SAVIAC
Shock and Vibration Information Analysis Center
Current Awareness
May/June 2003

Plans For The 74th Shock & Vibration Symposium

Planning for the 74th Shock & Vibration Symposium is proceeding along nicely. In next month's newsletter I will write about the Program Committee meeting but so much has happened already that you should know. First a recap, the Symposium is the week of October 27-31, 2003 at the Red Lion Hanalei Hotel in San Diego, CA. We will be featuring SPAWAR, NSWC/Crane, and Endevco. The keynote speaker is RADM Kenneth Slaght, SPAWAR Commander. Next the new developments.

To celebrate the 75th birthday of Gene Sevin, a special session will be held on the afternoon of Tuesday, October 28, with a dinner and social gathering that evening. A nominal charge is anticipated to attend the dinner and social gathering. There will be technical presentations at the afternoon session, and a special issue of the Shock and Vibration Journal will be published with these contributed papers. Anyone interested in presenting a paper at this session should contact Walter Pilkey (wdp@virginia.edu or (434) 924-3291). Arrangements for this event are being made by Walt Pilkey, Kent Goering, and Nick Perrone.

There will be a separate track for training/education. From Tuesday afternoon through Thursday evening, 20 college level lectures of 50 minutes duration each are planned. These lectures, to be presented by senior members of the community, are to introduce basic concepts in structural dynamics to newcomers. There will be no additional cost to attend these lectures. Josh Gordis, Naval Postgraduate School, Walter Pilkey, University of Virginia, Ted Krauthammer, Penn State, and Rudy Scavuzzo, Consultant have agreed to teach. A list of the topics and the instructors will be posted on the web site as they are developed.

Phil Bell of Cranfield Aerospace Ltd. from the UK has proposed a session on Weapons Clearances for the Symposium. The Weapons Clearance Program can be interpreted as fit for service in terms of safety and performance. We are working to build a program around the proposed concept, with sessions from the US Air Force, US Army, US Navy/USMC, United Kingdom (UK) and commercial industry informing how the respective countries, services and industry go through the various aspects of the acquisition process including verification methods (with emphasis on shock and vibration) used to determine whether systems are operationally effective, suitable, survivable, and safe for intended use. Plans are for four sessions of 90-120 minutes each, fol-

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Are You A World-Class Organization?

Would your company like to be featured at a future Shock & Vibration Symposium? Read on for a bit of history and find out how you can build your business through increased exposure throughout the community.

The Shock & Vibration Symposium originated in 1947 when the Centralizing Activity (CA), the grandfather of SAVIAC, conceived of a traveling meeting to gather lessons learned from World War II experiences on how to design equipment to withstand dynamic loading. This meeting was to convene at different government agencies around the country for presentations and facility tours to document good design practices. Over the years the Symposium grew and changed to meet evolving needs. In 1997 we added a commercial featured company to complement the government agency and modified the focus from a one week taste to a year long event. Now it starts at the previous Symposium and continues throughout the year, culminating at the Symposium the organizations are being featured. The goal is to educate the community on the kind of resource(s) the featured organizations can provide. Today, the Symposium attracts 350-400 attendees from all over the world and is the only meeting dedicated solely to applications solutions to dynamics problems.

The benefits for the featured organization are numerous. To be recognized as a leader, if not the leader, in a field is important. Universities dedicate significant resources to become number one in academics as well as sports. It helps them attract the brightest students, best faculty, alumni contributions, state taxpayer dollars and new business. Featured organizations will realize similar benefits. People want to work for organizations that are leaders. People want their problems solved by

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Announcement & Call For Papers

Sessions on Ship Shock Modeling and Simulation at the 74th Shock and Vibration Symposium

The ship shock modeling and simulation work has been in rapid progress in predicting the responses of surface ship and submarine subjected to underwater explosion. The "ship" includes any type of marine structures, not limited to surface ship and submarine. We plan to organize symposium sessions on the following topics in this area:

Ship Shock Modeling and Simulation to Far-field Explosion
Ship Shock Modeling and Simulation to Near-field Explosion
Surrounding Fluid Modeling and Its Effects to Ship Responses
Ship Structural System Damping
Digital Filtering of Transient Data
Quality Assessment Methods and Criteria

Two categories of presentations will be accepted: full papers, suitable for publication in the Symposium Proceedings; and short discussion topics, consisting of viewgraphs with no written paper. Full paper will have 15 minutes technical presentation time plus 5 minutes for questions, while short discussion topics will have 10 minute presentation with no question period.

