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DESIGN

Design Engineering Division Newsletter

Krishna C. Gupta, Editor

Summer 2001

Greetings from the Chair



Daniel Segalman

Each year, there is a new chair of the Design Division and there is a new greeting from the chair. The greeting usually discusses the size of the division (BIG), its financial status (healthy) and its role in ASME

(weighty). Our outgoing chair discusses some of this in his column, so I shall take this opportunity to discuss other issues. Mostly I'll discuss why and how to participate energetically in ASME activities and in Design Division activities in particular.

The major reason for mechanical engineers to participate actively in ASME is a reason that your professors probably never told you. The reason is that - except for tenured professorships - all jobs are temporary. If I had the opportunity, I would warn all engineering students to expect to be unemployed approximately every five years. These are the facts and this is where ASME and your division come in.

If we must go out looking for a job every few years, and often in a whole new industry, we need lots of preparation. The time to prepare is not once the *Wall Street Journal* publishes an interview with your CEO in which he (or she) mentions off-handedly the "unfortunate but

necessary forthcoming reduction in technical/design/engineering staff." The time to start preparing is the day you graduate. Preparation has two parts: staying marketable and staying connected. That is where ASME comes in.

The key element of staying marketable is the continual updating and sharpening of skills. There was a time when employers worried about our technical currency for us. Now that engineers are seen more as a commodity, employers are less willing to invest in their people. Staying current is now primarily our own responsibility. By the way, the fact that staying current is now our responsibility is reflected in the certification criteria for engineering programs (ABET 2000) which includes the criterion "a recognition of the need for and an ability to engage in life-long learning."

Of course, one way to try to stay current is to seek out assignments with your current employer which will broaden your skills. Sometimes this works. Another is to take advantage of every opportunity your employer offers to send you to short courses or technical conferences. ASME and the Design Division start to come into play here. Let me mention the conferences in which the Division plays a part.

- We organize the annual International Design Engineering Technical Conference (IDETC). This is pretty research oriented, but it focuses on some practical technical issues. The IDETCs put on a series of tutorials specifically aimed at industry people.

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From the Editor's Desk

ASME tries very hard to attract young engineers to its membership ranks. The Design Division pays particular attention to the needs of young engineers by sponsoring student design contests at its conferences, and other activities of interest through its Student Affairs Committee. Unfortunately, many students and beginning engineers fail to see the value that the ASME membership can, or does, offer. Many do not join ASME, or drop out after a few years. In her article, "The Value of Volunteering," Diane Peters, P.E., an ambitious young engineer herself, offers her perspectives on how the participation in ASME activities can offer unique leadership opportunities, and important benefits through networking, to young and aspiring engineers. An earlier version of this article appeared in the monthly newsletter (January 2001) of the ASME Chicago Section.

Krishna C. Gupta

Registration information for IDETC 2001 in Pittsburgh is included inside!



www.asme.org/conf/congress01

Greetings from the Chair

(continued from page 1)

- The Design Division also sponsors the annual National Design Engineering Conference (NDEC). Now this is more practical. For instance, we have industry people talking about how one actually does design for manufacture.
- We organize some sessions at the International Mechanical Engineering Congress and Exposition (IMECE). This is primarily a research meeting, but even researchers need to avoid obsolescence. Each of our technical committees organizes sessions in either the IMECE or the IDETC or both.

There should be something of interest to each of our members in at least one of the above conferences. Additionally, there are generally short courses and tutorials offered at the beginning or end of each of these events. There are of course many other specialty conferences, short courses, and tutorials offered by ASME or its other divisions. If they know where you live, you get the notices.

The other half of the issue is staying connected. The people we know are part of our network, and so are the people that they know. I personally have a huge Rolodex and I take great pleasure referring job-hunting friends to contacts I have built up over the years. I have also discovered that one secret to job hunting is to put our friends to work shaking the trees for us.

For most of us, the best way to stay connected is to network locally. This is most conveniently done through our local ASME chapters. One goes to meetings once a month and meets other mechanical engineers who share our technical interests. We begin by exchanging business cards and after a few months discover that we have become close friends. We discuss the problems we find challenging, check each other's job status, and offer help and encouragement as appropriate. Long-term friendships grow quite naturally at the local chapters.

