



# The Macrogram

Hartford Chapter of the ASM International  
Build on our Strengths - Leverage our Diversity - Network to Succeed

## MONTHLY MEETING – TOPIC

March 18, 2008

### Awards and Recognition Night\*

**Topic: Metallurgical Failures in History and Failures in Inspection Procedures**

**Speaker:** Arthur McEvily  
Professor Emeritus  
University of Connecticut

**Directions: Cugino's**, 1076 Main Street, Newington, CT 06111, Ph: (860) 665-0881  
Main Street is Route 176. **Cugino's** is south of Route 175 (Cedar Street). Use alleyway to parking area in rear.

**Agenda:** Cocktails: 5:30-6:30 PM  
Dinner: 6:30-7:30 PM  
Program: 7:30-8:30 PM  
**Program Charges:** Regular Members - \$28.00  
Retirees - \$15.00  
Full Time Students - \$15.00

**Technical Chairperson:** Arnie Grot  
**Reservations:** Call Shirley at Dynamic Metals (860) 583-3336 by noon March 13th. **Thanks!**

### Bio:



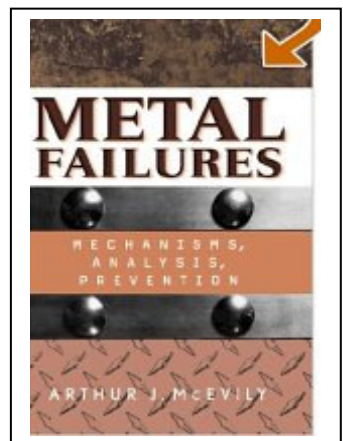
Dr. McEvily was honored in 2006 by ASM/TMS for his contributions to theoretical and experimental aspects of fatigue and fracture over the past 50 years. He received his Ph.D. from Columbia University and began his career at NASA, later working for the Ford Motor Co. before joining UConn. He has been a visiting professor/researcher in India, Japan, Great Britain, the USSR, Germany and China. He is a fellow of ASM, ASME and the International Fatigue Congress.

### Abstract:



Despite the great strides forward that have been made in technology, failures continue to occur, often accompanied by great human and economic loss.

The most frequently used inspection methods are, for the most part, effective and reliable. There have been instances, however, where the designated inspections were not able to detect cracks, and as a result catastrophic failures occurred. In the aviation field we are fortunate the accident reports are made public, so engineers can learn from the mistakes and take corrective actions to prevent recurrences. A number of cases where faulty inspection procedures resulted in accidents will be discussed. These cases are based on published reports and personal experiences and will deal with the crashes which involved a 707 freighter (visual examination), a DC-10 (dye penetrant), a small passenger plane (magnetic particle), a 737 (eddy currents), and a 747 freighter (ultrasonics).



\* **Service Award**  
*Recipients will receive a gift based on years of membership. Awards will be presented at dinner.*

The future of ASM... is in your hands.

Visit the new UConn Materials Advantage Chapter's Web Site  
[www.engr.uconn.edu/ucma](http://www.engr.uconn.edu/ucma)



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**MONTHLY MEETING – TOPIC**

**April 17, 2008**

**Joint ASM-SOCT/ASM-Hartford/ACS  
Materials Week Meeting**

**The Golden Age of Trucking Museum Tour  
Topic: Direct FuelCells Greening America**

**Speaker:** Andrew J Skok  
Executive Director, Strategic Marketing  
FuelCell Energy ([www.fuelcellenergy.com](http://www.fuelcellenergy.com))  
Danbury, CT

**Directions: Golden Age of Trucking Museum,**  
1101 Southford Road, Middlebury, Connecticut 06762,  
Ph: 203-577-2181. From I-84 Westbound - Exit number  
16 Turn right onto CT-188. Golden Age of Trucking  
Museum is 0.48 miles along 188 on the right. From I-  
84 Eastbound - Exit number 16 Turn right onto CT-188.  
Golden Age of Trucking Museum is 0.60 miles along  
188 on the right ([www.goldenagetruckmuseum.com](http://www.goldenagetruckmuseum.com))

**Agenda:** Tour/Cocktails: 5-6:30 PM  
Dinner: 6:30-8:00 PM  
Program: 8:00-8:45 PM

**Program Charges:** Regular Members - \$25.00  
Retirees - \$20.00  
Full Time Students - \$10.00

Members who wish to attend the technical presentation and/or visit the museum only are welcome. There will be a \$10/adult \$5/child fee to help cover the facility charges.

