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## Full-Field 3D Optical Measurements to Support Manufacturing Processes

**Speaker:** Vinh Tran, Senior Engineer, Trillion Quality Systems

Complementary full-field 3D optical measurement techniques can be applied for various optimization and troubleshooting tasks in manufacturing. Large area 3D point tracking is used to quantify the deformations of tooling and components during operation, to ensure that no unexpected shifts or misalignments are occurring. The methods are applicable to a wide range of materials including composites. Real-time 3D strain mapping can also be carried out using optical methods that can provide information on how strains develop over time in the tool or part. This facilitates optimization of tooling design, material and lubricant selection, and allows ongoing monitoring of tooling degradation. The performance of different materials that have undergone identical processing can also be compared. The end result is measurable improvements in quality.

**When:** Tuesday – January 26, 2010

Social Hour: 5:00PM

Dinner: 6:00PM

Speaker: After Dinner

**Where:** Buca de Beppo  
4301 Alderwood Mall Boulevard  
Lynnwood, WA 98036-6769

### **Directions from I-5:**

**From the north:** take exit 181 and proceed right on 196th St. SW. Left at 44th Ave W. Go approx 0.3 miles and restaurant will be on left.

**From the south:** take exit 181A. Take left onto 44th Ave. W. Go approx 0.3 miles and restaurant will be on right.

Free Parking

**Price:** Student: \$8 with RSVP, \$13 at door

Professional: \$20 with RSVP, \$25 at door

Retiree: \$15 with RSVP, \$20 at door

**Reservations:** e-mail: [seattlesampe@hotmail.com](mailto:seattlesampe@hotmail.com)

Voicemail: 425-522-3830

**RSVP as soon as possible!**

## Announcements

**New Website Address** – Look for upcoming improvements to our website. The new address is [www.sampeseattle.org](http://www.sampeseattle.org).

### **Board Business E-mail Distribution List**

If you would like to be on the "Board & Others" distribution that is used to inform people of Board meetings and conduct other board business, please send an email with subject "SAMPE Board Distribution" to Arlene Brown at [arlenesampe@comcast.net](mailto:arlenesampe@comcast.net).

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## Announcements (cont.)

### Publication & Sponsorship Information

Please send any comments, questions or concerns about the newsletter to Bob Yancey (yancey@altair.com).

### Job Postings

If you have a job posting, please send to Bob Yancey at [yancey@altair.com](mailto:yancey@altair.com) for posting on the website.

### Nominate a High School Teacher

SAMPE has agreed to sponsor 2 High School teachers from the Seattle area to attend the SAMPE 2010 International Conference in May 2010. If you have a High School Science Teacher you would like to nominate, please contact a member of the SAMPE Board.

### Sponsorship Drive

This is the time of year when sign up our sponsors for 2010. Please go to the website ([www.sampeseattle.org](http://www.sampeseattle.org)) for more details. Please contact any new companies that are not currently sponsors who would benefit from this. Interested in being a sponsor? This includes advertising in this newsletter, a booth at the annual Puget Sound Materials Exposition, and more! Contact Laura Lu (Laura.z.lu@boeing.com) for more information.

### Graduates of the Last Decade (GOLD)

SAMPE GOLD is looking for younger engineers interested in networking and socializing with other young professionals in engineering. To learn more about GOLD, please contact [Anthony Nguyen](#).

### YEPPS – Young Engineer Professionals of Puget Sound

Event: January 30th Event at Pyramid Brewery

Guest Speaker: *Laura McLaughlin is an Environmental Engineer at Cascade Designs, Inc.* Cascade Design has partnered with PATH

([http://www.path.org/projects/safe\\_water.php](http://www.path.org/projects/safe_water.php)) to form what PATH calls their Safe Water Project. Last year they piloted their household water treatment and safe storage (HWTS) product in areas of India I believe. This year she would speak about the partnership with PATH, the multi engineering disciplinary dimension, the product design features in a engineering context, and the results of their first round pilot.

### Puget Sound Engineering Council – PSEC

PSEC is looking for nominations for Engineering Awards. If you want to nominate an engineer that has made significant contributions to the engineering field, please contact our PSEC rep, [Mike Kinsella](#).

### Mark your Calendars

**27 January 2010** – PSEC Mentor Night at UW – Looking for Volunteers – contact [Mike Kinsella](#)

**23 February 2010** – Puget Sound Materials Expo – Museum of Flight

**17-20 May** – SAMPE Seattle International Conference – Washington State Convention Center