There is also networking on a more national level. In ASME, this is done through the division, but begun at the technical committee level. The Design Division is composed of ten technical committees, all listed with contact coordinates elsewhere in this issue. You show up at meetings of the technical committee of interest to you and look for work to do. After a while, you have become indispensable and the committee votes you in as a member. In the Design Division, one usually serves six or eight years on a technical committee before becoming involved at the Division's executive committee.

Because of this, members of our executive committee tend to have significant understanding of the Division operations and those of ASME as a whole by the time that

they start serving at that level. Unfortunately, a few other divisions of ASME do not have vibrant technical committees and their division officers start service without the necessary background to navigate the ASME whirlpools. When you do decide to get involved at the division level, do so with the Design Division.

All of the above arguments addressed how it is to your benefit to be active in ASME, in the Design Division, and in your local section. It is not just you who benefits. ASME is run primarily by its membership and ASME members do most of the work. Those good things I discussed above - conferences, tutorials, and even local sections - all depend on the work of volunteers. ASME and its members are there for each other.

Daniel Segalman, Chair

Past Chair's Report

It has been a great pleasure to lead the Design Engineering Division during this year. We have a reputation in ASME for sound stewardship, and for being active in serving the interests of our members. That reputation poses a challenge for the Division Chair, and for the members of the Division Executive Committee. We do have some very, very able people serving on the Executive Committee. I know that our incoming chair, Dan Segalman, has some great ideas, and will continue our tradition in fine style.

The ASME Council on Engineering is very actively looking at restructuring the organization. The watchword is to make the Society a knowledge-based organization. Of course, that can mean many different things, and we must wait to find out what it means in this context. However, it is a time at which our leadership is actively seeking input. Since ASME exists solely to serve its membership, it is very appropriate that you, our members, speak up with your ideas and concerns. I invite you to communicate with me, or Dan, or directly with our Group Vice-President: Larry Hoberock (lhobero@ceat.okstate.edu). Let us know what you would like your Society to become in this 21st century. We are the largest division within the Council on Engineering, in fact larger as an individual division than five of the eight groups. That alone will ensure that we are heard. In addition, as indicated above, we have a reputation for sound management and service, which amplifies what we say.

It is, in fact, a time of great change within the Society. Dramatic changes are taking place in all aspects of communications. Given that a Society like ASME is fundamentally about communication, those changes cannot help but have profound effects. One example is in the area of publishing; a traditional area in which ASME has both communicated with, and on behalf of its members, and supported

itself financially. There used to be a financially significant aftermarket for the paper proceedings of ASME sponsored conferences that helped to underwrite the cost of producing those proceedings. With the advent of CD-ROM proceedings, and, in the near future, web proceedings, that aftermarket has evaporated. This has drastically changed the economics of both the ASME publications department, and the way in which we budget for the conferences. There will be many similar issues for our Society to deal with in the coming years. Some will have even more drastic implications.

Within ASME, leadership is provided by volunteers who are ordinary members like you and me. Yes, ASME does have a permanent, professional staff, but ultimately their role is to support what the volunteers choose to do. Obviously, a volunteer led organization can only be as effective as those who step forward to spend a little of their time providing that leadership. I add my voice to Dan's in encouraging you to become involved. The more people we get involved in Division leadership, the more activities and initiatives we can pursue. The better the communication channels with our members, the better we will respond to their needs.

Kenneth Waldron

The Value of Volunteering

As you read various ASME publications, you periodically see announcements about the need for volunteers for a variety of positions and tasks. You may have stopped to think about volunteering, or perhaps you passed it over without considering offering your service to the society. After all, you're busy, and you need to have a good reason to take on an additional time commitment. Clearly, some people think the time is well spent, but why?

Volunteering for ASME is beneficial to the society, the profession of mechanical engineering, and also to you. Your service benefits ASME because it brings in new talents, new energy, and new perspectives. If all volunteers are drawn from a limited portion of the membership, the programs organized and initiatives pursued will reflect their opinions and perceptions. If people from all facets of the society volunteer, ASME will have the benefit of diverse ideas and perspectives, and will be much stronger because of it. Your service is good for the profession because strong technical societies do a great deal of good. They provide an avenue for members to gain training that will enhance their skills, encourage talented young people to consider the profession, and influence governmental regulations that affect the profession.