**Technical Chairperson:** James Steele  
**Reservations:** Call Shirley at Dynamic Metals (860) 583-3336 by noon April 14th. **Thanks!**

**Abstract:**



This presentation is on Direct FuelCell(R) commercial applications and their positive impact on the environment. It will cover the commercial and industrial use of the smaller DFC 300 and DFC 1500 products and also discuss the recently awarded DFC 3000 utility applications through the CT Project 100 program. This will include a discussion on the DFC-ERG Milford 9 MW project, the world's largest fuel cell project.

**Bio:**



Mr. Skok is a senior marketing executive for FuelCell Energy in Danbury CT where he has over 29 years of experience in many different management positions. Areas of focus have included R & D, first of a kind demonstration projects, new product development, development of a world-class field service group, sales, business development, and marketing.

Mr. Skok has first-hand experience with power plant operability, reliability, instrumentation, operator training and customer interfacing. He has directed field construction and operations of the world's first full-size 1.8 MW carbonate fuel cell power plant in Santa Clara CA. In this role, he supervised all power plant site activities including permitting, construction, process testing, electrical interconnection with the Utility, power plant testing, and interaction with sponsors, visitors and other agencies. He has also led the design, fabrication, quality testing, design verification, start up and testing of the company's first DFC300 power plant. After the successful introduction of this early product, he played a major role in the design improvements presently being incorporated into the current production units. Mr. Skok's prior responsibilities have ranged from fundamental R&D to technical support and training to the companies OEM distributors, certification of the company's products, and technical support for the company's New Product Introduction (NPI) process.

Mr. Skok received his undergraduate degree in Materials Engineering from Wilkes University and attended the Yale University's Chemical Engineering Graduate School. He has published numerous technical articles, is past Chairman of the International Standards Committee IEC TC 105 on Fuel Cell Installation, and actively participates on many other national and international committees.



The Golden Age of Trucking Museum is a non-profit organization that was founded in 1998 by the late Richard J. Guerrero. Mr. Guerrero was a successful businessman who owned a trucking company which was in operation for over

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35 years. As the company became successful, Mr. Guerrero began to purchase and restore antique vehicles. He housed them in barns all over the state and would often take them to truck shows and offer them for use in local parades. In 1998 he founded The Golden Age of Trucking Museum and purchased land to build a home for the organization. He passed away in 1999, but his wife, Frances Guerrero, carried out his wishes by building a 32,000 square foot facility to house the antiques. His dream came to fulfillment in 2002 when the museum opened its doors.

The 18 antique trucks and 2 antique boats that belong to the Guerrero family will remain in the museum forever. However, the other 30 or more antique cars and trucks are on loan to the museum. They find their home in the museum for one year and are then rotated out to make room for others. This keeps the exhibits new and exciting. The Memory Lane display greets you with Crosley cars and collectibles as well as an extensive display of first gear models. As you make your way into the showroom you will find a pristine display of Diamond T, Mack, Pierce Arrow, Kenworth, Sterling, White, GMC, Dodge, International, Brockway, Federal, Jeep and Autocar trucks from the early 1900's through the 1970's. There are also stock cars from the Danbury Race Arena along with memorabilia and

hundreds of photographs and artwork pieces. The Waramaug Way exhibit displays two antique boats and an extensive array of vanity license plates. The Interactive Interstate display is geared for children. There is a cut-away of a Volvo tractor complete with a sleeper that the children can get into and pretend to drive. There are games, toys, blocks, puzzles, books, computers, and videos to watch. The Golden Age of Trucking Museum has been chosen as an Editor's Choice in the 2006 edition of the Yankee Magazine Travel Guide to New England.

Save  
**September 10, 2008**  
 for the Annual Golf  
 Outing  
 Gillette Ridge CC  
 Bloomfield, CT



2007 Most Honest Team

**All proceeds go to our Scholarship and Student Outreach Programs**

## Hartford Area ASM Materials Camp™

Undertaking this camp, which is a great outreach event on materials to high school students, has some basic needs:

- **Costs** – No Charge to Students; Transportation must be provided by the participants.
- **Audience** – Entire Junior class (50-60 students) of the University High School for Science and Engineering (Magnet school located on the University of Hartford campus) plus other high school students
- **Location** - UConn IMS facilities in Storrs, CT
- **Timing** - Monday, October 20<sup>th</sup> or Monday, October 27<sup>th</sup> 8:30 AM to 3:30 PM
- **Station owners** (*Please submit application*) - Owners would determine the content of the station and gather the resources for 64-100 students. Stations (8-9) will involve students in hands on experiments or demonstrations. Each presentation is to be approximately 20 minutes long and is to be given 8-9 times during the camp to groups of 8-12 students. A take away item from each station to remind students of the experiment or demonstration is desirable.

