

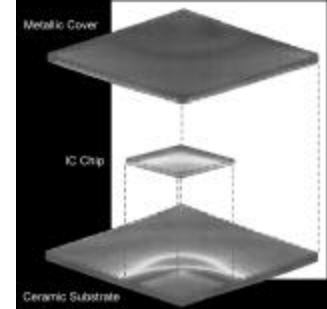


Arizona/Nevada Section of SAE October Newsletter

The Engineering Society For Advanced Mobility Land Sea Air and Space

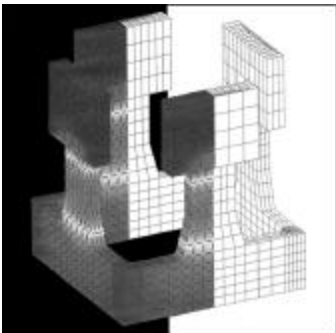
Dinner Meeting - October 19th 7:00pm Virtual Testing Through Computer-Aided Simulation

The Arizona Section of SAE is delighted to present a Technical Dinner Meeting of interest to many of our members. Martín Martínez, President of Engineering Science Analysis Corporation (ESA) will discuss how best to utilize Computer Aided Engineering (CAE) tools. The end goal of any CAE tool use is to bring to market products that meet the customer's expectations. As these tools continue to improve, their proper use can accelerate product time to market, which can lead to higher profitability.



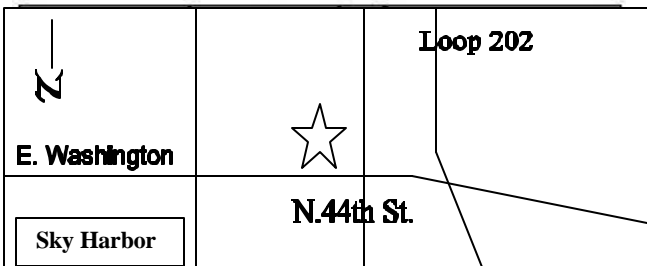
This Technical Dinner Meeting will cover the following topics:

- 1) Quick overview of where simulation fits into the engineering process.
- 2) Best practices for using simulation in the engineering process.
- 3) Pitfalls to avoid when using CAE tools.
- 4) Some real world examples.
- 5) Computer Aided Simulation- where it is today.



Mr. Martínez has consulted in the Valley since 1991 by offering specialized analysis and engineering services to customers including; Honeywell, AlliedSignal Aerospace, Motorola and Intel. His analytical skills were honed at AlliedSignal (now Honeywell) from 1984 to 1996. He led research and development activities as a Program Manager at Cerprobe Corporation from 1996 to 1999. Currently, Mr. Martínez is leading ESA full-time and is providing consulting services to a number of local companies. ESA provides services in the following fields: structural, thermal, magnetics, dynamics, life prediction, elastic/plastic non-linear deformations, fracture mechanics, composites, fast fracture reliability, correlation of test data to model and product design.

<i>DATE</i>	<i>TIME</i>	<i>LOCATION</i>	<i>COST</i>
Thursday October, 19th	Social Hour Dinner Presentation	6:00 pm 6:30 pm 7:00 pm	Holiday Inn – 44 th St./Washington Phoenix, AZ. (602) 273-7778
			Members \$18 Non-mbers \$20 Students \$10



CALL LINK-WEST AT (480) 926-0414 FOR RESERVATIONS
PLEASE MAKE YOUR RESERVATIONS NO LATER THAN 2 P.M. on October 17th
WE CANNOT ACCEPT RESERVATIONS AFTER THIS DATE

Contemplative Leadership Seminar Is Big Success!

