



# Puget Sound Human Factors and Ergonomics Society

May 2010

Spring Newsletter

[www.pshfes.org](http://www.pshfes.org)

## Renew Your Membership or Join Today!

Our chapter is a non-profit organization associated with the Human Factors and Ergonomics Society and serves the interests of the local community of the Pacific Northwest. Our funding is generated via the chapter's membership dues and activities.

For only \$18 (\$9 for students), you can enjoy opportunities for professional development, network with fellow professionals, and tour local facilities when you join PSHFES.

Additionally, receive newsletter and mail updates about what's going on in the area, volunteer opportunities, access to and a listing in the membership database, and an invitation to the yearly business meeting.

Join for the 2010 calendar year by visiting our Web site at [www.pshfes.org](http://www.pshfes.org), click "Membership," and pay online (Pay Pal) or by check.

## President's Message

Dear PSHFES members,

I have recently returned from the Applied Ergonomics Conference [AEC] in San Antonio. For those of you who have not attended this conference before, I strongly encourage you to put it on your "to-do" list! One of the best parts of the conference is their "Ergo Cup" competition. Companies submit their ergonomic projects and, if chosen as a finalist, come to the AEC to demonstrate their "before" and "after" results to the attendees. They are judged on innovation, cost-effectiveness [ROI], amount of risk reduction, etc. One example was a machine part that needed to be dipped in a coating, then excess coating substance needed to be removed. Prior to the ergonomic intervention, this removal was accomplished by hitting the machine part with a mallet approximately 300 times. The ergo solution was to clamp the machine part to a vibrating machine that "shook" the excess coating substance off. Return on Investment time for this fix? – FOUR DAYS!!! Not to mention the substantially reduced risk to the workers.

The conference reinforced two seminal aspects of ergonomics and human factors to me:

1. Any work we do needs to not only focus on but actively involve the end user if it is to be effective.
2. Ergonomic projects benefit from having professionals with different backgrounds approaching the issue.



**Janet Peterson**  
PSHFES President

We are fortunate to work in a field that encourages innovation and teamwork. As you'll see elsewhere in this newsletter, the PSHFES Council represents individuals from varied professional backgrounds; this becomes a strength of our organization as we put together our Annual Symposium and Workshop [already booked for September 15<sup>th</sup> and 16<sup>th</sup>].

I'm happy to report that we're on schedule to revamp and revise our website [[www.pshfes.org](http://www.pshfes.org)]. We have contracted with a webmaster and plan to "go live" no later than August 1<sup>st</sup>. If you have suggestions of what you'd like to see on the website, please send me an email at: [president@pshfes.org](mailto:president@pshfes.org). YOU are our end users, so we want to hear from you!

# Meet Your PSHFES Leaders

In the February Newsletter we introduced you to half of the 2010 PSHFES Council. Here are the other Council members who volunteer their time to put together a Symposium & Workshop, assist with teaching students about ergonomics, and to plan interesting events during the year for PSHFES members. If you're interested in being a part of this rewarding, fun group in 2011, please contact Janet Peterson, PSHFES president, at [president@PSHFES.org](mailto:president@PSHFES.org)

## **Rick Goggins** **PSHFES Communication Chair**



I've been working for the past 15 years as an ergonomist with the Department of Labor and Industries, where I have the opportunity to work with small- and medium-size companies in every imaginable industry. The most enjoyable part of my job is visiting employers in their workplaces and learning how they operate, then working with them to find solutions and prevent injuries. Prior to moving to Olympia, I worked as an ergonomist at Hughes Aircraft in El Segundo, CA, while completing my Masters' in Human Factors/Ergonomics at USC.

I've been a member of the PSHFES council for several years now, in the roles of Secretary, President, Past President, Community Projects, and now Communications.

Outside of work, I enjoy biking, skiing, kayaking, reading, watching movies, and eating good food.

