May 12, 2015

**Topic:** Science Base for the Joining Technologies of the Future

**Speaker:** Stan A. David  
Corporate Fellow and Group Leader  
Emeritus ORNL, Oak Ridge, TN

**Directions:** The Adams Mill, 165 Adams Street, Manchester, CT 06042, Ph: 860-646-4039  
(www.theadamsmill.com/directions.htm)

I 84 Take exit 62; from west turn right onto Buckland Street, continue straight for less than a mile (Buckland Street turns into Adams Street by the Manchester Honda Dealership). From east turn right at end of exit and right at light onto Buckland and follow directions above. The restaurant is on the left, a brick building set back off the road.

**Agenda:**
- Cocktails: 6:00-6:30 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

**Entrées must be pre-Ordered**
- Sliced Pork with Mushrooms
- Rosemary Chicken
- Honey Mustard Salmon
- Pasta Primavera

**Technical Chairperson:** Rainer Hebert

**Reservations:** Call Linda at Service Steel Aerospace 203-906-6381 or lthomas@ssacorp.com by noon May 8th for dinner. Thanks!

**Abstract:**

Welding or joining is a critical technology used in a wide variety of industries. Perhaps because welding is mostly used in construction technology, it is viewed by many as a primitive science. In the last few decades welding has evolved from an almost empirical art to a major interdisciplinary activity requiring synthesis of knowledge from various basic and applied sciences and advanced tools. Scientists from diverse disciplines such as arc and plasma physics, high-temperature chemistry, materials science, computer science, and a wide variety of engineering fields, including mechanical, chemical, electrical, and materials engineering, are making new contributions. Major progress has been made in understanding physical processes, microstructural evolution, and the correlation between microstructure and properties and intelligent control and automation of welding processes.

The presentation will examine significant recent activities in welding science.

**Bio:**

Dr. David received his Ph.D. degree in Metallurgical Engineering from the University of Pittsburgh. He was an adjunct professor at the University of Pittsburgh and Colorado School of Mines, and a Visiting Professor at Coventry University, Coventry, United Kingdom.


He is the recipient of several major awards: To mention a few The Arata Prize from the International Institute of Welding, Distinguished Alumnus Award from the University of Pittsburgh, Elegant Work Prize of the Institute of Materials, London, for his publications on single crystal welding. In 1994 he was the recipient of the Champion H. Mathewson award from The Minerals, Metals and Materials Society and was awarded the 1981 Lincoln Gold Medal by the American Welding Society.

He has contributed to over 300 papers in the fields of solidification and welding metallurgy and is the editor of eight international conference proceedings.