



March 2002

David Shapiro, Co-Editor
David Smith, Co-Editor

ASME Hudson-Mohawk Section

Newsletter

**The Vibration Institute
Presents**

VIBO-RAMA 2002

**Holiday Inn Express
Latham, NY**

**Thursday, March 21, 2002
Noon to 8 PM**

**In association with
ASME
AIAA
STLE
ASNT**

VIBO-RAMA 2002

Hear discussions about:

- PC-based vibration monitoring & analysis
- Oil analysis for condition-based maintenance
- Advanced dynamics of rolling element bearings
- Phased array transducers & ultrasonic testing
- In-situ oil refurbishment
- Data analysis using time-frequency methods
- Motor circuit analysis methods for predictive maintenance
- Pulse theory
- Time waveform analysis

See displays and talk to suppliers of:

- **SENSORS** to measure force, strain, displacement, vibration, temperature, pressure, and thermal image
- **INSTRUMENTATION** to record and analyze measured data
- **SYSTEMS** to acquire data and help determine the condition of equipment
- **SERVICES** by experts to help you, or do the work for you

Learn about:

- Machinery dynamics
- Maintaining/assessing machinery health

Save Time: Find out what is available to meet your needs in a relaxed environment without disruptive and time consuming investigations on your own or multiple visits and phone calls to vendors.

- ✓ Complimentary food and refreshments
- ✓ Free admission
- ✓ Door Prizes

Directions: The Holiday Inn Express is located on NY State Route 9, about ¼ mile north (I-87) Exit 7. The Inn is opposite Kirker's Steak House Restaurant.

Contact:

Tom Walter, 518-456-9919, x-107
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Engineer's Week Event

On February 21, Larry Willey of GE Power Systems gave a very informative presentation to an enthusiastic gathering of about 50 at the Hefner Alumni House on the campus of RPI. Larry's presentation was entitled



"A New Steam Turbine Test Vehicle For The Verification of Improved Efficiency Steam Turbines".

Andrew Hunter (left) presents Larry Willey to the audience



Part of the audience listens to Larry's presentation

Representatives of AIAA, ASME, STLE, ASNT, IEEE, and The Vibration Institute attended this event and asked Larry many questions about the Steam Turbine Test Vehicle (STTV). GE's 'DENSE PACK' high-pressure section replacement/up-rate offering is one of the newest advanced steam turbine designs to address the needs for delivering more power for the least amount of fuel.

The STTV faithfully models a typical 4-admission large utility steam turbine and preserves geometric and flow similarity while operating at reduced pressure. Larry did an excellent job by visual presentation of how the STTV operates. Larry held the audiences attention with his excellent presentation skills and the audience considered the event extremely informative and entertaining. Our thanks to Larry. If you have any questions concerning this topic, you can contact him at larry.willey@ps.ge.com.

April Tour

ALBANY STEAM STATION

**Near the Port of Albany
Albany, NY**

**Thursday, April 4, 2002
6:00 – 7:00 PM**

***** Safety Equipment Required *****

Here is an excellent opportunity to tour a steam powered electric generation plant. But hurry, the number of attendees must be limited to 30 people, first come-first served.

The Albany Steam Station is a 50 year old electrical generation plant located south of the Port of Albany. The plant burns oil and gas to produce 400 megawatts of electricity. This event will consist of a one hour tour of the facility with a short discussion of the new gas turbine facility which has been recently approved.

Hard hats, safety glasses, and safety shoes will be required for this tour. There will only be a limited number of hard hats available at the site. Please let the contact people know if you will need safety equipment.

Directions: From I-787 South, take the South Pearl Street exit. Take a left onto South Pearl Street (Rt. 32). Continue south for 4 miles until you see the plant on the left (look for the smoke stacks). Enter through the gate into the parking lot. The group will meet in the main building on the first floor.

Contact: Please RSVP by April 2 to:
Frank Reed 518-385-4264 frank.reed@ps.ge.com
David Shapiro 518-385-2895
david.Shapiro@ps.ge.com

Section Web Page

Section members Govind Rengarajan and Sami Aslam are the Webmasters for this section's website. For those receiving this newsletter as a hard copy, please consider receiving this by e-mail. You will receive the newsletter and event announcements in a more timely manner. It also helps decrease the cost of mailing it. Our goal is to have 100% email. The web address to see the newsletter on-line is:
<http://www.asme.org/sections/hudson-mohawk/>

The website also includes: Contact information for section officers, a calendar of events, section newsletters, and links to other websites that section members may find interesting. Please send your comments to:

Govind Rengarajan rengarajan@crd.ge.com or
Sami Aslam sami.aslam@ps.ge.com.

More Humor

More Actual Doctor's Notes

These are more doctor's notes on patients' charts continued from last month. (unedited) The comments are those of the editor.

