



ASME Hudson-Mohawk Section

# Newsletter

**January 2002**

*David Shapiro, Co-Editor*

*David Smith, Co-Editor*

## January 2002

### Technical Presentation

**Topic:** Motor Driven Planetary Gears –  
Problems and Diagnosis

**Presenters:** *Jim Flynn, Dick Burchill, Jack  
Frarey, Bernie Geren and Mark Higgins*

*Holiday Inn Express – Capital Room  
946 New Loudon Road (Route 9)  
Latham, NY*

**Tuesday, January 8, 2002**

**Refreshments: 6:00 PM**

**Presentation: 6:15 PM**

**Dinner (Sandwich Buffet): 7:00 PM**

#### Cost:

**\$8.00 – ASME Members and Students**

**\$10.00 – Non-Members**

### **Event/Meeting Details**

The Holiday Inn Express is located just north of the Adirondack Northway (I-87) Exit 7, across Route 9 from Kirker's restaurant.

Please RSVP before end-of-business Friday, January 4, 2002. The Holiday Inn Express requires a final attendance several days before our event.

#### **Contacts:**

M.J. Shaw (518) 243-5070 [ShawM@ASME.org](mailto:ShawM@ASME.org)

David Smith (518) 385-1234 [david.smith@ps.ge.com](mailto:david.smith@ps.ge.com)

Tom Walter (518) 456-9919 [twalter@fosmiltech.com](mailto:twalter@fosmiltech.com)

### ASME International

#### Hudson-Mohawk Section Officers

Chair: Paul Kehoe (518) 475-5174 [paul.kehoe@ps.ge.com](mailto:paul.kehoe@ps.ge.com)

Vice Chair: Frank Reed (518) 385-4264 [frank.reed@ps.ge.com](mailto:frank.reed@ps.ge.com)

Admin.Assoc. Tom George (518) 395-4045

Treasurer: Mike Brilliant (518) 387-6558 [brilliant@crd.ge.com](mailto:brilliant@crd.ge.com)

## **January 2002 Technical Presentation**

Our section is teaming with the local chapter of the Vibration Institute to host this meeting. The presenters will review a puzzling case history involving a planetary gear drive system with unusual vibration and performance problems that led the investigators down several paths to isolate and solve the root causes of these problems. The speakers will discuss the diagnostic methodologies employed and the results obtained.

We are fortunate to be able to team with the Vibration Institute for this event. This will be an interesting meeting and will provide the opportunity to interact with another technical organization in the community. We plan to participate with the Vibration Institute again in March for their annual "Vibro-Rama" event. This event combines vibration related technical presentations from both industry and vendors.

## **Section Chair's Message**

### *A Memorable Fall 2001*

It's been an interesting Fall! We got off to a good start with an interesting meeting at the Van Dyck in Schenectady. Holding this event in September and having a speaker rather than just a purely social event improved attendance and made for a more balanced evening.

We were all impacted by the events of 9/11. Our October tour of the Watervliet Arsenal was put on hold due to security concerns. Other industry tours, such as a follow-on tour of last year's successful event at the Albany Airport, are becoming increasingly difficult to arrange. The ASME name and reputation opens many doors, but post 9/11 security concerns and the local economy have forced us to re-visit our annual event schedule several times. This small inconvenience, of course, pales in comparison to the huge losses suffered by many families and organizations. In view of this situation, we have opted for museum tours, such as last

month's Industrial Gateway Museum tour and the Saratoga Car Museum tour (tentatively scheduled for this Spring) in lieu of inside tours of local industry. Hopefully, this will change as time goes on in the new post 9/11 era. A tour of the large Wind Farm at Madison, NY this Spring promises to yield a large turnout for a more traditional ASME event. Look for details in a future newsletter.

We have an exciting schedule for the Winter and Spring, including collaborating with our friends at the Vibration Institute for our January event and the AIAA for Engineer's Week in February. A new location for the Annual Honors and Awards Dinner in May should help us bring a large contingent of Schenectady area members to the Edison Club for socializing, dinner, a technical presentation, and awards that recognize the membership of our local Section.

As always, I hope to see you at one or more of this year's event. Best wishes from the Hudson Mohawk Section for a safe, happy and healthy Holiday Season!