Presentations will be accepted on the basis of their abstracts, which must be submitted by May 30, 2003. You are encouraged to submit online at www.saviac.org, click on 74th S&V Symposium Abstract Submittal. The Program Committee will review the abstracts during the June Program Committee meeting and authors will be notified of acceptance by June 26, 2003. The full paper presentations must meet the following standards" They must be previously unpublished and unpresented, must be appropriate to community interests and must not be overly commercial. Standards for short discussions topics are similar except that they may include previously presented or published material. The Proceedings will be published on CD-ROM. The paper due-date is October 17, 2003.

The abstracts may be submitted online at www.saviac.org or send to:

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(301) 596-0100

Questions should be directed to Joel Leifer.

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organizations that are number one. Among the business world, to say you have an MBA from Harvard is on a par in the dynamics world to work for the U.S. Army Engineer Research and Development Center (ERDC), or Sandia National Laboratory, both past featured organizations. People sit up and take notice. These organizations lead by example; Sandia employees have received the coveted Henry Pusey Award for best paper presented at the Symposium and published in the proceedings four times in the award's eleven year history, while ERDC engineers typically publish 10 papers per year in the proceedings. An organization is only as good as its people, and people make their reputations by doing good work and sharing the results.

The process starts when you decide you would like your organization featured and request time from the SAVIAC Program Manager to present your company's qualifications to the SAVIAC Technical Advisory group. Upon acceptance, you are assigned to a Symposium. Currently, the featured organizations are NSWC/Crane, SPAWAR, and Endevco Inc. for the 74th Symposium (2003, San Diego, CA), and NSWC/Dahlgren, Northrup Grumman Newport News, PCB Piezotronics, Inc. for the 75th Symposium (2004, Tidewater area, VA). Openings are available for the 76th Symposium and beyond. Typically, we limit the featured organizations to no more than two government and two commercial per Symposium.

Once selected, here's what happens: At the Symposium prior to the one where you will be featured, you will share a table in the Exhibit Hall with the other featured agencies/companies. This is an opportunity to do some advanced marketing on the capabilities you will be showcasing next year. After the Symposium there will be a monthly Telecon to discuss ideas for sessions that will show how your company is addressing the issues of concern to the community. I will also be asking for articles to go into the monthly Current Awareness Newsletter, which reaches over 3400 people from 46 states and 30 countries representing over 100 agencies and 300 companies. For an example, look in the April 2003 newsletter for the Drop Shock article by Endevco.

There are three TAG meetings throughout the year; one at the end of the Symposium, one in February and one in June. The June meeting is conducted at the hotel where the Symposium will occur in the fall, and is used to put together the preliminary program. The February meeting signals the start of the Symposium planning. If the featured agencies are not located in the same city as the Symposium, the TAG will meet at the featured agencies' location. The meetings last for half a day and are followed by a facility tour. The day prior to the TAG meeting, SAVIAC hosts a free Shock & Vibration Seminar; a part-technical, part-marketing event, created to introduce people to the community and interest them in attending the Symposium. These are all opportunities for the featured companies to interact with other leaders of the community in a one-on-one atmosphere. In additional time around the time of the TAG meetings, SAVIAC will visit your organization and interview your people for an article in the Current Awareness Newsletter. This one-thousand word article will provide the community with a description of your company's credentials.

The duties of the featured agencies are to co-chair the Program Committee and provide a high ranking company official to welcome the attendees to the Symposium at the Opening Session. The Program Committee co-chairs also present the Henry Pusey Award for Best Paper Written & Presented at the previous Symposium and are the hosts of the Program Committee Reception, a private reception for the community leaders on Monday night at the start of the Symposium. We also look to the featured organizations to suggest programming and speakers that will showcase their capabilities and be of interest to the community.

SAVIAC offers you the opportunity - now it's up to you to decide if you want to be a leader or a follower. Look at the people in your organization. Do any of them have a world class reputation? Have any of them received awards commendations, etc., from their peers outside of your organization? Maybe some do, maybe there are others who should and maybe there are others who would like to. Remember, you can't be a world class organization without world class people, and you won't have world class people unless the rest of world recognizes them. Give me a call and let's talk about it.

