SPEAKER:  Chuck Tuffile, Ph.D.  Director, Additive Manufacturing Products  
Dr. Tuffile is the Director of Additive Manufacturing & Foil Products of NanoSteel, an advanced materials company specializing in the design of new grades of formable advanced high strength sheet steels for vehicle lightweighting and the design of new steel alloys for additive manufacturing. Dr. Tuffile is responsible for exploring, developing, and commercializing products in AM markets which can leverage NanoSteel’s proprietary ferrous alloys. His technical expertise includes rapid solidification and structural development of metals, two critical areas for understanding and producing consistent, reliable, high performance metal AM parts. Dr. Tuffile received a Ph.D. in Materials Science & Engineering from Northeastern University, M.S. in Mechanical Engineering from Tufts University, and B.S. in Mechanical Engineering from Clarkson University.

TOPIC:  Wear Resistant Alloys for Additive Manufacturing  
Core components within industries such as oil and gas, tool and die, and agriculture experience high levels of wear in day to day operations. To meet the lifetime requirements for these parts, new advanced materials must be developed that deliver significant durability. Laser powder bed fusion (LPBF) and binder jet (BJ) additive manufacturing processes have the potential to serve the needs of on-demand metal wear-part fabrication. However, the commercially available materials for these processes have poor wear performance, making them unsuitable for many industrial applications. This presentation will examine wear resistance, mechanical properties, and microstructures of common and new ferrous alloys used in BJ and LPBF in both as-built and heat treated conditions. The microstructural influences on the properties will be highlighted. Utilization of new wear resistant ferrous alloys with LPBF and BJ is expected to enable on-demand production of wear limited parts with low printed part cost.

Location:  Spumoni’s Restaurant, 1537 Newport Ave, Pawtucket, RI  
*Note: We will be in the upstairs, private function room.*

Time:  Wednesday, Oct. 12 - meet and greet at 6:00 PM. Dinner at 6:30 with presentation at 7:30

Dinner:  Dinner entrée selection from a specially selected menu!

Cost:  ASM Members $25, Guests $30, Students & ASM Retirees $15.

Reservations:  Reply to this e-mail with your intentions, or click the link: [asmri@comcast.net](mailto:asmri@comcast.net)