



TMS Member Profiles

Meet a Member: Diana Lados: Casting Creations in Aluminum & Photography

By Francine Garrone

When Diana Lados began playing tennis at the young age of 4, she was learning to perfect her game with a wooden racket. By the time she was a championship player at 14, Lados had moved on to an aluminum racket. Already, the science and aesthetics of aluminum had made their mark on her game and, ultimately, on her life.

Looking back on her championship year, Lados, an assistant professor in the Mechanical Engineering Department and director of the Integrated Materials Design Center at Worcester Polytechnic Institute (WPI) in Massachusetts, associates her understanding of materials in tennis, and their evolution, with materials used in other applications, particularly aerospace materials. Shortly after starting her doctoral research at WPI and many years after winning her tennis trophy, Lados developed a passion for casting the same material that her racket was made from—aluminum—and creating beautiful artwork. Her hobby

soon became an artistic inspiration that benefited from her studying materials science and having an understanding of the metal. “While preparing my research samples, I would see interesting shapes that I thought I could bring to life in a different way,” Lados said. “I never made parts from scratch but rather re-shaped or accentuated the existing pieces of cast aluminum alloys from our foundry.”

By “post-processing” pieces of cast aluminum that she finds in WPI’s foundry, Lados creates such artwork as “The Egg” (Figure 1). Post-processing includes bending, hammering, coarse or mirror polishing, and selective area etching. At times, Lados paints the pieces with vibrant colors or glues several pieces together to create the final shape to enhance specific features of the piece. “Most pieces represent objects or beings often with stylized features to create different effects and emphasize certain characteristics,” she said. “There are also a few abstract

pieces that challenge the viewer’s imagination.”

To date, Lados has created more than two dozen pieces of cast aluminum artwork. Each of her works ranges in size from a few inches to several feet tall. She said she gives her artwork to friends to be placed in their homes and gardens.

On occasion, Lados has used her creativity to shed light on certain features of her cast aluminum artwork using another one of her hobbies—photography. “Both cast aluminum creations and photography require imagination and a good sense of proportion and three-dimensional space visualization,” she said. “They are great ways to use technical knowledge and tools for artistic manifestations.”

Lados’ photography not only captures her cast aluminum artwork but also landmarks, nature, churches, as well as many objects and “catch the moment” shots. “I started with an old 35 millimeter Leica camera over 20 years ago, and in recent years, I began to explore more with digital photography,” Lados said. “I was always inclined to observe things, place them in a context, and pay attention to details.”

Currently, Lados is preparing an exhibit with 72 of her photographs to be displayed in the Gordon Library at WPI. Work from her “Nature, Color, and Life in South America” and “Architecture Around the World” collections will be featured. “In a way, both of these interests have enabled me to look at the world around us with a different perspective, add new dimensions to it, and appreciate the beauty, form and context,” Lados said.

Each month, *JOM* features a TMS member and his or her activities outside of the realm of materials science and engineering. To suggest a candidate for this feature, contact Francine Garrone, *JOM* news editor, at fgarrone@tms.org.



Figure 1: Al-7%Si-Mg (A356) alloy egg. The question is: Which came first? The cast Al egg or the cast Al hen?



Figure 2: Machu Picchu, Urubamba Valley, Peru—“The Lost City of the Incas.”