



Puget Sound Human Factors and Ergonomics Society

August 2015

Summer Newsletter

www.pshfes.org

President's Message

This is our first newsletter for 2015. The Council has been so busy with scheduling events and pulling the symposium together time just got away from us. As many of you know, our Annual Occupational Ergonomics Symposium will be held on September 25, 2015 at Salty's Restaurant – Alki in Seattle WA. The theme is "Inclusive Design". Miriam Joffe, our Symposium Chair and her committee have worked hard to bring you a great line up. See next page for details.

Now a little bit about Inclusive Design...

According to the Inclusive Design Research Center (IDRC): Inclusive Design is design that considers the full range of human diversity with respect to ability, language, culture, gender, age and other forms of human difference. There are 3 dimensions of Inclusive Design were taken from the IDRC's website and are outlined below:

1: Recognize diversity and uniqueness

Inclusive design keeps the diversity and uniqueness of each individual in mind. As individuals spread out from the hypothetical average, the needs of individuals that are outliers, or at the margins, become ever more diverse. Most individuals stray from the average in some facet of their needs or goals. This means that a mass solution does not work well. Optimal inclusive design is best achieved through one-size-fit-one configurations.

2: Inclusive process and tools

The process of design and the tools used in design are inclusive. Inclusive design teams should be as diverse as possible to support diverse participation and enable the design to be as closely linked as possible to the application, the design and development tools should become as accessible and usable as possible.

3: Broader beneficial impact

It is the responsibility of inclusive designers to be aware of the context and broader impact of any design and strive to effect a beneficial impact beyond the intended beneficiary of the design. Inclusive design should trigger a virtuous cycle of inclusion, leverage the "curb-cut effect", and recognize the interconnectedness of users and systems.

I hope this wets your appetite for more on Inclusive Design on September 25th, 2015.

Janet DeLapp MS, CDMS, CPDM, CPE – PSHFES President

**2015 Puget Sound Human Factors and Ergonomics Society
Occupational Ergonomics Symposium**

Friday, September 25th, 2015

Salty's Restaurant- Alki, Seattle, WA

**Keynote Speaker: Gayna Williams, MS Ergo/HF
Inclusion – An Inside-Out Perspective**

Founder of Swash Consulting and former UX Director at Microsoft. To achieve optimal “inclusive design” and give ergonomists/HF specialists the tools, environment and services they deserve, let’s explore typical systems and challenge how inclusion is supported and managed.

Other featured speakers and topics include:

Controls and Displays: Designing with the Human in Mind

Lynda Enos, RN, MS, COHN-S, CPE; HumanFit, LLC

Lighting to Optimize Workplace Design

Shaun P. Darragh, LC, MIES, Architectural Lighting Designed

What Were They Thinking! Human Factors Lessons in Design

Zach Collins, OTR, CPE, Sr. Ergonomist and Steve Russell, OTR

Designing the Environment to Fit the Customer

Brian Collins-Fredrichs, Principal; SkB Architects

IDEA – Inclusive Design and Ergonomics Acceptability

Josh Kerst, CPE, CIE, Executive VP/Principal Ergonomist, Focal Upright Furniture

\$160 before August 21, 2015*

\$210 after August 21, 2015*

Lunch Included

**BECOME A MEMBER AND TAKE ADVANTAGE OF THE YEARLY
EVENT OFFERINGS; WE HAVE SOME GREAT OPPORTUNITIES.
WWW.PSHFES.ORG**

2015 YTD Events Summary

May 16th Nucor

Giant fireballs notwithstanding, the Nucor Steel Plant tour was a big hit. Members of the Puget Sound Human Factors and Ergonomics Society were led on a tour by Oliver Lyles, the Safety Director at Nucor. After the usual and customary sign-in at the guard's station and issuance safety gear – ear plugs, hard hat, safety glasses and not so customary orange fire retardant jackets- Mr. Lyles ushered us to various informative stops around the plant.

At a reception area Mr. Lyles revealed how the 111 year old plant converts 100% recycled scrap --810,000 tons last year-- to produce solid bars called billets which are then rolled into angles, flats or channel or simply sold as is. Nucor prides itself on safety and Mr. Lyles knew the exact number of incidents year to date up to last night. They offer massage and on-site urgent care, among other things aimed at worker safety. Mr. Lyles shared how Nucor Steel has invested heavily in green operations including recycling all cooling water-treating any that may enter the Duwamish during rainstorms, filtering potential air pollutants including the reclamation of zinc from the furnace, reclaiming slag for concrete, and most significantly operating on a carbon free grid using 60-80% less energy than industry standard to melt steel .

Before melting, the steel must be mixed and as Mr. Lyles walked us to the furnace room we stopped in a covered area the size of a football field to watch crane operator pick and dump from huge covered piles of different sorted steel scrap into a bucket. Little does it know it will become engulfed in flame and heat bigger than most American living rooms. Think of the crane operator as a chef with two 120 ton magnets instead of measuring cups. A pinch of rusty drive shafts from here, a dollop of sheet metal from there, and two pulls of shiny grindings...

As the crucible of steel fixins made its way under us, we made our way to the furnace control room where we can see through a colored glass window three rods the height and diameter of a basketball player arcing electricity into the crucible melting the mix. The controller indicated they were about to add 'the third stage' and the group chatted and answered questions while the lid came off, and we watched through the color shielded glass as the material was dumped from overhead into already molten steel. Little did we know 'adding the third stage' was a burst of engulfing fire bigger than most living rooms, booming noise, and a whole lot of heat.

