

## Honors and Awards Banquet

**Where: Edison Club - Rexford, NY**

**Topic: Engineering and Baseball – Wood, Aluminum, and Composite Bats**

**When: Thursday, May 22, 2003**  
Reception 6 PM  
Dinner 7 PM  
Awards and Lecture 8 PM

**To reserve your seat, contact Fred Willett**  
([willetff1@asme.org](mailto:willetff1@asme.org) or (518) 347-0271) by 6 PM  
Wednesday, May 21st

## **Engineering and Baseball – Wood, Aluminum, and Composite Bats**

**About the Topic:** When Abner Doubleday first developed the game of baseball in the 1839, players used wood bats to hit the ball. The profile of the bat and the choice of materials have changed since that time. The early hickory bats were relatively heavy in comparison to the ash and maple wood bats used today, and the older bats had fatter handles. The sole use of wood bats continued into the early 1970's. However, with the advent of space-age aluminum and composite bats being developed by engineers, players were given alternatives to wood. In 1974, the NCAA permitted the use of aluminum bats, and this move to non-wood bats trickled down to high school and youth baseball and over to softball. The initial intent of the move to aluminum bats was to reduce costs. However, this cost reduction was soon obscured by the potential for super bats. While there is very little that an engineer can do to enhance the performance of wood bats, other than modify the bat profile; engineers can exploit metals to achieve a wide range of bat performances.

In 1998, Major League Baseball and Rawlings Sporting Goods gave a seed grant of \$400K to establish the UMass-Lowell Baseball Research Center (UMLBRC). The mission of the UMLBRC is to be a research facility

that MLB and other baseball governing bodies, such as the NCAA, can use as an engineering and science resource for research of baseball related items, e.g. bats, baseballs, and protective equipment and baseball-engineering education and academic research.

This talk will present the facilities available at the UMLBRC and discuss the results of some of the recent research projects,

### About the Speaker:



Prof. James A. Sherwood is the Director of the Baseball Research Center, Co-Director of the [Advanced Composite Materials and Textile Research Lab](#), and Co-Director of the Center for Electric Car and Energy Conversion at the University of Massachusetts at Lowell.

Dr. Sherwood's research interests lie in the field of constitutive modeling, mechanical behavior of materials with emphasis on composites, finite element methods with emphasis on high speed impact, and innovative teaching methods in engineering education. His most recent works include crash modeling for the Solectria Sunrise All-Composite Electric Car and the modeling and experimental investigation of the bat/ball impacts for Major League Baseball and the NCAA

Presently, Dr. Sherwood is pursuing funding to establish an independent test center for evaluating the performance of baseball bats. It is anticipated that this facility will expand to be a test center for investigating the structural performance of safety equipment associated with baseball and to be the official test center for Major League Baseball.

To learn more about Dr. Sherwood go to his own web-page <http://m-5.uml.edu/sherwood/full.htm>

## Honorees:

**ASME Fellow:** *Dr. Prabhat Hajela*

**Daniel C. Drucker Medal :** *George J. Dvorak*

**Thomas A. Edison Patent Award :** *Hooshang Heshmat*

**Burt L. Newkirk Award :** *Thierry A. Blanchet*

In addition, we will announce the winners of three student awards: the Sayre Prize (Union College), the Davies Award (RPI), and the Scheper Scholarship (Hudson Valley Community College)

## 50 Year Members:

- O. Chadwick Loveland
- William G. Rogal
- Fred W. Staub, PE

**25 Year Members:** Michael J. Behrman, PE; E. Richard Booser, PhD, PE; Anthony Caravuna, M. R. M. Crespo da Silva, PhD; Stephen J. Derby, PhD; Edward A. Donoghue; Ivar Giaever, PhD; Gerard F. Havasy; Marshall G. Jones, PhD, PE; John A. Urbanski; Richard L. Van Kempen

## Dinner Choices:

The reception includes an elaborate display of crudite vegetables with assorted dips, assorted domestic cheeses & crackers, bruschetta & french bread, and fresh fruits. Beverages may be purchased from a cash bar.

Entree choices include one of the following:

- Roast Sliced Sirloin of Beef, or
- Chicken Marsala with Fresh Mushrooms, or
- Baked Scrod Fillet with Lemon Wine Sauce

And includes Fresh Garden Salad, Fresh Bread Basket, Oven Roasted Baby Red Potatoes, Fresh Vegetable Medley, Warm Apple Dumpling w/Caramel Sauce & Vanilla Ice Cream, and Coffee or Tea.

**Cost:** Cost for the dinner is

\$20 for ASME members (and their guests)

\$25 for non-members

\$15 for Students

**Reservations:** Number of people and dinner selection to: Fred Willett ([willettf1@asme.org](mailto:willettf1@asme.org) or (518) 347-0271) by 6 PM Wednesday May 21st. Checks payable to ASME and cash will be accepted at the door.

**Directions to Edison Club:** **From I-87:** exit 9 Clifton Park: 146 West to Rexford bearing left @ traffic light. Left @ 1<sup>st</sup> light onto Riverview Road. Edison Club on left. **From Rt. 7:** Turn onto 146 (Balltown Rd. going north). Cross Rexford Bridge. Right @ 2<sup>nd</sup> light onto Riverview.

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## AIAA/ASME Aerospace/Mechanical Engineering Symposium

The AIAA/ASME symposium was held on April 7 at the Holiday Inn on Wolf Road. Forty technical papers were presented to an audience over seventy attendees in four parallel sessions. In addition, Victor Abate, VP of Engineering at GE Power Systems, gave the keynote address and Daniel Landry, VP of Nanotechnology R&D at Evident Technologies, gave the luncheon presentation. The eight sessions included ones on heat transfer, CFD/aerodynamics, seals and bearings, structural analysis, measurement and visualization, and combustion and two that were systems related.