To discuss becoming a SAVIAC featured organization contact Joel Leifer at joel.leifer@saviac.org or by phone at 301.596.0100.

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Free Summer Shock & Vibration Seminar

SAVIAC invites you to attend a FREE seminar on Shock & Vibration. The course will be held on Wednesday, June 18, 2003 at the Red Lion Hanalei in San Diego, CA, the site of the 74th Shock & Vibration Symposium. This seminar will coincide with the June Program Committee Meeting. SAVIAC and the featured experts in their disciplines have organized this seminar to introduce you to the SAVIAC community, while providing a valuable educational experience.

Agenda

8:00 - 8:30	Registration & Continental Breakfast	
8:30 - 8:45	Introduction to SAVIAC	Joel Leifer, SAVIAC
8:45 - 9:00	Using SAVIAC to Address Your S&V Problems	Joel Leifer, SAVIAC
9:00 - 9:30	Blast Resistant Connections	Ted Krauthammer, Protective Technology Center
9:30 - 10:00	Test Fixture Design	Allen Parkes, NSWC/Crane
10:00 - 10:15	Break	
10:15 - 11:15	Fluid Structure Interaction	Rudy Scavuzzo, Consultant
11:15 - 11:45	Pyroshock	Vesta Bateman, Sandia National Labs
12:00 - 1:00	Lunch	(no host)
1:00 - 1:30	Statistical Analysis of Shock Sources	Tom Paez, Sandia National Labs
1:30 - 2:00	Extreme Environments Testing	Rick Smith, Wyle Labs
2:00 - 2:30	System Damping Modeling	Young Shin, Naval Postgraduate School
2:30 - 2:45	Break	
2:45 - 3:15	Shock Accelerometer Selection	Anthony Chu, Endevco
3:15 - 3:45	What's Wrong With Structural Dynamics Measurements Today?	Charles Wright, Applied Measurements Engineering
3:45 - 4:15	Force Measurement Systems Development	David King & Dennis Booth, Allied Aerospace
4:15 - 4:45	Introduction to Dynamic Design Analysis Method (DDAM)	Dave Weinberg & Wil Weisenburg, Noran Engineering
4:45 - 5:00	Wrap-up & Questions	All

Please forward this invitation to anyone you know who may be interested in attending this program.

The seminar is free, but you must register to attend. Please RSVP to Lauren Yancey, (301) 596-0100 or lauren.yancey@saviac.org to assure your space and note packet. SAVIAC reserves the right to substitute topics and/or instructors when necessary. This schedule is subject to change. For more information about SAVIAC and directions to the Red Lion Hanalei Hotel, please visit our website at www.saviac.org.

Get ready for the 74th Shock & Vibration Symposium

Exhibitor Prospectuses are now available for the **74th S & V Symposium** in San Diego, California.. The show will be held October 27th - 30th, 2003 at the Red Lion Hanalei.
Booth spaces are now available and will be going fast! Please contact Lauren Yancey at **lauren.yancey@saviac.org**, or at 703.892.0060 for information about having your company showcased at the symposium!

People In The News

Kevin Arden from Northrup Grumman Newport News and a member of the SAVIAC Technical Advisory Group has been promoted to Engineering Supervisor for CVN21, effective Monday June 2, 2003. Kevin will be replaced on the TAG by Troy Tanner.

Allen Parkes from NSWC/Crane, a member of the SAVIAC TAG and the 74th S&V Symposium Program Committee Co-Chair has taken on additional duties. In addition to handling environmental testing of microwave components, he now has duties in ordnance and high power systems.

Congratulations to Colleen Perry, the marketing director at DSPCon. Colleen and her husband Kevin have a son Shane Thomas Perry, born Friday March 28th, 2003 and weighing in at 8 lbs 7 oz.

Congratulations to Dan Worth of NASA/Goddard Space Flight Center. He and his wife Temple also have a new addition. Hannah Margaret Worth was born on April 18, 2003 at 10 a.m. and weighed in at 7 lbs. 5 oz.

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lowed by a general session/panel to summarize the similarities and differences.