## **Wilmarie Villanueva** **PSHFES Secretary**

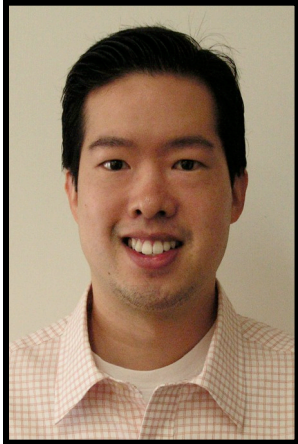
I graduated with a Bachelors of Science in Industrial Engineering from the University of Puerto Rico. After graduation, I have been focusing my career on Safety and Ergonomics. I also worked as an Environment, Health and Safety (EHS) Consultant in Puerto Rico for over a year. In 2007, I moved to Washington to work for the Boeing Company as an Industrial Engineer. After working as an Industrial Engineer for two years, I decided to become part of the Everett Ergonomics Team. I am currently working for the Everett EHS organization providing ergonomics support for the Wings manufacturing areas.



I am the chapter secretary for the Puget Sound Human Factors and Ergonomics Society (PSHFES). I am also member of the American Society of Safety Engineers (ASSE), Puget Sound Chapter. In addition, I am the newsletter editor for the Safety Professionals and the Latino Workforce (SPALW) within ASSE.

During my free time, I love to travel, learn new languages, read, enjoy music, and meet people.

# Meet Your PSHFES Leaders



**David Lee**  
**PSHFES Database Manager**

As the current membership Database Manager for PSHFES and previous Membership Chair, I maintain the membership webpage, event registrations, and membership database for PSHFES.

Professionally, I am a Research Specialist / Post-Doctoral Research Fellow in the Department of Medicine at University of California, San Francisco and University of California, Berkeley's UC Ergonomics program. My research interest is in clinical musculoskeletal biomechanics and the prevention of musculoskeletal disorders. I am currently involved in federally-funded research projects- 1) examining the ergonomics of gastroenterologists performing routine endoscopy, and 2) investigating the biomechanical effectiveness of hand tool design to prevent hand pain among dentists performing periodontal scaling.

My interest in ergonomics started when I was working as an occupational therapist, specializing in rehabilitation of upper-extremity musculoskeletal injuries. I then pursued and completed my Doctoral degree in Ergonomics and Injury Prevention from Harvard University in 2007. Following that, I worked as a usability researcher in Microsoft's Hardware group (with Dr. Dan Odell, past-president of PSHFES), helping to develop innovative keyboard and mouse products from an ergonomic perspective.

Non-professionally, I enjoy playing tennis, working out at the gym, and watching movies and any Boston-related sports teams!

## The PSHFES Mission Statement

- ◆ Provide opportunities for professional development, networking, workshops, and education for local Human Factors and Ergonomics professionals, students, and enthusiasts.
- ◆ Raise public awareness of the value and benefits of Human Factors and Ergonomics.
- ◆ Provide volunteer opportunities for HFE professionals to contribute to the Puget Sound area community.

# PSHFES Metro Bus Tour

On February 10<sup>th</sup>, PSHFES members were treated to an “ergonomics” tour of Metro Buses. Sue Stewart, Transit Safety Officer for King County Metro Transit [and PSHFES Council member], gave us a tour of two historically preserved buses from the 1950's and 1970's as well as a sneak peek at the sleek new Rapid Transit bus, due to start service this fall. From the driver's seat adjustments and materials to the flooring on the bus to the configuration of the handholds on the seats for standing passengers, it was clear to see the ergonomic changes that have been made over the years to accommodate passengers, drivers and other workers who service the buses. One example: the passenger seats are wall-mounted now so that mops can more easily clean under the seats. Sue explained that most of the vendors she communicates with are very responsive to her input on how to improve their products from an ergonomic perspective.