**Some possibilities for station topics include:**

<b>Glass &amp; Ceramic</b>	<b>Polymers</b>	<b>Materials Identification</b>	<b>Fuel Cells - Efficient Energy Generation</b>
<b>Microstructure</b>	<b>Casting</b>	<b>Shape Memory Alloys</b>	<b>Heat Treatment &amp; Mechanical Properties</b>
<b>Superconductivity</b>	<b>Corrosion</b>	<b>Aerospace Materials</b>	<b><i>Your idea (Submit a Proposal)</i></b>

- **Volunteers** – for Registration, Groups escorts, assist in setup (day before) and teardown (immediately after)
- **Funds** – We are soliciting local companies to provide
  - Materials Camp™ T-shirts or Hats
  - Materials Camp™ Tote Bags for station take away items
  - Materials Camp™ Notebooks and Pens to record observations
  - Lunch
  - Appreciation gifts for volunteers

**Contact:** Arnie Grot (email: [chair12@asm-hartford.org](mailto:chair12@asm-hartford.org), mail: 87 Chapman Dr., Glastonbury, CT 06033)

**HARTFORD AREA MATERIALS CAMP™ Materials Station/Experiment Application**

**DATE:** Monday, October 20<sup>th</sup> or 27<sup>th</sup>, 2008

**LOCATION:** UConn IMS Facilities in Storrs, CT

Please complete the following information and submit by August 15, 2008 to

Arnie Grot (email: [chair12@asm-hartford.org](mailto:chair12@asm-hartford.org), mail: 87 Chapman Dr., Glastonbury, CT 06033)

**Experiment Name:**

**Science/Engineering Station (Name and Title/ Company)**

**Contact Person (Phone Number/Street Address/Fax/Email Address)**

**Experiment Description (25-50 words):**

**What type of Equipment will you provide/bring for the Experiment:**

**What type of Utilities will be required for the Experiment (electrical/water/ etc.)**

**Experiment Layout (How much space will you need? Example 2 Tables – 6 ft each)**

**Additional Support needed?**

**EXEC'S LETTER**

My fellow members, March 18, 2008 is *Awards and Recognition Night*. We will honor our members with 5, 15 and 25 years and those with life service in ASM. To be a chairperson of a Chapter of ASM International is an honor to which any member may properly aspire. As this mark of distinction can be conferred



**Past Chair Plaque**

upon only a comparative few, all officers should consider themselves signally favored in having an opportunity to serve on the Executive Committee. Our immediate past Chair, John Rugh, lead the Hartford Chapter to Five Star recognition for the 2006-7 year. He will be signally recognized for this achievement on March 18, 2008. On this night we also honor all individuals who have served as chairperson of our Chapter. They are our guests for the evening and are asked to proudly wear their Past Chair Name Badges. Please ask them about their year as chair.

April 14-19 is *Materials Week* in Connecticut. You can celebrate with us, the Southern Connecticut Chapter and the American Ceramic Society on April 17 by touring the *Golden Age of Trucking Museum* in Middlebury. After dinner at the Museum, Andrew Skosk, a senior marketing executive for FuelCell Energy in Danbury CT, will present a talk on *Direct FuelCells Greening America*.

Our January meeting featured a very informative talk about the growth and success of **Project Lead the Way (PLTW)** in Connecticut and an overview of the newest option for Connecticut schools: **Engineering byDesign™ (EbD)**.



**Greg Kane  
Receives Speaker Mug**

**Project Lead the Way (PLTW)** in Connecticut has grown from a dozen public schools in April 2003 when we last had Mr. Gregory Kane speak at ASM Hartford. There are now 57 high and middle schools with PLTW programs. These pre-engineering programs are having a profound effect on the

future of Connecticut.

In February, Dr. Anthony Dennis of Connecticut Center for Advanced Technology (CCAT) discussed



**Dr. Anthony Dennis  
Receives Speaker Mug**

**Modeling Manufacturing Processes and the Effect on Durability.** Modeling and simulation employs physics-based machining process modeling solutions to help manufacturers improve the efficiency of their machining processes. CCAT is holding the largest US **Symposium for Aerospace Laser Applications (SALA)** on April 2 & 3, 2008 in East Hartford, CT ([www.ccat.us/laser/events](http://www.ccat.us/laser/events)).

In May, come and witness the accumulation of years of research, months of preparation and weeks of competition by UConn Materials Advantage Student members for the privilege of presenting to ASM Hartford. **Only three, out of**

**an over seventy possible projects, can be selected.** *Those not selected in the competition will have poster boards of their research available for review.* This technical program demonstrates why MSE adds to UConn status as the number one public University in New England.

