr is the Chancellor's Professor, McKamey Professor of Engineering, and Materials Science and Engineering Department Head at the University of Tennessee (UT). He is also a UT-Oak Ridge National Laboratory joint faculty member. Joining TMS in 1980, Pharr's research interests include: nanoindentation and nanomechanical testing; thin film and small-scale mechanical behavior; and mechanisms of fracture and flow in solids.



TMS Member Profiles

Meet a Member: Barbershop Singing Strikes the Right Chord for Mike Peretti

By Lynne Robinson

Barbershop singing is a potent musical alloy of notes, pitches, and tones that create a signature sound—known as “the ringing chord”—when all four parts of the harmony being sung lock to create essentially a “fifth voice.”

“It’s just amazing to hear,” said Mike Peretti, advanced programs director, Materials and Manufacturing, GE Aviation, in summarizing the reasons he has sung barbershop competitively for the last 2 ½ years.

Peretti sings with the Chorus of the Chesapeake, the Dundalk, Maryland, chapter of the Barbershop Harmony Society (BHS), an international organization boasting more than 30,000 members. Peretti rehearses with the 80 other members of the chorus every Tuesday night, preparing for shows, community appearances, and competitions. (To see Peretti and the Chorus of the Chesapeake perform, go to www.barbershop.org/news-a-events-main/520.html.)

“The sound that barbershop creates is very addictive,” said Peretti. “It’s a unique sport that’s challenging both physically and mentally from the standpoint of having the control and ability to form and sustain notes and chords, synchronizing it all to give a unified sound.”

Peretti sings the lead part that generally carries the melody of the song. Those singing bass provide the low harmony, tenors produce the high harmony, and baritones fill in the fourth harmony note to achieve that unmistakable barbershop chord.

Sung *a cappella*, barbershop traces its name and origins to the 19th century, when men would socialize by improvising harmonies for spirituals and folk songs while waiting their turns in barbershops. Recordings of studio quartets were hugely popular in the early part of the 20th century, but lost ground when advances in microphone technol-

ogy tended to favor solo singers. The BHS—originally known as the Society for the Preservation and Encouragement of Barbershop Quartet Singing in America—was founded in 1938 to carry on this musical tradition. It later expanded its scope to include chorus singing.

While perceived by some as a mature man’s pursuit, barbershop is experiencing a youth movement of sorts, fueled by the popularity of television shows that celebrate the joys of singing, such as *Glee*. This has influenced many choruses and quartets to include barbershop versions of contemporary songs in their repertoires, as well as old-time classics. Peretti notes that his own chapter members range in age from their mid-20s to over 80, with a number of father-son-grandson members. Peretti himself is looking forward to the day when his 11-year-old son will join him on stage. “One great thing about this hobby is that it can be a lifelong family activity,” he said. In fact, it was Peretti’s wife, Sue, who first introduced him to barbershop singing when she joined a woman’s barbershop chorus 9 years ago. “I found I really enjoyed the sound of barbershop harmony and saw the fun she was having,” he said.

While the chance to make amazing music is a powerful lure for Peretti, he maintains that the best thing about his barbershop experiences is the friendship. “It’s all about the harmony, but in the end, the camaraderie and special feeling of singing and performing with the group is what keeps me coming back,” he said. “Sometimes, just singing an old standard in a pickup quartet with three other guys and ringing a few chords for fun can really make your day.”



(Above) Peretti (in blue) rings a few chords with other members of his barbershop chorus during a recent rehearsal. (Below) Peretti (third from left) performing with his chorus when they were finalists in the 2010 BHS International Competition. “Looking out from the International stage at a room with 10,000 people in it, having the house lights go down, and launching into our two contest songs was a thrill I’ll never forget,” he said.

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.