Tim Hasselman from ACTA, Inc. is organizing a session and discussion titled "Progress Report from the ASME PTC 60 Committee on Verification and Validation of Computational Solid Mechanics, with Discussion and Feedback". The session will consist of 10 minute presentations followed by a discussion. The following topics will be presented: Introduction (Hans Mair, IDA, Committee Co-chairman), V&V definitions (John Cafeo, GM), Role of non-determinism in V&V (Ben Thacker, Southwest Research Institute), Model development (Scott Doebling, Los Alamos National Laboratory), Verification (Francois Hemez, Los Alamos National Laboratory), Validation (Paul Senseny, Factory Mutual).

Pat Walter from Texas Christian University and Endevco, is organizing a session titled "Measurement of Extremely High Shock" which will be followed by a discussion. Presenters will include representatives from U.S. Army, Air Force, NIST, and industry.

Tim Coats from NSWC/Dahlgren is organizing a session on shock mitigation in high-speed planing craft. It will be a combination panel/discussion on the subject.

Young Shin from the Naval Postgraduate School is organizing a session on Ship Shock Modeling & Simulation. This is a late development so abstracts are just being solicited. See the Call for Papers in this newsletter for more details.

Pete Stein from Pete Stein Engineering has agreed to come out of retirement and teach his tutorial on "Bad Data Look Just As Believable As Good Data; Plan Your Measurement System To Tell The Difference'. Taking this tutorial, to be followed by Pat Walter's tutorial on "The Measurement of Meaningful Shock & Vibration Data" will provide quite an education.

Wayne Tustin from ERI will teach a tutorial on "Attaching Test Articles to Shakers". Wayne is an excellent speaker and knows this subject well. I suggest you sign up early for this tutorial as it will fill up fast.

This is just a partial list of new programming for this year's Symposium and I expect more will come forward at the Program Committee Meeting. If you have something to present and haven't submitted it yet, please do so soon. The Preliminary Program will come out in the next newsletter.

Need Equipment? Selling equipment? Come to "The Marketplace"

SAVIAC would like to announce a new addition to *Current Awareness* - "The Marketplace." "Marketplace" will be an open connection for members of the shock & Vibration community to post ads for equipment or materials they would like to find/buy and sell. This is a great way for you or your organization to connect directly with the people who use the materials you need or want to buy! Take a look at our rates below:

Cost of Equipment	$0.00 - $999.00	$1,000.00 - $9,999.00	$10,000 - $99,000	$100,000 & Up
Price of Ad (percentage of Asking/Selling Price)	10%	6%	4%	2%
Number of Words (Including Contact Info)	20	30	30 words & 2x2 Picture	¼ Page ad, including words & picture in any combination

Get your information in now to be published in the August 2003 newsletter! Please send Marketplace ads to Lauren Yancey at lauren.yancey@saviac.org, or fax them to 301.596.6400.

SAVIAC
Shock and Vibration Information Analysis Center

Presents a Five Day Course On

PRACTICAL SHOCK ANALYSIS AND DESIGN

On the following dates and places

December 8-12, 2003
San Diego, California

February 16-20, 2004
Biloxi, Mississippi

May 10-14, 2004
Portland, Maine

July 26-30, 2004
Seattle, Washington

September 27-October 1, 2004
Virginia Beach, Virginia

Please sign up for these courses as soon as possible, and no later than 30 days prior to the course you would like to attend, in order to ensure course availability. All courses are subject to cancellation if adequate attendance is not met.

This course will provide a comprehensive treatment of practical shock design and analysis with special emphasis on applications related to the design of ship structures and equipment for shock loads produced by underwater explosions. Although this course is aimed primarily at shock design applications on ships, the analysis and design techniques presented are equally applicable to problems related to design for seismic loads or blast induced ground shock. Thus, engineers in these related areas may find the course to be useful. For all who participate, the course will provide a comprehensive coverage of shock design practice and a solid basis for further exploration of shock technology.