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## April's Distinguished Lecturer

Adrian Bejan, the J. A. Jones Distinguished Professor of Mechanical Engineering at Duke University, gave a thought provoking lecture on constructal theory and design. Constructal theory is the study of natural flow systems and their application to engineered flow systems, such as heat exchangers. These principles lead to more compact and efficient heat exchangers.

This event was hosted by the Student Section at Union College in Schenectady. The section did a superb job in lining up the speaker, facility, and refreshments. Approximately two dozen people attended the event.

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## Professor Frank Wicks - Local Contributor to Mechanical Engineering Magazine

Frank Wicks, Professor of Mechanical Engineering at Union College is a frequent contributor to Mechanical Engineering Magazine. During the past year Professor Wicks has authored two cover articles.

The July 2002 issue featured "Where on Earth?" an article describing the development of navigation leading to the satellite and atomic clock based Global Positioning System. (The cover shows one of 24 GPS satellites.)

This month's (May 2003) issue of Mechanical Engineering features "The Remarkable Henry Ford" coinciding with the 100th anniversary of the Ford Motor Company. (A picture of a 1932 Ford V8 is on the cover.)

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**ASME International**  
**Hudson-Mohawk Section Officers**

Chair: Fred Willett (518) 347-0271 [willett1@asme.org](mailto:willett1@asme.org)  
Vice Chair: Frank Reed (518) 385-4264  
[frank.reed@ps.ge.com](mailto:frank.reed@ps.ge.com)  
Secretary: Tom George (518) 395-4045  
Treasurer: Mike Brilliant (518) 387-6558  
[brilliant@crd.ge.com](mailto:brilliant@crd.ge.com)

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## Student Competition Winners

The ASME Region III Student Competition was held in Washington the first weekend in April. Four Union College Students

**Smitesh Bakrania** who is advised by Professor Ann Anderson won 1st Place (\$300) in the Old Guard Speaking competition. He will be returning to the ASME International Congress in Washington in November and compete for \$3000 in prize money.

**Mark Hoffman** who is advised by Professor William Keat placed third in the Old Guard Speaking competition.

**Scott Clark** who is advised by Professor Brad Bruno placed 2nd in the poster competition.

**Ben Tillotson** who is also advised by Professor Brad Bruno placed 3rd in the poster competition.

This is the fourth time in seven years that a Union student has won the oral competition. Prior winners were:

- Gretchen Voegler in 1997
  - Mark Eberhardt in 1999
  - David Chapin in 2001
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## P.E. Exam Videotapes Found

The Section's P.E. Exam study guide videotapes were loaned out to a section member and forgotten. The missing tapes have been mentioned in the last two newsletters. Thankfully, the member who borrowed the tapes has identified themselves and will return them to the section shortly.

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## Distribution of Section Newsletter

The Hudson Mohawk newsletter is posted at:  
[www.asme.org/sections/hudson-mohawk](http://www.asme.org/sections/hudson-mohawk).

Once each newsletter is posted on the Section's web page, an e-mail notification and link to the above website is sent to members who have e-mail addresses in the ASME member database. If you are an active member of ASME and did not receive an e-mail notification, please go to the ASME web site and update your membership information.

<http://members.asme.org/myasme/login/myasme.cfm>

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## PE Exam Study Group Leader

The Hudson-Mohawk Section seeks a member to lead and host a P.E. exam study group. The ideal volunteer is an engineer planning to take the P.E. exam in the next year. The leader will arrange a location and schedule for prospective P.E.'s to view and discuss the P.E. exam study guide videotapes. The leader will have custody of the section's P.E. exam study guide videotapes for the duration of the study group schedule.

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## Section By-Laws

Our section by-laws have gotten lost over the years. A new set of by-laws has been written, based on one form of section by-laws suggested by ASME. The executive committee has reviewed the new version and recommends that it be submitted to the section for ratification. The ratification vote will occur along with the annual election of officers. (The ballot for this vote is included in this newsletter.) The new by-laws, along with answers to some anticipated questions, can be found at <http://www.asme.org/sections/hudson-mohawk/bylaws.html>

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## 2003-2004 Section Officers

The section Nominating Committee, chaired by Paul Kehoe, has nominated officers and directors for 2003-04. The ballot is included on the next page. We have looked into electronic voting through our section's website, however a "fool-proof" system could not be implemented before press time.

**Voting Instructions:** If you received this newsletter electronically, print out the last page, clip the ballot, fill it out, sign it, and mail to:

**Paul Kehoe**  
278 Kenwood Ave  
Delmar, NY 12054

**THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS  
HUDSON MOHAWK SECTION**

Paul Kehoe  
278 Kenwood Avenue  
Delmar, NY 12054

**NON PROFIT  
ORGANIZATION  
U.S. POSTAGE PAID  
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(Clip Here and Mail in per Voting Instructions)

**Ballot for 2003-2004 Section Officers**

<b>Position</b>	<b>Nominee</b>	<b>Accept</b>	<b>Withhold</b>
Chair (second year of a 2-year term)	Fred Willett		
Vice-Chair (two year term)	Francisco Moraga		
Treasurer (second year of a 2-year term)	Mike Brilliant		
Secretary (two year term)	David Smith		
Newsletter Editor (two-year term)	Ramesh Gambheera		
WEbmaster (second year of a 2-year term)	Govind Rengarajan		
History & Heritage Director (two-year term)	Tom George		
		<b>Yes</b>	<b>No</b>
<b>Ratification of By-Laws</b>			
<a href="http://www.asme.org/sections/udson-mohawk">http://www.asme.org/sections/udson-mohawk</a>			
Name			
Signature			