Over 40 people attended the one-day Contemplative Leadership Seminar sponsored by the Arizona Section of SAE. About half of the attendees were SAE members, the remaining attendees were community leaders. The seminar achieved its goal of bringing a new leadership tool to SAE members that is not readily available in traditional educational venues or company training programs. The seminar was an effective community development tool that increased public awareness about SAE and its vision of advancing the mobility community to serve humanity. The seminar also created a new community of people interested in using contemplative practices to achieve breakthroughs in engineering teams, community projects, relationships, and personal development.



Contemplative Leadership Seminar Group

What is Contemplative Leadership? It's a broad subject. It's not new, but what is new is the growing use in the workplace to offset the busyness, chaos, and disharmony present in many businesses today. Schaefer, C. & Darling, J. (1997) in their research

article "Why Spirit Matters: Reflections on Contemplative Practice In the Workplace"

(Resource for Organization and Community Renewal. Spring Valley, New York: High Tor Alliance.) provide the following definitions:

Contemplation can be described as the conscious and regular focus of human attention on an issue, or a question, or a practice in which the motive is to serve, or be in contact with, a higher good or being.

Contemplative Leadership is using contemplative/reflective practices to gain access to our true desires and goals and then achieving breakthrough performance in attaining these outcomes.

Individual Practices: Meditation, conscious listening, silence, prayer

Individual Practices At Work: Congruence of action and intention, conscious listening, feedback from colleagues, conscious speaking, reading/studying texts

Organizational Practices: Work on vision and values, discussion of spiritual values, dialogue and group process work, silence, sharing life stories

During the day, attendees listened to personal stories and also told their own stories in a "hands-on"



There were many small group discussions. This one was on life stories. Each person drew about goals, barriers, gifts to others, accomplishments, and what is central to his or her life.

exercise. There were also exercises on visioning, conscious listening, and claiming. A team spirit model was presented. The seminar ended with a powerful leadership circle that helped attendees get in touch with their true desires and inner wisdom. This one-day seminar originated from a 5-day course our past section chair, Steve Trimble, attended at The Union Institute as part of his Ph.D. studies. Steve was able to secure the services of nationally recognized experts in this area to organize and conduct the seminar.

The organizers included:

- **Deborah V. Welch, Ph.D.** who has 20 years of professional experience in psychology, business management, coaching, consulting, and college teaching. Her dissertation was in the contemplative leadership area and she is currently co-authoring a book on reflective leadership.

- **James M. Stuart, MBA** who has over 20 years experience in leading major companies and public projects. He has also been active in college teaching. He is co-founder of The Leadership Circle, a retreat program aimed at senior business leaders and CEOs.

- **Jennifer Cash O'Donnell** who is an international internal team consultant for AT&T.

Contemplate (con't)

She is an expert on the use of the Team Spirit Model and Contemplative Practices to facilitate the building of high performance teams. • **Steve Trimble, MBA** who has over 25 years of experience in the aerospace industry as an engineer, team leader, business developer, and educator. Steve is past chair of the Arizona SAE Section. He is pursuing a Ph.D. in Business Administration with an emphasis on Contemplative Leadership. He is also writing a book entitled *Made to Serve, Made to Last: Poems of an Engineer*.

- The organizers of the seminar plan on keeping the seminar community together through a newsletter and e-mail dialogue. SAE members interested in joining this community should contact Steve Trimble, (480) 592-7199 or e-mail: steve.trimble@honeywell.com

As part of his story, Steve Trimble shared this poem and related it to the SAE Vision Statement.

Antique Tractor Parade

Deliberate, yet jolting in their motions,
With deep rhythmic percussion they parade.
Phoenixes of forgotten fields and scrap men's
bone yards,
Like assembly line newborns they are displayed.
Objects of curiosity to the young,
Vessels of memories to the old,
They grind past the grandstands,
Mechanical works of art to behold.
Designed for the family farmer,
They eclipsed hunger, their rival.
A tribute to man's better nature,
A bright point on the technology spiral.
Complex, yet understandable;
Icons of distant, better past.
Powerful, yet manageable;
They were made to serve, made to last.
--Steven W. Trimble

Technical Dinner Meetings and **You**

The 2000-2001 SAE Arizona Governing Board understands that the membership needs a return on their investment. Whereas the cost of a meeting per person is nominal, we know that your time is not. That's why we have endeavored to bring to you meetings that can add value to your engineer's tool kit, which is precisely what the October Technical Dinner Meeting is all about.

