



# Puget Sound Human Factors and Ergonomics Society

SECOND QUARTER

ISSUE 2, 2018

## A Message from the President

Dear PSHES members:



I hope you are having a good summer. It is that time of the year when preparations for our annual symposium are in full swing. As mentioned in our previous newsletter, the symposium will be held on September 13 at the Four

Points by Sheraton Seattle Airport South. The day will offer thought-provoking presentations, networking opportunities for current and new members, superior products from exhibitors, and of course, delicious food. Symposium chair, **Niki Howard** is working diligently with the committee to make this event exciting for all of us. This year's program focuses on emergent issues in Human Factors and Ergonomics (HFE). Similar to last year, there will be two keynote presentations, one on *Robotics and Workplace Automation*, and the other one on *Virtual Reality in Home Healthcare*.

- Robotics and Workplace Automation:** Recent advances in workplace automation have brought productivity improvements and an increased focus on economic output in the developed world. However, assessments of the benefits and risks of automation, as well as guidelines for safe collaboration between workers and robots, are still just beginning to emerge. The first keynote will shine a spotlight on the role of automation in the workplace in depth.
- Virtual Reality in Home Healthcare:** Based on the recently published literature, home healthcare is one of the fastest-growing occupations in the country. As the population ages, the number of elderly people receiving care at home is growing exponentially. Home environments are unpredictable in terms of workplace health and safety, and ergonomic hazards abound. With increasing application of virtual reality in industry, there is a growing interest in gaming simulation as a health and safety training tool. The second keynote will address the

importance of studying the use of virtual reality to enhance worker safety in the home healthcare industry.

In addition to the keynotes, this year's program will showcase **four high quality talks** and **student 'flash' presentations**. Please check our website (<https://www.pshfes.org/>) periodically for developing information on symposium speakers and presentations.

It is important to note that, for **current PSHFE members**, the symposium registration fee is the same as last year; however, for **non-members** the fee is slightly increased to include a one-year membership. Thus, by registering for the symposium, non-members will gain access to a variety of HFE activities and tours in the Puget Sound region that are free to current members. Also, there is a slight change in the **Exhibitor Sponsorship package**, revised now to three levels: **Platinum** (\$1500), **Gold** (\$1000), and **Silver** (\$750). Special thanks and welcome to **Lori Winnemuller**, our new Exhibitor Liaison for her efforts in this regard.

I would like to take this opportunity to thank the sponsors who have been very loyal to PSHFES over the years, and I ask that you continue to support the symposium this year as well. We cannot thank you enough for your involvement and financial support.

I urge all of you to register and attend this year's symposium, bring your co-workers and friends, and connect with other like-minded attendees on September the 13<sup>th</sup>. It is going to be informative and fun.

I look forward to seeing you all in September!

**Rammohan V Maikala, PhD**

## BECOME A PSHFES MEMBER

**Full Member:** \$28.00; **Student Member:** \$14.00.  
Visit <http://www.pshfes.org/> for membership benefits.

## 2018 Symposium Chair

Ninica (Niki) Howard has been a research ergonomist with the Safety and Health Assessment and Research for Prevention (SHARP) Program within the Washington State Department of Labor and Industries for over 20 years. Niki graduated from the University of Massachusetts Lowell with an MSc in Work Environment. Her research has focused on the development and quantification of risk of musculoskeletal disorders, involving sociotechnical systems, safety culture and climate and musculoskeletal epidemiology.



*Niki Howard, SHARP, Dept. of L and I*

Niki is a member of the Musculoskeletal Health Council, a part of the National Occupational Research Agenda (NORA). For over 12 years, Niki has conducted research in the health care sector, including work that helped lead to the Safe Patient Handling Law for Washington hospitals. In addition, she was a member of the interprofessional group that develop the American Nurses' Association's Safe Patient Handling and Mobility National Standards. She also sits on the editorial board of the International Journal of Safe Patient Handling and Mobility.

## Welcome to our President-Elect



Randy Pickett, our current communication co-chair will be the next President for our chapter (2019-2021). Randy works for Archbright, and has a Masters in Organizational Leadership from Gonzaga University. Thanks Randy for accepting this challenge, and looking forward to your leadership.