The course includes the following topics:

Review of Basic Vibration Theory
Introduction to Mechanical Shock
Shock Measurement
Underwater Shock Phenomena
Multi-Degree-of-Freedom Systems
Navy Shock Qualification Process
Shock Qualifications by Test
Shock Qualification by DDAM
Shock Qualification by Extension
2-Dimensional Normal Mode Theory
Practical Design Considerations
Special Design and Analysis Tools
3-Dimensional Normal Mode Theory
Optimum Foundation Design
Use of Finite Element Analysis for DAM
General Problem Solving Workshops
Review and Wrap-up Sessions

The Registration Fee is $1200 per student. The registration is transferable to any person in the same organization. The fee includes a comprehensive set of course notes, a text book entitled Naval Shock Analysis and Design by Rudolph J. Scavuzzo and Henry C. Pusey, a Certificate of completion worth 3 CEUs, as well as a Continental Breakfast, Lunch and coffee breaks daily. A Registration Form may be printed out from the SAVIAC Web Site or may be requested from Sallie or Henry Pusey. As SAVIAC Technical Services Manager, Henry Pusey will arrange for the scheduling, management and presentation of all courses. All completed registration forms should be faxed or mailed to Sallie Pusey at the address given below.
NOTE: Registrants for each course will be provided details about the course location and hotel(s) as soon as the course is firmly scheduled.

Special Guest Lecturer representing NAVSEA is anticipated to be included in all courses.

For registration information contact:
Sallie Pusey, Course Registrar
1877 Rosser Lane
Winchester, VA 22601
Tel: (540) 678-8678; Fax: (540) 678-8799
email: hcpusey@ix.netcom.com
or
register online at www.saviac.org/upcoming_events.htm.

Industry News

Endevco teams with National Instruments to Announce New Plug & Play Sensors

SAN JUAN CAPISTRANO, CA - National Instruments and Endevco, leaders in vibration measurements, have joined forces to ensure your long-term measurement success from the accelerometer to application software. Plug & Play TEDs Sensors, based on the IEEE P1451.4 standard, can simplify the setup of automated measurement systems by eliminating manual data entry and automatically obtaining calibration data from the sensor. Take this opportunity to learn more about Plug & Play Sensor technology by downloading a FREE white paper at: http://tx.ssprd1.net/trak.asp?119665.260675.7660

Get FREE LabVIEW examples for making vibration measurements, plus information on 24-bit acquisition devices and tutorials, by requesting the NI Sound and Vibration Resource CD at: http://tx.ssprd1.net/trak.asp?119665.260675.7660

New IEST Documents Published

Design, Test, and Evaluation
IEST-RP-DTE040.1: High-Intensity Acoustics Testing. This Recommended Practice focuses on high-intensity acoustic testing (HIAT) within reverberant chambers. The RP advances the simulation that can be achieved in a HIAT chamber. Also included are test philosophy, descriptions of a few typical test facilities, and discussion of test articles for various tests.

IEST-RP-CC028: Minienvironments. The purpose of this document is to provide a framework for describing minienvironments for microelectronics and similar applications. This new Recommended Practice discusses applications, planning, design, and evaluation in detail.

For more information on these or other products, visit http://www.iest.org/news/news.htm. To order documents, visit http://www.iest.org/storearea/store.htm . To find out more, visit IEST online at http://www.iest.org/storearea/store.htm or telephone 1-847-255-1561.

New Accelerometer Series Measures in Three Axes

A unique annular shear sensor element that exhibits a high immunity to base strain and transverse acceleration is used in the new 8798A accelerometer series from Kistler Instrument. This Ceramic Shear design enables precise vibration measurements in three mutually perpendicular directions. An advanced hybrid charge amplifier design provides a wide operating frequency range.

The 8798A series is available in three ranges of 5, 10 and 50*g* with sensitivities of 1,000, 500, 100 mV/*g* respectively. The three built-in IEPE electronic impedance converters provide a low impedance voltage output signal. These CE compliant accelerometers can be powered by any Kistler 5100 series PIEZOTRON coupler/signal conditioner or by any commercially available IEPE voltage mode piezotronic sensor power supply. They can be installed on a test object using wax or a mounting stud.

For more information on this and other products call the Kistler Instrument Corp. at 716.691.5100 or e-mail at:info.us@kistler.com.

