

## Investigation of the Hydrogen Release Incident at the AC Transit Emeryville Facility

08 May 2013 – ME Auditorium 1200

### With Guest Lecturer Dr. Chris San Marchi

Senior Member of Technical Staff  
*Sandia National Laboratories*

On May 4, 2012, the uncontrolled release of approximately 300kg of hydrogen occurred at the AC Transit hydrogen fuel cell bus refueling station in Emeryville, CA. Witnesses reported a loud “boom” when the released hydrogen mixed with air and ignited. The Emeryville Fire Department promptly responded to the incident. Facility employees along with the surrounding businesses were temporarily evacuated as a precautionary measure, although no injuries or fatalities resulted from the incident. After the incident Sandia National Laboratories (Livermore CA) was asked to assist the investigation because of the expertise of the Hydrogen Safety, Codes and Standards program, a US Department of Energy program at Sandia with extensive experience analyzing the risks associated with hydrogen infrastructure. The present talk summarizes the investigation results and highlights the metallurgical failure of the pressure relief device that precipitated this incident.



Dr. Chris San Marchi

### **Abridged Biography:**

Dr. Chris San Marchi obtained a PhD in Materials Science from MIT in 1997 and holds BS degrees in Mechanical and Aerospace Engineering as well as in Chemistry. Currently, Dr. San Marchi is a Principal Member of the Technical Staff at Sandia National Laboratories in the Hydrogen and Metallurgy Science Department. Dr. San Marchi has published extensively in the area of hydrogen-assisted fracture, including authoring the Technical Reference for Hydrogen Compatibility of Materials and contributing to distinguished texts. Dr. San Marchi also works with various standards organizations that are developing codes and standards for hydrogen infrastructure.



NAVAL  
POSTGRADUATE  
SCHOOL