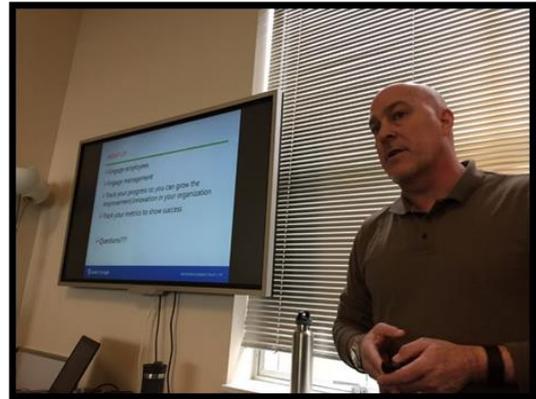
## 2018 Events

### Employee Engagement and Ergonomics Talk

Karen Wolgast with Ergosquad hosted Employee Engagement and Ergonomics (March 8th) that consisted of lunch and two interesting and informative speakers:

#### Keith Osborne, Seattle City Lights

Ergonomist Keith Osborne shared case study applications of a variety of innovative low-cost high impact solutions to address ergonomic risks. Keith discussed statistics that show the reduction of expenses by putting an emphasis on ergonomics. He presented the barriers to ergonomics programs that included "it's the way we've always done it", no incentive to reorganize issues, only tracking lagging indicators, "if it ain't broke, don't fix it" thinking, working in silos, technology challenges, and adapting to multi-generational work styles. Older generations tend to have more back issues and younger generations tend to have neck problems. New innovations were discussed, defining innovations and determining whether it is better to renew or change.



*Keith Osborne, Seattle City Lights*

Employee Engagement programs were discussed including the "Safe Habits Safe Workers" initiative that focuses on employees being part of the solution and taking ownership of their safety. Keith gave examples of successful initiatives that included the Electronic Distribution Operations (EDO), using magnetic laptop holders, and telescoping pole chain saws that are battery operated and replacing manual tools with power tools at the shoreline substations.

Some new ideas that are being explored include using exoskeletons for reaching overhead and wearable posture devices for office workers' postural

deficits. The process involves engaging employees and management, tracking the progress, and tracking the metrics to show success.

### Randy Pickett, Archbright

Randy discussed the impediments to safety professions. He reviewed organizational culture (control, culture, and climate), how the system works and the changes within, and how cynicism and low engagement are huge barriers. With the average company lasting 40 years, it is harder to get companies to change as they get older and bigger. He further emphasized “Effective change does not happen until the pain of NOT changing is greater than the pain of changing.”



*Randy Pickett, Archbright*

Contributed by: Lynnda Dee English

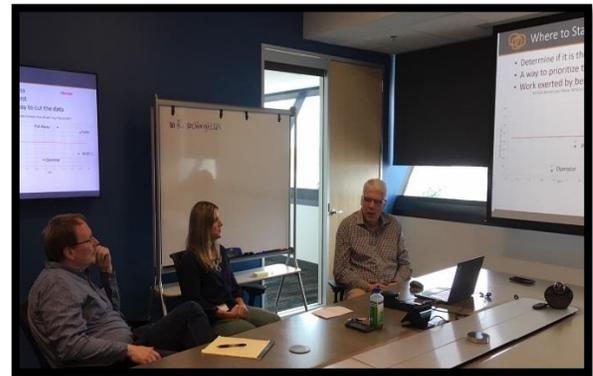
### OSU Student Dissertation Webinar

PSHFES has been mentoring and collaborating with the Oregon State University student chapter of HFES over the past year. Our first event together this year was a webinar on April 12<sup>th</sup> that was hosted by the students. Three of the PhD students presented short TED-like talks on their dissertation work. It was a good opportunity for them to practice their “pitch” and for us to hear about the exciting work that the next generation is doing. Their dissertations covered use of a driving simulator to help with traffic signal issues, designing “good work for people”, and inclusive design. The students did a great job and the participants had thoughtful comments and questions. Special thanks to Miriam Joffe, our Outreach Committee chair for creating this opportunity.