DAPserver PC-Based Test Products Use Eurocard Channel Architecture

Microstar Laboratories, Inc., maker of Data Acquisition Processor (DAP) boards, today announced the first members of a family of DAPserver test, measurement, and control products - preloaded with Linux or Windows and DAPcell network server software, ready for application development. A DAPserver mounts in an industry-standard 19” rack, and includes a hard drive - shock-rated to 800g - as well as a floppy disk drive. DAPcell client software on any PC on the network can request data acquisition or control services from any of up to four DAP boards on any DAPserver. Input and output design conforms to the channel architecture that Microstar Laboratories has implemented in 3U Eurocards. These Aurocards provide multiplexing, isolation, filtering, simultaneous sampling and other functions. Each DAPserver can contain up to ten Eurocards, and can connect to many more in additional industrial enclosures. The company offers the DAPserver 200R at $6,495 for rugged environments. To find out more, visit www.mstarlabs.com and click on *New* in the sidebar, or talk to the people at Microstar Labs by calling toll free: 888 MSTARLABS (888.678.2752).

Accurate, Affordable, and Compact REAL TIME ANALYZER for HVAC Acoustics and Building Noise Measurement

COLUMBIA, MD - ScanTek, Inc. announces the availability of the newest precision real time analyzer from CESVA, the SC-160 Real Time Analyzer. The SC-160 is an incredibly affordable high quality ANSI Type 2 sound level meter and real-time octave band spectrum analyzer with frequency range from 31.5 Hz to 16kHz. With a single 100 dB dynamic range, and a phenomenal memory (almost 90 hours of 1-sec measurements), it allows complete check of all HVAC equipment with no need for range switching. Calculating all functions and weightings simultaneously, it gives a real-time value of NC rating. The SC-160 comes with software and all necessary to make measurements. It can be used for NC, RC, RC mark II, NCB and all descriptors used in HVAC product noise and community noise analysis. The cost is less than $2,000. Color datasheets are available at www.scantekinc.com/datasheets/sc160.pdf.

For further information contact Richard Peppin, PE at 410.290.7726 or by e-mail: PeppinR@ScantekInc.com.

Conference Announcements

NOISE-CON 2003 - The 2003 National Conference on Noise Control Engineering
June 23-25, 2003
Cleveland, OH

At NOISE-CON 2003, special emphasis will be placed on INCE/USA technical activities with opportunities for each INCE/USA technical group to hold meetings during the conference. The goal is to strengthen the technical activities program and to encourage more participation in the technical initiatives being taken by the International Institute of Noise Control Engineering. For more about this conference visit www.inceusa.org/03confinfo.asp. To register online, go to www.inceusa.org/03conform.asp.

10th International Congress on Sound & Vibration
July 7-10
Stockholm, Sweden

The Tenth International Congress on Sound and Vibration, sponsored by KTH (The Royal Institute of Technology) and the International Institute of Acoustics and Vibration (IIAV) will be held at KTH in Stockholm, Sweden, 7–10 July, 2003.
IIAV is an international non-profit scientific society affiliated with the International Union of Theoretical and Applied Mechanics (IUTAM). IIAV currently has 550 individual members in 55 countries and is supported by 31 national and international scientific societies and organizations. Theoretical and experimental research papers in the fields of Sound and Vibration are solicited for participation.

The 27th Annual Meeting of the Vibration Institute and 2003 National Technical Training Symposium
July 8-11, 2003
New Orleans, Louisiana

The Vibration Institute will conduct its 2003 National Technical Training Symposium (formerly termed the Annual Meeting) in New Orleans from July 8 through July 11 at the Omni Royal Orleans. The purpose of the Symposium is to provide specific training in practical vibration technology. Visit *www.vibinst.org/vmeeting.htm* to view the preliminary program and to register for this event.

For a summary of upcoming conferences and short courses for 2003, visit www.saviac.org/upcoming_events.htm To receive a FREE 2003 SAVIAC Calendar, filled with the year's most important, industry-related events, e-mail Lauren Yancey at lauren.yancey@saviac.org.

Short Course Announcements

Modern Protective Structures Short Course
July 14-18, 2003
University Park, PA

Dr. Theodore Krauthammer, of Penn State's Protective Technology Center and an internationally renowned expert, has developed this week-long course on protective construction analysis and design in order to give engineers, architects, and safety and security managers practical background information relating to the performance and design requirements for hardened facilities. Comprehensive reviews and advanced research and development topics are designed to augment the technical capabilities of hardening and forensic engineers and scientists. In addition, a review of Blast Damage Assessment (BDA) issues provides forensic and rescue personnel with additional background information.