Your Chapter officers are working on having an Aerospace talk in June. Details of both this meeting and the May **Student Night** presentations will be in the spring issue of the *Macrogram*.

Greg Kane shared some disturbing data showing that American companies are facing an increasingly significant shortage of engineers. Part of the solution is to encourage more middle and high school students to pursue careers in science and engineering. One important approach is providing them with hands on exposure to science and engineering. Since 2002, *ASM Materials Camps™* have introduced thousands of high school students to hands-on learning about the role of materials in our daily lives. You have the opportunity to influence a few Hartford area young minds by helping with the **Hartford Area ASM Materials Camp™** which the Hartford Chapter is sponsoring at UConn in Storrs on October 20<sup>th</sup> or 27<sup>th</sup> 2008. Please read, elsewhere in this newsletter, about what you can specifically do to help and then volunteer your time and resources.

Please feel free to drop me a line to share your thoughts on these matters. I'd be delighted to discuss ASM Hartford – present and future – with loyal members like you.

*Thanks for your Support,*

*Sam Christy*

**Leighton Lee II** of the Lee Company will lead an **Informal Discussion on Early Engineering Technologies**. Attendees can tour the *David Bushnell House Museum of Early Engineering* in Westbrook, CT. Check [www.asm-soct.org](http://www.asm-soct.org) **ASM Southern Connecticut Chapter** for details on this tour, dinner and discussion planned for the Thursday, March 21, 2008 - Oliver's Restaurant & Taverne in Essex, CT

**Highlighting New Technology in Thermal Spray for the Aerospace Industry.**



The ASM Thermal Spray Society will hold its Aerospace Coatings Symposium on October 15-16 at the Sheraton Bradley Hotel in Hartford, Connecticut.

This symposium will bring together professional technical, commercial and academic decision makers of surface engineering and thermal spray solutions throughout the aerospace coatings supply chain, such as: materials and equipment suppliers, coating applicators, system integrators, engine manufacturers, airlines, and service providers

[www.asminternational.org/TSSaerospace08/](http://www.asminternational.org/TSSaerospace08/)



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### 2007-2008 Executive Committee

<b>Chairperson</b>	Sam Christy	(860) 565-5985
<b>Secretary</b>	Jack Woodilla	(203) 374-7650
<b>Treasurer</b>	Joe Kubinski	(860) 745-5977
<b>Public Relations</b>	Harley Graime	(860) 550-7246
<b>Membership</b>	Jack Piela	(860) 872-9359
<b>University Affairs</b>	Mark Aindow	(860) 486-2644
<b>Student Affairs</b>	Rainer Hebert	(860) 486-3155
<b>Student Chapter</b>	Amber Black	(860) 550-3096
<b>Golf Outing</b>	Rebecca Gatzen	(860) 667-4403
<b>Member at Large</b>	Stu Weiss	(860) 731-6736
<b>Online Chair</b>	Arnie Grot	(860) 633-5849
<b>Outgoing Chair</b>	John Rugh	(860) 741-9388

### Sustaining Member Companies

Consider becoming a sustaining member. For information, please contact Jack Woodilla, Secretary.

BASF	Jacobs Vehicle Systems
Bodycote Thermal Processing	Industronics Service Co.
Consolidated Ceramic Products	Metallurgical Services Intn'l
Conval Corp	MicroTech Optical Inc.
Deringer Ney Inc	Nerac
Excel Technologies	Pratt & Whitney
ExTorconsult	Specialty Steel Treating Inc
Flame Treating & Engineering	United Service Company
Fenn Manufacturing Co	University of Connecticut
Grot Enterprises	Vitta Corp

*Due to cost of printing and mailing, ASM Hartford will publish just one issue of the Macrogram in the fall, one winter issue and one spring issue. Therefore, it is particular important that you bookmark the ASM Hartford web site (<http://www.asm-hartford.org/>) and check it regularly for updated information. We will continue to send out email notices to those on our distribution list prior to events.*

To receive an email notice of Hartford Chapter events, send an email to [web@asm-hartford.org](mailto:web@asm-hartford.org).



**Join ASM!**

- FREE Book when you join! (see available selection)
- FREE monthly magazine covering industry and society happenings
- FREE access to ASM Desk Editions Online
- FREE access to online membership directory for networking and information exchange
- Members-Only discounts on books, seminars, journals, self-study, conferences, and online subscriptions



The Materials Information Society

[www.asm-hartford.org](http://www.asm-hartford.org)

ASM HARTFORD CHAPTER  
Jack Piela, Membership  
68 Brimwood Drive  
Vernon, CT 06066