Joe Small holds onto a re-designed handhold on one of Metro's new buses. The circumference and orientation allows for a power grip and more neutral wrist postures, while the angled seat design maximizes the aisle space



Sue Stewart demonstrates the wheelchair access ramp on the new vehicles that can be activated manually in case of a power failure. The “low floor” bus design eliminates the need for stairs and allows for faster ingress/egress



Claudia Kelley demonstrates the poor visibility and uncomfortable driver's seat in a 1950's era bus. The steering wheel is near/horizontal and has no adjustability.



Patrik Rynell sits in one of the newest Metro buses with a tilt/telescoping, steering wheel and an adjustable “air-ride” driver's seat to reduce whole body vibration. Patrik hasn't quite adjusted the seat to fit him.



## Technically Cool Computing Pilot Studies Completed

PSHFES members Susan Murphey, Janet Peterson and Kim Popovic recently completed three additional pilot studies of *Technically Cool Computing (TCC)*, the computer ergonomics learning activity module for students sponsored by PSFHES. The module teaches students how to evaluate their computer workstations and work habits in order to reduce their risk for musculoskeletal injuries. The goal is to develop a user-friendly learning module that can be easily implemented by teachers or other volunteers to provide tools for lifelong habits of safe computing.

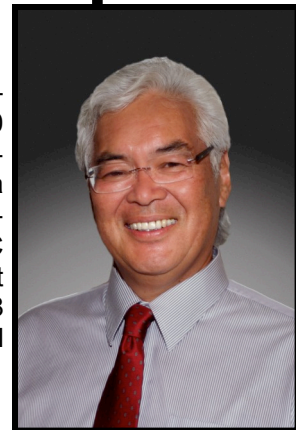
PSHFES volunteers have completed four pilots of the Technically Cool Computing (TCC) program in Seattle area schools. In the first pilot project in May 2009, 72% of students were able to recognize non-neutral postures and 61% of students were successful in correcting these awkward postures at their computer workstations. In addition, 89% of students felt they could repeat the exercise at home on their own computers. The most recent pilots, using a newly revised curriculum, resulted in 100% of students able to recognize non-neutral postures and successful in correcting awkward postures at their classroom computer workstations. Among the three classes participating, 78-92% of students felt they could repeat the exercise at home on their own computers. Several students who did not feel they would be able to simulate the project at home stated that they didn't have a computer at home, the chair they used at home didn't adjust, or that they only used a laptop at home and didn't sit at a desk. These comments stimulated excellent discussion among the group, ultimately demonstrating their grasp of the concepts that had been introduced.

Community Projects Chair, Susan Murphey, is working with Sue Stewart, Programs Chair and Janet Peterson, President, to host a Train the Trainer dinner event in May for PSFHES members interested in becoming a volunteer TCC Trainer. Watch for upcoming details.

## PSHFES Symposium Keynote Speaker

**Andrew S. Imada Ph.D., CPE**

Andrew S. Imada is the President of the International Ergonomics Association, which represents 49 federated societies and networks and 25,000 ergonomists around the world. He is a specialist in human and organizational change and a Certified Professional Ergonomist. Dr. Imada was a Professor of Ergonomics and Safety Sciences at the University of Southern California for 19 years. He also served as the Director of the USC Safety Science Center and the International Distance Learning Liaison at the university's Center for Scholarly Technology. Dr. Imada won the 1998 Liberty Mutual Prize and the 2000 Liberty Mutual Medal in international competitions for occupational safety and ergonomics research.





# SAVE THE DATE!!!

## 2010 PSHFES OCCUPATIONAL ERGONOMICS SYMPOSIUM & WORKSHOP

Date:

*September 15th & 16th*

Location:

*Seattle's Museum of Flight*

Keynote Speaker:

*Dr. Andrew S. Imada*

*International Ergonomics Association*

## Have an idea for an article?

We want to encourage all members to contribute ideas for articles and any items of interest for the next PSHFES Newsletter. For information or to submit content, please e-mail Wilmarie Villanueva at [secretary@pshfes.org](mailto:secretary@pshfes.org).

Thank you for all your continued support and contributions!

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