And, finally, serving ASME will benefit you. First of all, it will increase your visibility. By taking on a leadership role, you will increase your visibility to the members of your section, region, or technical division. If you are in a managerial position, you may want to hire some of these members. We are constantly hearing, usually in the context of H-1B visas, about the shortage of engineers. If you need to hire engineers and see a shortage, anything that presents you and your company in a positive light to a large number of people is helpful. You may want to do business with some of the people who see you in a leadership role. Your service to ASME will make them more familiar with you and what you do, and when they need your product or service, they will already have a positive view of you. I've experienced this firsthand, so I know it happens. At a meeting of my local section, I was introduced and spoke briefly about the next month's event, which I was arranging. One of the people at that meeting had an interest in machinery of the type that my employer makes, and after the meeting he introduced himself and gave me his card. The next morning, I was able to go into the office of the Vice-President, North American Sales and Marketing, and hand him a sales lead. Needless to say, this kind of thing makes your employer regard you very favorably. And, finally, your visibility may someday help you if you are unemployed and looking for a job. You have a network of people who know who you are, and have seen you demonstrate your leadership skills, who can help you find a new job.

Aside from visibility, what does service to ASME offer you? You gain the opportunity to develop new skills in a low-risk atmosphere. Perhaps you want to move from a technical role to managerial, but don't have the management background? Take on a leadership role, learn management skills by using them, and you can present your employer with solid evidence that you can do the job you want. Maybe you want to move into a sales engineering role. You could accept a volunteer role that would help you develop and demonstrate sales skills. If you have a rocky start, your job is not in danger. Freed of this risk, you can take more chances and learn more quickly. If you prefer to stay in a more technical position, you could learn more about your specialty through active involvement with a technical division, enhancing your value to your employer and increasing your chances of advancement.

Last but not least, you get to work closely with, and learn from, other engineers. As you're talking at a meeting, you may get a new perspective on career advancement from an older engineer, or

see the younger generation of engineers in a different light after speaking with one of them.

In summary, volunteering is a very positive experience. It benefits ASME, mechanical engineering, and YOU. What more could you want?

Diane L. Peters, P.E., Chicago Section

The 2001 National Manufacturing Week (NMW) Conference

The 2001 NMW Conference was held March 4th and 5th and consisted of six tracks of four sessions each day. Two of the tracks were organized by ASME with 16 sessions out of the total of 46 actually held. The DFM Committee organized one of our tracks with a total session attendance of 248 or an average of 31 per session. In our other track the Management Division organized two sessions, the Manufacturing Engineering and Technology and Society Divisions each organized one session and our Education and Vibrations Committees each organized two. The attendance at the sessions in this track totaled 140 for an average session attendance of 18. The two most popular sessions were a DFM session "Design for Six Sigma Manufacturing" with 46 attending and Reed session "The Integration of Six Sigma and Lean Manufacturing" with 58 attending.

The conference this year was a marked departure from the previous years. Previously the conference extended for three and a half days with approximately 120 sessions with about 44 sessions of interest to Design Engineers. The Sponsor, Reed Exhibition Company, has not yet informed us of the format for the 2002 conference.

Richard A. Hirsch, PE

News from the Committees

Vibration and Sound Committee Report

The past year was very busy for TCVS in connection with the preparation of the 2001 and 2003 IDETC, and the organization of sessions for IMECE. Our main activities are summarized as follows.

1. The TCVS Fall meeting was held in Orlando during the IMECE. The Spring meeting will be held in Chicago during the National Design Engineering Show. At the Fall meeting, brief information was provided by Dr. A. Flatau, program director of the

Dynamic Systems and Control Program of NSF, about new directions/initiatives and proposal due dates of the Civil and Mechanical Systems (CMS) Division of NSF.

