November 8, 2012 (Thursday)
Topic: Metallurgy Insights from the Collapse of World Trade Center Buildings
Speaker: George F. Vander Voort, FASM
Consultant – Struers Inc.
Directions: Margaritas Mexican Restaurant - 350 Roberts St., East Hartford, CT, Ph: (860) 289-7212
I-84 Exit 58 Roberts Street: From the East, turn right onto Roberts St. and the restaurant is immediate on the left. From the West, turn left on to Robert St. and after the first light the restaurant is immediate on the left.

Agenda:
Cocktails: 5:30-6:30 PM
Dinner: 6:30-7:30 PM
Program: 7:30-8:30 PM

Program Charges:
Regular Members - $28
Young Professionals - $20
Retirees - $15
Full Time Students - $15

Technical Chairperson: Phil Sherer
Reservations: Call Linda at Service Steel Aerospace 203-906-6381 or lthomas@ssa-corp.com by noon November 5th. Thanks!

Abstract:
At 5:20 PM on 9/11/01, the only building with a World Trade Center address that stood on a different block from the rest of the complex, 47-story steel-framed 7 World Trade Center, underwent a sudden total collapse. The available evidence on the condition of Building 7 prior to its collapse fails to document more than superficial structural damage (from the "collapses" of the Twin Towers) and small isolated fires. What can metallurgical examination tell us? Steel samples from Buildings 1, 2 and 7 of the World Trade Center were collected during the Federal Emergency Management Agency forensic investigation shortly after the September 11, 2001 incident. Macroscopically, the steel samples supplied exhibited severe “erosion” with plate thickness varying from 12.7mm to a total loss of metal in many areas. Also, some localized plastic deformation was observed. A determination of the cause of this unexpected erosion and an estimate of the maximum temperature that this steel likely experienced are the subjects of this study.

Bio: (www.georgevandervoort.com)
George Vander Voort, principle engineer of Vander Voort Consulting L.L.C., is a graduate of Drexel University and Lehigh University with a background in metallurgy and materials science and 29 years experience in the specialty steel industry. A past president of the International Metallographic Society and past chairman of ASTM Committee E-4 on Metallography, George has six patents and over 298 publications including Metallography: Principles and Practice (McGraw-Hill, 1984; ASMI, 1999) and the ASM video course, Principles of Metallography. He served as a trustee for ASM International, and is a member of several ASMI committees. He is vice president of Alpha Sigma Mu honorary scholastic society. He is a member of the editorial board of Praktische Metallographie and the International Journal of Microstructure and Materials Properties and is on the scientific committee of La Metallurgica Italiana. He was associate editor of Materials Characterization (1991-2004) and was on its editorial advisory board (1986-2007). He is a member of ASM International, IMS, ASTM, TMS, RMS, ISS, MSA, MAS, DGM, PSS, and the State Microscopy Society of Illinois. George is a fellow of ASMI and ASTM and has 34 awards for his microscopy work including the Jacquet-Lucas Grand Prize and the Dubose-Crouse Award of the International Metallographic Contest. He was named a Distinguished Alumni of Drexel University and a Distinguished Honorary Lifetime member of Alpha Sigma Mu honorary materials science society. He has given over 377 lectures in 39 countries; spoken 81 times at 51 ASM Chapters, and at 72 universities, and has taught 75 one-week ASM Metals Engineering Institute courses, plus 117 seminars for Buehler Ltd and 29 for other societies. Five of his color micrographs have been used to make ties and scarves. George will be cited as a Fellow of the IFHTSE Society in September. IFHTSE Fellowship recognises individuals who have made outstanding, globally recognised and significant contributions to the development of heat treatment or surface engineering.