The Board knows it's important for us engineers to stay current with available technologies, tools and methods. Anyone who has played mentor to a bright junior engineer is reminded early and often how much we have perhaps misplaced in our cranial computers. So as junior spouts off in some upcoming meeting about Visual Basic or the 2,935th least-used function in Pro-E, you (if you make this meeting) can ask if he knows the "Common Pitfalls of FEA modeling".

So join us and learn useful things, meet new business contacts, say hi to old friends and engage in interesting conversation with new friends. One thing I guarantee, you can't get this kind of experience over the Internet. Even Al Gore, who invented the Internet, will admit to that.
Technically Yours,

Paul G. Curry

Upcoming events:

Mark your calendars for next months meeting. We will be going to the Caterpillar proving grounds on November 9th. There will be a tour of the facilities and a demonstration on moving mountains. We hope to get all of the Universities in our section involved on this activity.

January 18th – Science Center / SAE A World in Motion (Phoenix, AZ)
February 15th – Boeing Cannon (Mesa, AZ)
March 15th – Mentoring (Tempe, AZ)
April 19th – Automotive Brakes Design & Manufacture (Phoenix, AZ)
May 17th – Intel Car PC (Chandler, AZ)

Engineering Week



The National Society of Professional Engineers established National Engineers Week in 1951. The week takes place each year at the time of George Washington's birthday. The nation's first president had the background of an engineer and land surveyor and established the first call for an engineering school, which led to the founding of West Point.

National Engineers Week includes a variety of programs. Through the "DiscoverE" program, more than 35,000 engineers nationwide work with more than four million elementary, junior and senior high school students and teachers to conduct in-class and extracurricular programs.

From the White House to the state house to city hall, government officials proclaim National Engineers Week in their communities. The President of the United States issues an annual message honoring engineers and their work. The week is also celebrated in the U.S. Congress with floor statements by members.

The local SAE section, along with a host of other organizations, are planning the Phoenix based activities. Currently we are working on activities at local schools, the Arizona Science Center, and a banquet. If you would like to get involved, please call Jeff Brown at (480) 926-0414 ext. 236. The next meeting is Tuesday, October 17th. The meeting location is still to be announced, but will be in Tempe. For more information on Engineering Week visit: www.eweek.org

A message from the Secretary of Education on Eweek:

Dear Engineers:

I commend you for your commitment to better education by participating actively in a school in your community. By creating exciting learning projects with students and sharing your enthusiasm for your profession, you exemplify the spirit of *America Goes Back to School*, a program I began at the U.S. Department of Education to encourage all Americans to get involved with their local schools. In fact, National Engineers Week served as a model for the design of *America Goes Back to School* because of your proven success in linking community members with schools.

Your efforts this year are especially timely because of our renewed national focus on mathematics as a critical basic skill. Students need to master challenging math, including algebra by the end of eighth grade, in order to be prepared to take the advanced math and science courses in high school to go on to college and successful careers. Business and education experts agree that in order to succeed in the Information age, students will need higher levels of problem-solving skills than ever before. Approximately 89 percent of the new jobs being created in our economy require more than a high school level of literacy and math skills.

You are ideal spokespersons for the message that math, science, and technology skills are demanded in the workplace and that the future success of U.S. students and of our national economy hinge, to a great extent, on students' achievement in these areas. This message must be communicated to parents, teachers, principals, and students themselves.

On a personal level, your visits will be memorable to students and may inspire some to dream of becoming engineers who have never had this dream before. I hope that you will continue to be involved in your local schools, not just during National Engineers Week, but also during the rest of the year. Again, I commend you for offering students the kind of rare learning opportunity that will truly make a difference in their lives.