2. TCVS will sponsor two sessions at the 2001 Design Show, with topics on: "FEA and SEA: Analysis, Theory, and Applicability" and "Applications in Structural Dynamics". The presentations will be made by industrial and government researchers. J. Dohner (Sandia Labs) is the coordinator.
3. TCVS sponsored eleven sessions covering three symposia during the 2000 IMECE. These symposia were: "Dynamics, Acoustics, and simulations" (7 sessions, 40 papers) organized by A. Luo, R. Han, and K. Lee; "Vibration and Control of Continuous Systems" (3 sessions, 17 papers) organized by C. Rahn and J. Wickert; "Active Control of Vibration and Noise" (1 session, 25 papers, also co-sponsored by the Aerospace, Applied Mechanics, and Dynamic Systems and Control Divisions) organized by H. Tzou. G. Flowers of Auburn University is now the new coordinator for IMECE sessions. Five to six sessions have been approved for the 2001 IMECE and will be distributed among three symposia: "Vibration and Control of Mechanical Systems" organized by A. Luo, H. Rahnejat, and H. Hamidzadeh; "Friction/Vibration Phenomena" organized by K. Farhang; and "Vibration and Noise in Compressors", organized by K. Farhang and S. Abrate.
4. Technical papers for the 2001 IDETC have been received and in the review process. According to the Conference Chair, Dean Mook of Virginia Tech, about 20,000 announcements will be mailed out. The conference web site is at www.me.cmu.edu/DETC2001 where detailed information on symposia, conference venue, local activities and so on can be found. Detailed matters regarding the local arrangements, organization of symposia, short courses and tutorials, exhibits, etc. will be discussed at the Spring meeting in Chicago.
5. Preparations for the 2003 IDETC and Vibration Conference are underway. The Conference Chair, A. Shabana (University of Illinois, Chicago), has selected the conference venue to be the Downtown Chicago Marriot. K. W. Wang (Penn State) and J. Renaud (Notre Dame) are the Conference Vice-Chairs, T. Royston (University of Illinois, Chicago) is the Program Chair, and R. Parker (Ohio State) is the Program Vice-Chair. Professors Shabana and Royston will be responsible for local arrangements. A conference web site has been set up at www.me.uic.edu/DETC2003.

6. Professor L. A. Bergman, Technical Editor of the *ASME Journal of Vibration and Acoustics*, appointed two new associate editors in 2000. They are G. Flowers (area: rotating systems and machinery) and H.S. Tzou (area: intelligent materials and structures, mechatronics). Few more new associate editors are anticipated in 2001 as several current associate editors will finish their final terms at end of 2000.
7. At the Spring 2000 meeting, the following members were elected to serve a three-year term from July 1, 2000 to June 30, 2003: B. Banerjee (Caterpillar Inc.), S. E. Chen (Ford Motor Company), G. T. flowers (Auburn University), H. Hamidzadeh (South Dakota state University), R. G. Parker (renewed; Ohio State), T. Royston (University of Illinois at Chicago).
8. At the Fall 2000 meeting, Robert Parker and Albert Luo were appointed as the Chair and Co-Chair of the Awards Subcommittee. They are responsible for soliciting and collecting nomination packages for the Den Hartog and Myklestad Awards (voting at the Spring meeting) and recommending TCVS members and colleagues for appropriate ASME Awards. Kon-Well Wang was appointed as the Chair of the ASME Fellow Nominating Subcommittee. T. Royston would serve as the Co-Chair. Karl Grosh was appointed as the Chair of the Membership Nominating Subcommittee. Bappaditya Banerjee would serve as the Co-Chair. Voting on new members will take place at the Spring 2001 meeting.
9. At the Fall 2000 meeting, a new subcommittee was appointed to investigate how stronger ties can be made with industry. This Committee is chaired by Jeff Dohner.
10. The home page of TCVS is now at www.me.psu.edu/tcvs where information on committee members, meetings, minutes, and other activities are posted. Hyperlinks to ASME, ASME Journal of Vibration and Acoustics, and other relevant conferences/activities are also provided. The TCVS webmaster is C. Rahn of Penn State University.