Contributed by: Nicole Irby

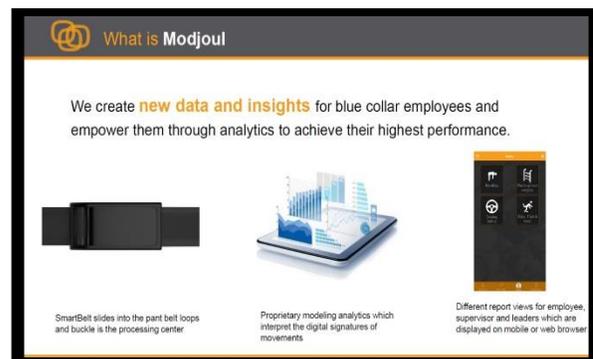
### Modjoul Webinar

On June 22<sup>nd</sup>, we hosted a webinar with guest speaker Eric Martinez of Modjoul. Eric’s company has created a versatile wearable technology called the SmartBelt. He shared information about the type of data that it collects and how it can be used. For example, it captures motions such as bending and walking. The percent of time doing that bending and walking can be compared across different job classes to help determine how a company might want to prioritize its improvement efforts.



*Eric Martinez, Founder and CEO, Modjoul*

SmartBelt also has GPS, which is an especially useful safety feature for situations where there are lone workers or access to a hazardous area of a facility needs to be controlled. The GPS feature can be turned off if it’s not needed. Supervisors as well as the employees wearing the belts can quickly access the data since it is immediately sent to the cloud



*Introducing Modjoul*

Since Eric lives on Mercer Island, he was able to come to the Archbright office in Seattle where we

broadcast the webinar. He brought one of the belts with him, so we had a chance to feel how lightweight it is despite all of the different sensors it uses. Over time, more sensors will likely be added so that additional data can be captured.

PSHFES is starting to host in-person webinars like this so that we can provide the opportunity for networking, but also allow people who can't be there to watch remotely. Let us know what you think!

**Contributed by:** Nicole Irby



**Puget Sound Human Factors  
& Ergonomics Society**

**ANNUAL SYMPOSIUM 2018**

**SAVE THE DATE**  
**September 13**

**Four Points By Sheraton Seattle  
Des Moines, WA**

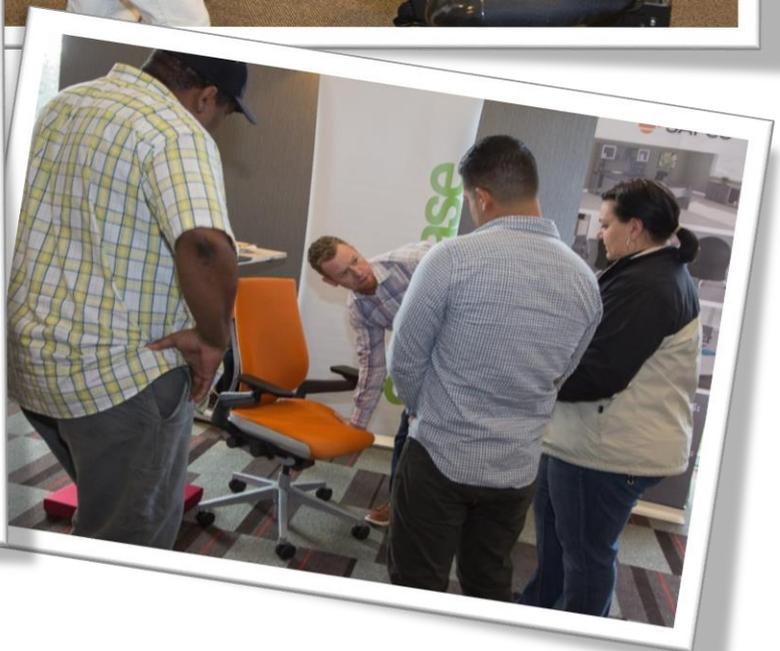
For more information, visit [PSHFES Symposium 2018](#)

The background of the poster is a night-time photograph of the Seattle skyline, featuring the Space Needle and various city buildings illuminated against a dark sky.