- The skin was moist and dry
- While in the ER, she was examined, X-rated and sent home
- Occasional, constant, infrequent headaches (**No wonder her head hurts!**)
- Patient was alert and unresponsive (**Hmmmm!**)
- Rectal exam revealed a normal size thyroid (**Ouch!**)
- She stated that she had been constipated for most of her adult life, until she got a divorce (**Interesting remedy!**)
- I saw your patient today, who is still under our care for physical therapy (**A bit extreme I think!**)
- The lab test indicated abnormal liver function (**Does the spouse know this?**)
- The patient was to have a bowel resection. However, he took a job as a stockbroker instead (**I wondered why the stock market was doing so crappy!**)
- Skin: Somewhat pale but present (**???????**)
- The pelvic examination will be done later on the floor (**I guess business must be so good, they ran out of tables!**)
- Patient was seen in consultation by Dr. Blank, who felt we should sit on the abdomen and I agree (**This must be stressful on the patient!**)
- Large brown stool ambulating in the hall. Patient has two teenage children, but no other abnormalities (**This one hurts my head!**)

My apologies if anyone is offended.

FIRST Robotics Team Update

The Capitol District Robotics Team completed the robot and shipped it to the site of the regional competition in New Haven, CT. Many hours were devoted to completing the robot in the 6-week timeframe allotted for concept, design, and production.

More than 60 students participated this year and they should be very proud of their efforts. Many evenings were spent well into the night, working to get the robot ready. Thanks also go to the many professional volunteers who lent their expertise to this worthwhile endeavor. FIRST has grown from just a hand full of teams 11 years ago to over 600 teams this year. Hundreds of thousands of students and professionals are now involved with FIRST. For general information

about FIRST and how you can get involved, visit the website at www.usfirst.org.

Ron Bunker Named ASME Fellow

Dr. Ronald S. Bunker, a mechanical engineer in the Thermal Systems Laboratory at GE, has been elected a Fellow of the ASME. The Fellow Grade is the highest elected grade of membership within ASME and recognizes exceptional engineering achievements and contributions to the engineering profession. Only about two percent of members are elected to Fellow status. Ron was cited for his significant technical contributions in turbine heat transfer and turbine cooling technology development. He will be formally recognized for his achievement during an ASME conference in June.

Ron began his GE career in 1980 at GE Nuclear Energy Business at San Jose, CA, working in reactor emergency core cooling systems design, containment heat transfer analysis, and safety licensing. Concurrently, he completed the Edison Engineering Program in Engineering and obtained his M.S. degree at UC Berkeley. After earning his Ph.D. in mechanical engineering at Arizona State University, Ron won the Alexander von Humboldt Research Fellowship with the Institute for Thermal Turbomachinery, where he conducted independent research on heat transfer in gas turbine disk cavity systems.

In 1990, Ron joined GE Aircraft Engines in the Advanced Turbine Aero & Cooling Technology group and worked on detailed component thermal designs for both commercial and military engines. He was responsible for the thermal design of the successful GE9 high-pressure turbine inlet guide vane, including experimental film cooling validation. His design innovations contributed to the military High Performance Turbine Engine Technology program. In 1993, Ron joined the GlobalResearch Center in the Thermal Systems Lab. Through his fundamental and applied product research supporting aircraft engine and power generation gas turbines, Ron has:

- Expanded the experimental design space and design validation for the steam-cooled turbine airfoils of the Advanced Turbine Systems H-machine gas turbine.
- Led and continues to lead many Turbine Heat Transfer projects.
- Directed the efforts in more than a dozen experimental heat transfer projects for the 7H/9H gas turbines, with results contributing directly to the product design.
- Been responsible for all external gas turbine heat transfer projects with universities and government agencies.

- Carried out concurrent research projects for aircraft engine turbines focusing on airfoil heat transfer and innovative film cooling.

Most recently, Ron has been leading the Heat Transfer Innovation Project and Airfoil Core Cooling, incorporating innovative cooling techniques and new core technologies for Power System Airfoils. He has published more than 40 refereed papers and has been awarded 14 patents. Please send a congratulatory note to bunker@crd.ge.com.

Message From the Editor

While the officer's (past and present) continue to do an excellent job of scheduling events for section members, the events of September 11 has made it difficult to set up tours due to increased security at many facilities. In some cases, a prohibition to visitors has been put in place. For the Hudson Mohawk section to be a vital outlet for news and activities that affect mechanical engineers in this region, it is essential that the members take an active roll in activities (planning and attending).

With over 700 members, it is somewhat discouraging that so few of this section's members seem willing to actively be involved. Of special note is the lack of participation from the colleges in the area. One of the great benefits of membership in ASME is the opportunity to be active in ASME activities on the local and national levels. The greatest benefit from membership is the ability to network with established and renowned professionals in the many mechanical engineering fields (such as Dr. Bunker). You are missing a great opportunity to establish your career at an early stage of life.

To the student advisors, you have an opportunity to get your students involved with what will be important for the future of your students. You also have a forum in this newsletter to publicize events that matter to people in this region. Yet I see very little to no participation at the college level.

To the professionals that belong to this section, we need your help. There is only a small group of past and present officers that seem willing to participate in section activities. I know that you have very busy schedules. So do those active participants. There are so many areas that could use your expertise and guidance. The last edition of the newsletter published a long list of positions that would allow you to contribute to the health of the section. Please consider filling one of these posts and help to continue the excellence of the section.

You would be surprised how inactive membership can quickly render ineffective the benefits of belonging to ASME. Let's set an example for the rest of the engineering communities as to what an active membership is worth to its members. You can contact any of the officers for additional information.

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

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