Regards,  
**Paul Kehoe**

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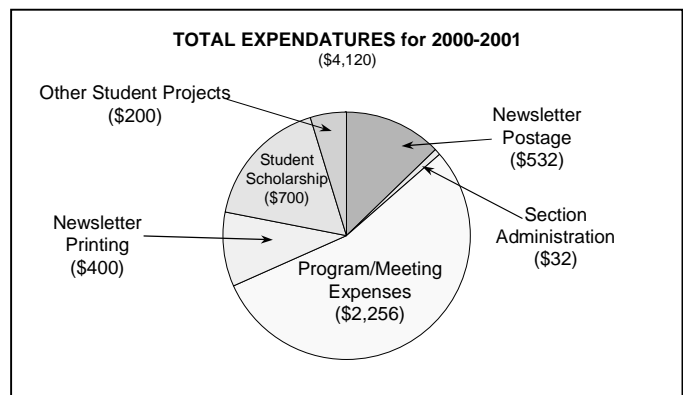
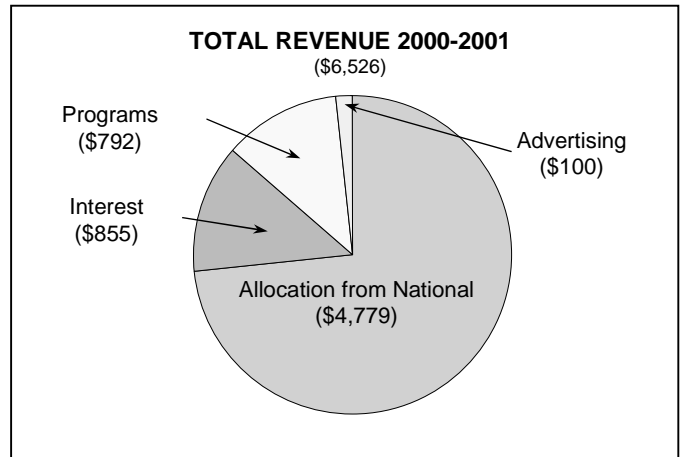
## 2000-2001 Financial Report

Howard M. Brilliant, Treasurer

The Hudson-Mohawk Section continued to grow this past year. As shown below, revenues over the past year totaled \$6,526 (up from \$5,243 in the previous year) and our expenditures totaled \$4,120 (up from \$3,431). Revenues exceeded expenses by \$2,406, bringing the Section's assets to \$19,377, up from \$16,971 one year ago.

We continued to support and to expand the student scholarships and other student activities and program support. The increase in revenue was mostly due to higher allocation from national, thanks to the two renovated technical chapters. Other factors included cancelled events, both locally and regionally. For the coming year, we hope to continue to expand student activities and program support. However, allocations from national and interest rates are down, so our revenue will be lower. Thanks to our reserves, we will not have to cut back on our chapter's activities. We have allocated some money for new projects. If you have any ideas, let one of the officers know.

The pie charts illustrate the breakdown of revenue and expenditures.




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## Section's Web Page

Section members Govind Rengarajan and Sami Aslam continue to do an excellent job of keeping the section's web page updated. Many of you obtained this newsletter from the website, but for those of you who received a hard copy through the mail our Internet address is:

<http://www.asme.org/sections/hudson-mohawk/>

The website includes: Contact information for section officers, a calendar of events, section newsletters, and links to other websites that section members might be interested in. Please take a look at the website and forward your comments to:

Govind Rengarajan [rengarajan@crd.ge.com](mailto:rengarajan@crd.ge.com)

Sami Aslam [sami.aslam@ps.ge.com](mailto:sami.aslam@ps.ge.com)

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## Fun Facts (or is it Fiction?)

What is RPN?

In the 1920's, Jan Lukasiewicz developed a formal logic system that allowed mathematical expressions to be specified without parentheses by placing the operators before (prefix notation) or after (postfix notation) the operands. For example the (infix notation) expression:

$$(4 + 5) \times 6$$

could be expressed in prefix notation as:

$$\times 6 + 4 5 \quad \text{or} \quad \times + 4 5 6$$

or could be expressed in postfix notation as:

$$4 5 + 6 \times \quad \text{or} \quad 6 4 5 + \times$$

Prefix notation also came to be known as Polish Notation in honor of Lukasiewicz. HP adjusted the postfix notation for a calculator keyboard, added a stack to hold the operands and functions to reorder the stack. HP dubbed the result Reverse Polish Notation (RPN) also in honor of Lukasiewicz.