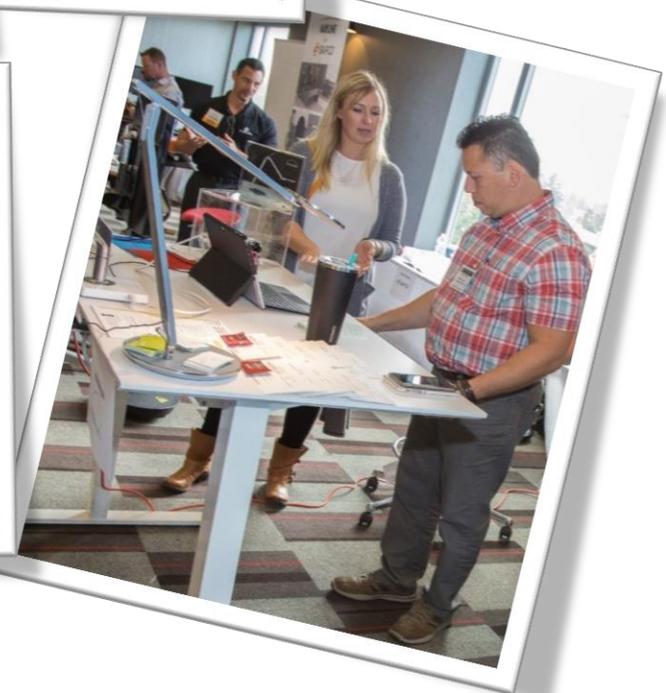
# 2017 Symposium Exhibitors



## 2017 Symposium Exhibitors continued



## 2017 Symposium Exhibitors continued



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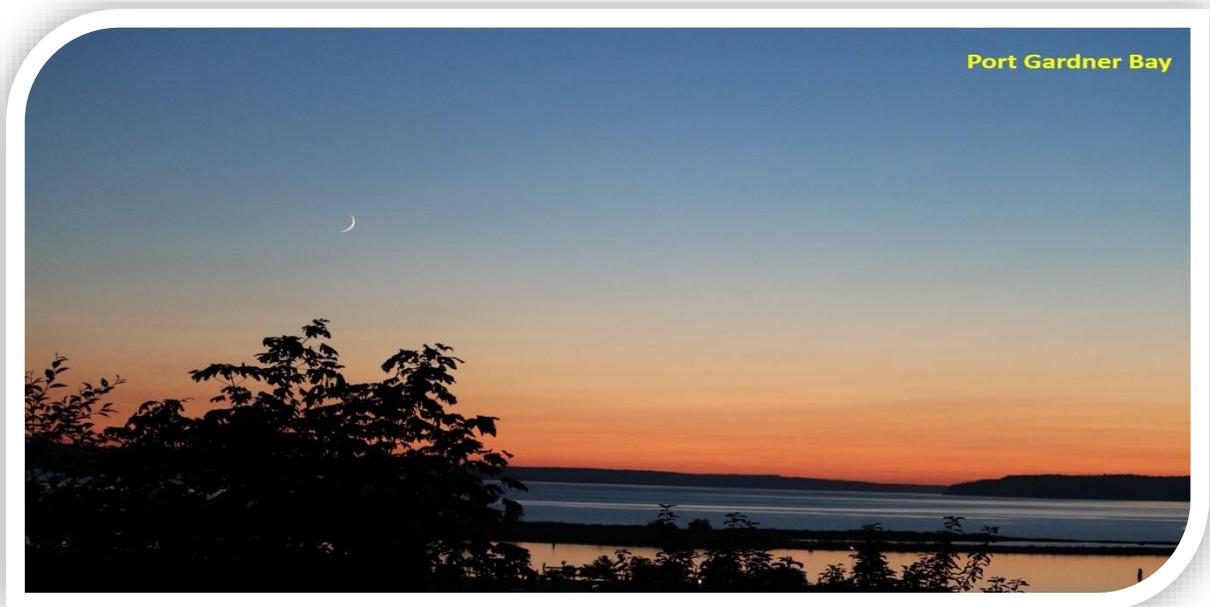


## The PSHFES Executive Council (2017-2018)

<b>President</b>	Rammohan Maikala
<b>President-Elect</b>	Randy Pickett
<b>Past President</b>	Janet DeLapp
<b>Treasurer</b>	Trevor Bryant
<b>Communications Co-Chairs</b>	Carrie Yi-Nien Lin, Randy Pickett
<b>Newsletter Editor</b>	Rammohan Maikala
<b>Program Events Co-Chairs</b>	Nicole Irby, Lynnda Dee English
<b>Symposium Chair</b>	Niki Howard
<b>Symposium Committee</b>	Lori Winnemuller Ernesto Carcamo
<b>Outreach Chair</b>	Miriam Joffe
<b>Director</b>	Gary Davis

### MISSION STATEMENT

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



Picture Credit: Wendy Fagan, Providence Regional Medical Center, Everett