Chin An Tan, Chair

Design Automation Committee

The 26th Design Automation Conference (DAC) held in Baltimore was very well attended. We held 36 sessions where 121 papers were presented. Thanks again to all of the paper coordinators and authors. Our plenary speaker was Andy Richardson, Senior Manager of

the Jaguar Vehicle Programme (US), Ford Motor Company, who presented "Design in the Information Age". We also sponsored one tutorial, "Friction-induced Vibration and Noise", presented by Kam-biz Farhang of SIU.

Congratulations to Sara McMains, Jordan Smith, Jianlin Wang and Carlo Sequin from the University of California, Berkeley for winning the Black and Decker Best Paper Award. We are currently planning our program for the 2001 DAC to be held in Pittsburgh. Information about the 2001 Design Automation Conference can be found at: <http://swhite.me.washington.edu/~asmeda/2001DAC>. Thanks also to Tim Simpson for volunteering to manage our web pages. Congratulations to our new committee members Georges Fadel, Hiroshi Yamakawa, and Samir Ben Chaabane. We look forward to seeing you in Pittsburgh.

Judy Vance, Chair

Power Transmission and Gearing Committee

I am looking forward to chairing this Committee. We just completed an international conference in Baltimore in September of 2000. Over 100 papers were presented on gearing, clutches and couplings. We usually sponsor an international conference every 4 years and I hope that I can do as good of a job as our past Chair, Neil Anderson. At this point in time we plan on having a meeting during the National Design Conference in Chicago on March 6th 2001. At this meeting we hope to elect a new Vice Chair. We tentatively are planning on aligning our conferences with the Vibration and Sound Committee. They are planning a National conference in 2003 in Chicago and an international conference for 2005. We are also looking at possibly doing something jointly with AGMA. We hope to firm up dates for and participation at this meeting. We also plan on seeking new members and hope to start a campaign on getting more industrial member to participate in our Committee.

Jon Mancuso, Chair

Vehicle Design Committee Objectives of VDC

The committee is strongly committed to its objectives which are to facilitate dissemination of advanced knowledge and new technologies related to vehicle design among the members of the mechanical engineering community through organizations of SME symposia and other information exchange mechanisms. The advances in the areas of Vehicle Dynamics, Stability and Control of light and heavy vehicles, Vehicle Design, Off-road Vehicles Technology, Vehicle Control and Navigation Systems, Vehi-

cle/Road and Vehicle/Human Interactions, Crash Research and Occupant Safety, Weigh in Motion Technology, and Intelligent Transport Systems will be specifically emphasized.

IMECE-2000 VDC Symposium on "Advanced Vehicle Technologies"

The committee organized a very successful symposium on "Advanced Vehicle Technologies" for the IMECHE-2000 in Orlando, November 2000. Four successful sessions, including 22 papers from the Academic, Governmental, and Industrial organizations, were included in this symposium. The attendance was above our expectation. Dr. Imtiaz Haque (Vice-Chair of VDC) was the principal organizer of all of the sessions of this symposium. The committee is very thankful for his efforts and help.

IMECE-2001 VDC Symposium on "Advanced Vehicle Technologies"

The Vehicle Design Committee of the ASME Engineering Design Division is organizing a symposium entitled "Advanced Vehicle Technologies" to be held during The International Mechanical Engineering Congress and Exposition on November 11-16, 2001 in New York, USA. Papers will be presented on innovative analytical, computational, and experimental investigations in controls, dynamics, and design of full vehicle systems and their sub-assemblies. Papers will address fundamental research, applied research, or successful implementations relating to light or heavy vehicle design and development. Four sessions have been organized.

M. El-Gindy, Chair

Mechanisms Committee

The current organization of the Committee is as follows:

Chair - Lung-Wen Tsai, *Chair-Elect* - Kazem Kazerounian, *Past-Chair* - Harvey Lipkin

Members to 2002 - Kam-biz Farhang, Clement Gosselin, Dinos Mavarodis, John Mirth, Charles Wampler

Members to 2004 - Larry Howell, Shridhar Kota,

Jahan Rastegar, Mike Stanisic, Lung-Wen Tsai

Members to 2006 - Vijay Kumar, Jeffery Ge, Suresh G.K. Ananthasuresh, Karim Abdel-Malek, Steve Derby

The IDETC 2000 in Baltimore had the total attendance of 831 (including 132 students) and paid registration of 652; the latter figure well exceeded the budgeted registration of 450 used for conference planning. The Conference and tutorials generated +\$35,799 in net credits for the Design Division, +\$4,462 for the CIE Division, and +\$31,201 for the ASME COE.