To find out more about this course, go to www.outreach.psu.edu/C&I/protectivestructures/.

Vibration And Shock Training Short Course
August 12-14, 2003
Seattle, Washington

This course is needed by engineers and technicians who conduct developmental and production vibration and shock tests; by designers of products that must survive tests AND rigorous service conditions; by metrologists who measure vibration and shock on automobiles, aircraft, etc; by sales/applications engineers involved in the sales of equipment used in test (shakers, shock test machines, etc.) and measurement (transducers, data acquisition etc.).

Registration and course details can be found at http://www.equipment-reliability.com/course3.htm. To register, visit http://www.equipment-reliability.com/regist_form.htm.
Contact instructor Wayne Tustin with questions about the course, (805) 564-1260, FAX: (805) 966-7875, e-mail tustin@equipment-reliability.com or tustin@vibrationandshock.com.

Endevco Short Courses: Dynamic Pressure Measurement Technology
September 17-18, 2003

The measurement of dynamic pressures, from underground and underwater blast effects to aerodynamic turbulence, presents the measurement engineer with unique challenges in selection and installation of transducers. This two-day application-oriented seminar will give engineers and senior technicians a review of the basics and an opportunity to broaden their working knowledge of all aspects of dynamic pressure measurement. This course is offered both in the United States and Europe several times each year, and includes lectures and demonstrations on the following subjects: Pressure, Pressure measuring instruments, Static pressure phenomena, Calibration, Dynamic pressure phenomena, Selecting the best system for your application.

For more information on trade shows and technical short courses, contact webmaster@endevco.com or visit http://www.endevco.com/main/events/short-courses.php.

Something to Brighten Your Day

The Engineer's Dictionary

Major Technological Breakthrough - Back to the drawing board.

Developed after years of intensive research - It was discovered by accident.

Project slightly behind original schedule due to unforeseen difficulties - We are working on something else.

The designs are well within allowable limits - We just made it, stretching a point or two.

Customer satisfaction is believed assured - We are so far behind schedule that the customer was happy to get anything at all from us.

Close project coordination - We should have asked someone else; or, let's spread the responsibility for this.

The design will be finalized in the next reporting period - We haven't started this job yet, but we've got to say something.

A number of different approaches are being tried - We don't know where we're going, but we're moving.

Test results were extremely gratifying - It works, and are we surprised!

Extensive effort is being applied on a fresh approach to the problem - We just hired three new guys; we'll let them kick it around for a while.

Preliminary operational tests are inconclusive - The darn thing blew up when we threw the switch.

The entire concept will have to be abandoned - The only guy who understood the thing quit.

Modifications are underway to correct certain minor difficulties – We threw the whole thing out and are starting from scratch.

Want more jokes? Visit www.fosterbrooks-jokes-laughter-humor-comedy-by-fosterbrooks.com/index.htm

The Fire

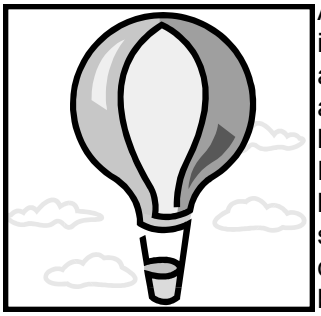
A chemist, an engineer and a mathematician were all asleep in a hotel when several fires broke out in their respective rooms.

The chemist woke up, saw the fire, ran over to his desk, pulled out his CRC (chemistry handbook), and began working out all sorts of fluid dynamics equations. After a couple minutes, he threw down his pencil, got a graduated cylinder out of his suitcase, and measured out a precise amount of water. He threw it on the fire, extinguishing it, with not a drop wasted, and went back to sleep.

The engineer woke up, saw the fire, ran into the bathroom, turned on the faucets full-blast, flooding out the entire apartment, which put out the fire, and went back to sleep.

The mathematician woke up, saw the fire, ran over to his desk, began working through theorems, lemmas, hypotheses, you-name-it, and after a few minutes, put down his pencil triumphantly and exclaimed, "I have proven that I can put the fire out!" He then went back to sleep.

FULL OF HOT AIR...