There were oooos. There were ahhhs. There was even some flinching. Suddenly the fire retardant jackets made sense even though we were behind glass.

From there we saw how the molten material is poured and coaxed into continuously moving through the stationary billet mold. It was here that the PSHFES members got to see just how difficult it can be to make steel as one of the 4 billet molds required workers to attempt to keep the steel moving even though it had already started cooling.

As we walked into the rolling area where the billets are made into finished product we passed a beat up mid-1980s ford pick-up with 'weld shop' stenciled on the door. I wondered to myself "how much longer until you end up under giant fireball in the furnace room?"

Nucor has been running an impressive business since 1904 and the members of Puget Sound Human Factors and Ergonomics Society would like to thank Mr. Lyles for allowing us the opportunity to experience it. Especially the giant fireball.

Written By Zachary Collins



2015 YTD Events Summary

April 1st - Dept. of Energy

Patrick Phelan of the U.S. Department of Energy and Nora Wang of Pacific Northwest National Laboratory discussed how they are collecting information as part of the Buildings of the Future Project. Phelan and Wang discussed design for the next 100 years of buildings. Questions and ideas tossed around the room included: What are examples of human factors that directly/indirectly affect building efficiency? How can future buildings technologies be better incorporated with ergonomics? What knowledge can be used by architects or mechanical engineers to design more efficient and healthier buildings? The information will be incorporated to guide and inspire the technology developers and trades to work together to truly transform buildings into dynamic resource assets. For more information on this project and a short video, visit the Pacific Northwest National Laboratory web pages at <https://spcollab.pnnl.gov/sites/fb/pages/Home.aspx>

April 24th Anna Pereira - Microsoft

At a Friday Lunch and Learn in late April, the back room of Vino At The Landing in Renton was full of members of the Puget Sound Human Factors and Ergonomics Society to hear Anna Pereira share her research about the ergonomics of portable tablet use. Pereira, currently at Microsoft and previously in a research position with the Tangible Media Group in the MIT Media Lab as part of her PhD in Ergonomics from UC Berkeley, did not disappoint. She revealed how shape, size, orientation and grips for a portable tablet all can contribute to comfort or discomfort. Even a difference in texture of a device can make a difference in usability according to her studies. A few questions and further discussion wrapped up Pereira's presentation but conversations continued. A room crowded with such good people and flowing with such good ideas could make an ergonomist want to take an extra long lunch... and why not it was a Friday in springtime after all.

May 16th – NW Trek

The NW Trek event on May 16th was a very nice outing for a few members and their families. The most interesting part was the bears. The park staff set up a campsite, with tents, picnic items, food, etc... in the bear's area and then we all sat back and watched as the bears literally destroyed everything; in some cases to get to the food but in other cases because it was just good fun. We came back after our tram ride to see the all damage done. It took them just a few hours to make shambles out of everything. It made for an interesting spectacle while teaching the importance of securing your food!



By Janet DeLapp

2015 YTD Events Summary

July 24th Humanscale

Vincent Wang, MS CPE is a Board Certified Professional Ergonomist who holds a graduate degree in Human Factors and Ergonomics from Cornell University. Vincent's undergraduate degree is in Industrial Engineering from Tsinghua University, China. At Humanscale, Vincent coordinated a 2 year office ergonomics project for a large city agency, tracking a 50% decrease in discomfort levels among employees.



We've all heard it. Some of us try to live it. But as any cluttered garage, closet or junk drawer demonstrates, we tend toward more. More stuff, more gadgets, more features on our gadgets. Ergonomists can be especially interested in more adjustability, more usability, more comfortable, more more more! Vincent Wang, Board Certified Professional Ergonomist, objectively and compellingly described the benefits of less.

Puget Sound Human Factors and Ergonomics Society (PSHFES) members gathered at the Seattle Humanscale showroom for a Lunch and Learn dialogue with Wang about his recent study through Humanscale involving large multinational firms to track the comfort of office workers as a function of the number of features of a chair. Turns out, the more adjustability, the less comfortable. This is likely due to the workers' lack of awareness of function, purpose and operation of the different adjustments.

After hearing some of Wang's findings, members had the opportunity to test out some of those reduced adjustability chairs and office furniture in the showroom. Chatting and business cards got exchanged. A delicious sandwich or two was grabbed courtesy of Humanscale. No, better make that just one sandwich, because just like features on a chair, with sandwiches the message is clear -less is better.

Written By Zachary Collins

COMING EVENTS in 2015

Sept.18 11:00-2:00

**Alan Hedge – Economic Impact of Ergonomics
Design Implementation**

**End of Year Meeting and Social
Dec TBA**





The PSHFES Council



President – Janet DeLapp

President Elect/Secretary – OPEN

Past President – Gary Davis

Treasurer – Trevor Bryant

Symposium Chair – Miriam Joffe

Communications Chair – Kelly Lynch

Program Events Chair – Celeste McLaughlin

Outreach Chair – Janet DeLapp

Committee Members: Zachary Collins, Janet Peterson, Cindy Williamson, Rick Goggins, Ernesto Carcamo, Trevor Bryant

You can find their contact information at:

www.pshfes.org

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.