Yours Sincerely,

Richard W. Riley



Sparks



(Excerpts From) The Monthly Newsletter of the Society of Automotive Engineers at Arizona State University

A new school year...

Sleeping late, parties and the summer fun ended, or at least slowed down, as school started August 21st. It's time to hit the books and begin work on the new 2000-2001 formula car. With the start of the new year brings new faces and ideas to our group. It has become more academically diverse than ever with students outside of engineering ranging from Architecture to Business.

New Car Development

The plans for the new car are underway and construction of the chassis has begun. The three observers from ASU that attended the competition back in May (George Piotrowski, Matthew Carpenter and Matt LaPaglia) were able to gain some valuable insight about the competition. The information they gathered from the event led us to revamp some of our designs for the car. The major sections that had to be reconsidered include the engine and chassis. All teams have started planning their work for the 2000-2001 year.

Team Leaders

To better facilitate the new construction of the car, seven teams have been created to focus on individual sections of the car. There are several reasons to split our group into teams. It gives each group a specific time line and a particular section to work on. Secondly it allows the students to be more focused on that area of the car.

Body Work	Matt LaPaglia
Chassis	Matthew Carpenter
Documentation	Dave Vasquez
Powertrain	George Piotrowski and Geoff Racier
Sponsorship	Robert Carey
Suspension	Brian Peters
Wheels/Tires/B rakes	Kyle Post and Sam Stockham

The Driver's Seat

A Word from the President...

While everyone else was gone for the summer, Matt Carpenter and I developed a new strategy for this year. We are going to use a three-pronged approach to do our best. Through the prongs of education, research and the design competition, we will succeed.

For education, we are working to make sure that each member is able to help with the car. This requires getting all of our members to at least a minimum proficiency level. We are accomplishing this through the continuation of our highly successful education sessions we started last year. Also, we are regularly attending SAE AZ Professional Chapter dinners, featuring guest speakers. Other events are planned here, such as a leadership seminar and ASME partnership.

For research, we are having each of our team leaders become partnered with an ASU faculty member and an industry professional from the SAE AZ Professional Chapter. We want each of our team leaders to become experts in their area, so they are able to make the best possible decisions. Various research areas that will be explored include lightweight vehicles, safety and fuel economy.

Finally, the culmination is in the design competition. Here, we will combine everything else to finish the car and race it next May in Pontiac, MI. We have broken everything down into teams, which will be similar to "outsourcing" the various areas of the car. Each team leader will have complete control over that section of the car. I would like to say congratulations to our team leaders, Matt LaPaglia, Matt Carpenter, Geoff Racier, George Piotrowski, Brian Peters, Dave Vasquez, Kyle Post and Sam Stockham.

After seeing the race last May, we know what to expect now. Our chassis is underway, and I'm excited already to race next year. If you want to become a part of our team, either as a member or sponsor, please contact me by e-mail frobert@asu.edu or at (480) 379-0926

Sincerely,

Robert Carey, President of SAE at ASU ♦

A Note From the Editor:

This is my second letter as this year's News Letter Editor. I am always open for ideas of improvement on the letter. I want to encourage anybody who has a desire to write an article to do so. The newsletter is an excellent opportunity for members to share their thoughts with other SAE members. To submit an article for the next newsletter, please e-mail the article to j.merrell@linkeng.com.

Thank you,
Jason Merrell

Here are a few websites of interest:

- www.eweek.org - For information on Engineering Week
- www.primenet.com/~alexei/saehome.htm - SAE Arizona Chapter Website
- www.eas.asu.edu/~asusae/~asusae/ - ASU student SAE website
- www.pr.erau.edu/groups.html Embry Riddle - SAE website
- <http://engr.arizona.edu/~sae/> - University of Arizona – SAE website

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