A man is flying in a hot air balloon and realizes he is lost. He reduces height and spots a man down below. He lowers the balloon further and shouts, "Excuse me. Can you help me? I promised my friend I would meet him half an hour ago, but I don't know where I am."

The man below says, "Yes. You are in a hot air balloon, hovering approximately 30 feet above this field. You are between 40 and 42 degrees N. latitude, and between 58 and 60 degrees W. longitude."

"You must be an engineer," says the balloonist. "I am," replies the man. "How did you know?" "Well," says the balloonist, "everything you have told me is technically correct, but I have no idea what to make of your information, and the fact is I am still lost."

The man below says, "You must be a manager." "I am," replies the balloonist, "but how did you know?" "Well," says the man below, "you don't know where you are, or where you are going. You have made a promise which you have no idea how to keep, and you expect me to solve your problem. The fact is you are in exactly the same position you were in before we met, but now it is somehow my fault.

For more engineer jokes by Robyn Merrithew please visit http://members.tripod.com/~Robyn_M/robyn.html

Call For Papers

74th Shock and Vibration Symposium

October 27-31, 2003
Red Lion Hanalei Hotel
San Diego, CA

Planning for the 74th Shock and Vibration Symposium is underway, with the selection of NSWC/Crane and SPAWAR as the Government Featured Organizations, Endevco as the Commercial Featured Organization, and the Red Lion Hanalei Hotel in San Diego as the location.

The Shock & Vibration Symposium is the oldest continuously held meeting dealing specifically with the structural dynamic behavior of air, sea, space, and ground vehicles and structures. The Symposium was established as a mechanism for the exchange of information among Government activities, private industry, and academia on current work and new developments. Presentations on work in progress are encouraged. Separate sessions are held for presentation of classified or limited-distribution material.

Presentations in the following subject areas are welcomed:

Two categories of presentations will be accepted: full papers, suitable for publication in the Symposium Proceedings; and short discussion topics, consisting of viewgraphs with no written paper. Full papers will have a 15 minute technical presentation time plus 5 minutes for questions, while short discussion topics will have a 10 minute presentation time with no question period.

901D Case Studies
Active Vibration Control
Ballistic Shock
Biodynamics
Blast Design
Combined Environments
Computational Structural Dynamics
COTS
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Environmental Databases
Finite Element Analysis
Fluid-Structure Interaction
Ground Shock
Seismic Shock
Impact/Penetration Mechanics
Instrumentation
Isolation Systems
Large Structures
Live Fire Testing
Machinery Diagnostics
Machinery Vibration
Material Dynamic Properties
Modal Analysis and Testing
Non-Standard Shock Test Platforms
Product Announcement/Facility Description
Pyrotechnic Shock
Shock Characterization
Shock Hardening
Shock Qualification by Extension
Shock Test/Equipment Failure Modes
Shock Test Lessons Learned
Simulation Methods
Specifications and Standards
System Identification
Test Criteria/Test Tailoring
Underwater Shock Testing
Vibroacoustics

Presentations will be accepted on the basis of their abstracts, which must be submitted by May 30, 2003. You are encouraged to submit online at www.saviac.org, click on 74th S&V Symposium Abstract Submittal. The Program Committee will review the abstracts during the June Program Committee meeting and authors will be notified of acceptance by June 26, 2003. The full paper presentations must meet the following standards: They must be previously unpublished and unpresented, must be appropriate to community interests and must not be overtly commercial, except for papers in the Product/Facility session. Standards for short discussion topics are similar except that they may include previously presented or published material.

The Proceedings will be published on CD-ROM.
The paper due-date is October 17, 2003.
Questions should be directed to Joel Leifer, 301.596.0100 or joel.leifer@saviac.org.

ABSTRACT SUBMITTAL FORM
74TH SHOCK & VIBRATION SYMPOSIUM
SAN DIEGO, CA
OCTOBER 27-30, 2003

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Choose one subject area: ____ **Pyroshock** ____ **Vibration** ____ **UNDEX** ____ **Ballistics**

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We would prefer that you submit your abstract on-line via our web site http://www.saviac.org. If you do not have web access, please type your abstract (unclassified/unlimited only, 400 words or less, no equations or graphics) on a blank sheet and submit it with this form to:

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Abstracts are due Now !!

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