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## Chupp Elected Fellow of ASME

GE CR&D (11/28/01) -- Dr. Raymond E. Chupp, a mechanical engineer at GE's Corporate Research and Development Laboratory has been elected a Fellow of the American Society of Mechanical Engineers (ASME). The Fellow grade is the highest elected grade of membership within ASME. Attaining this grade recognizes exceptional engineering achievements and contributions to the engineering profession. Only about two percent of members are elected to Fellowship status.

Ray was cited for his technical contributions in heat transfer and seals technology development. Ray's career spans more than 35 years in gas turbine design and development at four different companies. At Rolls Royce (formerly Allison Gas Turbines), he conducted heat transfer and air systems design/analysis efforts of gas turbine, transmission and tank components. He also led experimental studies of impingement heat transfer.

At Teledyne CAE, Ray helped develop brush seals to significantly improve sealing. At Siemens-Westinghouse, he led design of internal flow systems for advanced industrial gas turbines. He also led

projects to significantly improve various types of seals. And at GE Corporate R&D since 1999, he has been leading several efforts to develop blade tip seals for GE Power Systems.

Over his career, Ray has led several R&D efforts to address improved sealing in gas turbine engines for both aero engines to propel aircraft and industrial gas turbines to drive generators to produce electrical power. Improved sealing reduces parasitic leakages so the gas turbine engines produce more power with less pollution, and are more fuel-efficient. Thus, improved seals aid in protecting our environment and energy resources, while yielding more energy and power for consumers.

Ray earned his B.S. degree in mechanical engineering from Kettering University. He earned his M.S. and Ph.D. degrees, also in mechanical engineering, from Purdue University. He holds two U.S. patents and has authored or co-authored 29 publications.

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## Editor's Message

As newsletter editor's, we strive to bring members of the Hudson Mohawk Section, interesting and informative articles. However, most of the contributions to the newsletter come from only a few members. The newsletter is the communications arm of the section. It allows for contributions by all members. We have well over 750 members in this section. We welcome suggestions for events, articles of interest, and most of all, participation in the planning and operation of the section. There are many positions available to serve and make the section more active. We are only as good as its participants. If you are interested in serving as an officer in the section, you may contact Paul Kehoe (Section Chair).

For the students and advisors of the many schools in the area, we would like to have a monthly article for inclusion into the newsletter. It is an excellent opportunity to involve students in the operation of the section.

For those employers that have positions to fill, the Hudson Mohawk section contains many talented people in many specialized areas. The editor's would be more than willing to publicize any career opportunities.

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## FIRST Robotics Team Update

The Capitol District Robotics Team continues to prepare for the upcoming 2002 activities. In preparation, student team members have been working

on small projects in which they had to design and build an operating model. The meeting takes place on December 20, in which presentations of the projects will be made.

The team meetings take place at the South Colonie High School Library. They are on Thursday evenings and start at 7 PM. We are seeking additional professional mentors for the team. It is not necessary to attend every meeting. We are asking that you volunteer whatever time you can spare. For updated information about the team, you can visit:

[www.team250.org](http://www.team250.org).

For general information about FIRST, visit:

[www.usfirst.org](http://www.usfirst.org).

The kickoff meeting for the 2002 competition will be on Saturday-Sunday, January 5-6 at the Edison Club in Rexford on Riverview Road. On Saturday, we start at 8:30 AM and watch the NASA broadcast unveiling this year's game competition. The meeting should last until about 2 PM.

Design day is Sunday. The meeting will start at noon and go to about 5 PM. This is a very intense session where everyone (engineers, mentors, and students) is needed to brainstorm and contribute to the Robot design.

Anyone attending on Sunday should bring an item of food for the potluck dishes. On Saturday, Pizza will be served.

For additional information, you can contact:

Deb Bigelow-Saulsbery [BIGBERY@aol.com](mailto:BIGBERY@aol.com)

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

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