The IDETC/CIE 2002 will be in Montreal, Canada. The General IDETC Chair is Kazem Kazerounian, the Technical Program Chair is Jahangir Rastegar, and the Program Coordinator is Q. Jeffrey Ge. The participating groups are Mechanisms,

DAC, DFM, DTM and CIE. The Mechanisms & Robotics Conference Chair is Vijay Kumar. More information can be found at: <http://www.caip.rutgers.edu/ASME2002/index.html>

The Division Executive Committee approved the designation of the Mechanism Committee Award as a DED Divisional Committee Award in March 2001.

Lung-Wen Tsai, Chair

Calendar of Upcoming Events

September 9-12, 2001

ASME International Design Engineering Technical Conferences (IDETC)
Hilton Pittsburgh and Towers
Pittsburgh, PA
(Dean Mook, Chair)
<http://www.me.cmu.edu/DETC2001>

November 11-16, 2001

International Mechanical Engineering Congress & Exposition (IMECE)
New York Hilton & Sheraton Hotels
New York, NY
<http://www.asme.org/conf/congress01>

September 29-October 2, 2002

ASME International Design Engineering Technical Conferences (IDETC)
Sheraton Hotel
Montreal, Quebec, CANADA
(Kazem Kazerounian, Chair)
<http://www.caip.rutgers.edu/ASME2002/index.html>

November 17-22, 2002

International Mechanical Engineering Congress & Exposition (IMECE)
New Orleans Hilton & Convention Center
New Orleans, Louisiana

September 3-6, 2003

ASME International Design Engineering Technical Conferences (IDETC)
Chicago Marriott, Downtown
Chicago, IL
(Ahmed Shabana, Chair)
<http://www.me.uic.edu/DETC2003>

September, 2004

ASME International Design Engineering Technical Conferences (IDETC)
Salt Lake City
(Alan Parkinson and Larry Howell, Co-Chairs)

Announcement and Call for Papers

The 2002 ASME International Design Engineering Technical Conferences and the Computers and Information in Engineering Conference (IDETC/CIE)

Hosted by the ASME Design Engineering Division

September 29 through October 2, 2002 in Montréal, Canada



Conference will be held In Montréal, Canada at Le Centre Sheraton Hotel and Towers

General Conference Chair: Prof. Kazem Kazerounian

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General Conference Technical Program Chair: Prof. Jahangir Rastegar

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Tel: (631) 632-8314 Fax: (631) 632-8544
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Author Information:

Paper due date: January 25, 2002
Acceptance notice: March 29, 2002
Final submission due: April 27, 2002

Please see web site for mailing addresses of the paper review chairs for each conference.

For inquiries concerning general conference arrangements, please contact the general conference chairman and program chairman. For inquiries concerning an individual technical conference, please contact the respective chairperson.

The 2002 ASME International DETC/CIE consists of the following conferences:

27th ASME Biennial Mechanisms and Robotics Conference

Conference chair: Prof. Vijay Kumar
Mechanical Engineering and Applied Mechanics
University of Pennsylvania
Towne 114, 220 S. 33rd Street
Philadelphia, PA 19104-6315
Tel: (215) 898-8241 Fax: (215) 573-5577
Email: kumar@cis.upenn.edu

Computers and Information in Engineering Conference

Conference Chair: Prof. David W. Rosen
School of Mechanical Engineering
Georgia Institute of Technology
813 Ferst Drive
Atlanta, GA 30332-0405
Tel: (404) 894-9668 Fax: (404) 894-9342
Email: david.rosen@me.gatech.edu

Design Theory and Methodology

Conference Chair: Prof. Spencer Magleby
Department of Mechanical Engineering
435 Crabtree Technology Building
Brigham Young University
Provo, UT 84602
Tel: (801) 378-3151 Fax: (801) 378-5037
Email: magleby@byu.edu

