

**Where:** Jesse's Steak, Seafood & Tavern  
224 Lebanon Street, Hanover, NH 03755  
603-643-4111

**When:** 6:00 – 6:30 Cocktail Hour  
6:30 – 7:30 Dinner

*Wood Grilled Atlantic Salmon, Top Sirloin or Teriyaki Sirloin,  
Twin Teriyaki Grilled Chicken, or Vegetarian Option*

7:30 – 8:30 Speaker Presentation



***Whose Joint Is This? A Failure Analysis  
Approach to Orthopedic Engineering***

**Abstract:** The number of total joint replacements has steadily increased worldwide over the last 10 years topping 1million annually in the United States alone. Problems related to design and material processing have led to an additional 100,000 surgeries annually. Fortunately, industry learns from its mistakes. This presentation will introduce some of the failures that have lead to recent material and design developments that are being implemented to satisfy the demands of a more active population. With good design and materials choices, today's total joint devices are expected to be working well after 30 years or more in one of the most demanding environments an engineer could imagine...your body.

**Speaker Bio:** Douglas Van Citters joined the faculty at Dartmouth's Thayer School of Engineering in January of 2007 after earning his PhD at Dartmouth in 2006. Trained as a mechanical engineer and materials scientist, he is a member of a research team performing failure analysis on a collection of over 9,000 retrieved artificial joints. He also helps advise the school's two motorsports teams, and has been an active collaborator and advisor in the biomaterials field for projects from DHMC's departments of orthopedics, pediatrics, radiology, physiology, and vascular surgery.

\$20 for ASM, SME, and ASME Members, \$25 for Non-Members, Free for Students  
*For more information, questions, and to **confirm your attendance** please contact:*

*ASM: Leigh Duren at [leigh.duren@parker.com](mailto:leigh.duren@parker.com) or 207-482-2709*

*SME: Carl Hurd at [hurd\\_carl@hotmail.com](mailto:hurd_carl@hotmail.com) or 802-886-8286*

*ASME: Jen Marris at [jen@longviewnh.com](mailto:jen@longviewnh.com) or 603-865-7260*

***by Monday October 26<sup>th</sup>***