Design for Manufacturing

Conference Chair: Dr. Irem Y. Tumer
Computational Sciences Division
NASA Ames Research Center
Moffett Field, CA 94035
Tel: (650) 604-2976 Fax: (650) 604-4036
Email: itumer@mail.arc.nasa.gov

28th Design Automation Conference

Conference Chair: Prof. Alejandro Diaz
Mechanical Engineering Department
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www.caip.rutgers.edu/ASME2002/org.html

ASME Design Engineering Division

July 1, 2001 - June 30, 2002

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<http://www.asme.org/divisions/ded/execCom.html>

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Educators as well as practitioners are encouraged to participate.

KEYNOTE SPEAKERS

Y. K. Lin

Florida Atlantic University
Boca Raton, Florida
Random Vibration Theory: Its
Development and Present Status

James Antaki

University of Pittsburgh, PA, and
AntakaMatics, Inc.
Pittsburgh, Pennsylvania
Design of Spare Parts for the
Human Body

Ali H. Nayfeh

Virginia Polytechnic Institute
and State University
Blacksburg, Virginia
Can the Mechanical Engineer
Ignore Nonlinear Phenomena?

Charles Steele

Stanford University,
Stanford, California
Some Mechanics of Hearing in
Man and Beast

TUTORIALS

- Active and Passive Damping
- Random Vibrations: A Tutorial on Linear and Nonlinear Structural Response
- NSF Open Workshop on Decision-Based Design
- Abridged FMEA - How to Get the Most Out of FMEA Using Limited Resources?
- Geometric Dimensioning and Tolerancing
- Vibration Isolation
- Design of Structronic and Mechatronic Systems with Smart Materials
- Friction-Induced Vibration and Noise
- Conceptual Product Design Using BTIPS
- An Overview of Engineering Information Management and Product Lifecycle Management Business Methods

ORGANIZING COMMITTEE

General Conference Chair
Professor Dean T. Mook
Virginia Tech
dtmook@mail.vt.edu

Technical Program Chair
Professor B. Balachandran
University of Maryland
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INFORMATION AND RESERVATIONS

For more information, go the conference website:
<http://me.cmu.edu/detc2001/>

For room reservations call the Pittsburgh Hilton at
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2001 Design Engineering Technical Conferences & Computers and Information in Engineering
Conference September 9-12, 2001, Pittsburgh, Pennsylvania USA

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* Full registration fees include entrance to all technical sessions, one (1) conference luncheon ticket, and the conference proceedings. Tickets for guests may be purchased separately. One day fees include entrance to the technical sessions for the day and the conference proceedings.

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TUTORIALS (Sunday, September 9)

- T1 Active and Passive Damping
Amr Baz, University of Maryland TUT1 \$60
- T2 Random Vibrations: A Tutorial on Linear and Nonlinear Structural Response
Tom Paez, Sandia National Laboratories TUT2 \$100
- T3 NSF Open Workshop on Decision-Based Design
Wei Chen, University of Illinois at Chicago, Kemper Lewis, University at Buffalo, and Linda Schmidt, University of Maryland TUT3 Free
- T4 Abridged FMEA - How to Get the Most Out of FMEA Using Limited Resources?
Kurt A. Beiter, Stanford University TUT4 \$100
 TU11 Students: \$30
- T5 Geometric Dimensioning and Tolerancing
Joe Davidson and Jami Shah, Arizona State University TUT5 \$60
- T6 Vibration Isolation
Eugene Rivin, Wayne State University TUT6 \$140
- T7 Design of Structronic and Mechatronic Systems with Smart Materials
H.S. Tzou, University of Kentucky TUT7 \$60
- T8 Friction-Induced Vibration and Noise
Kambiz Farhang, Southern Illinois University TUT8 \$60
- T9 Conceptual Product Design Using BTIPS
Zbigniew M. Bzymek, University of Connecticut TUT9 \$60
- T10 An Overview of Engineering Information Management and Product Lifecycle Management Business Methods
Dr. Ravi M. Rangan, CTO, Product Sight Corporation TU10 \$60

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