



Puget Sound Human Factors and Ergonomics Society

ISSUE 3, 2021

DECEMBER

A Message from the President

As this is the last newsletter of 2021, permit me some time to reflect. As I finish my first year as president, I am so grateful for this experience. Back in December 2019, I decided to volunteer as chapter president because I saw how the dedication of the volunteers of PSHFES has benefitted the community at large and I wanted to contribute. I do not regret my decision one bit. I have learned so much about this organization and the incredible work that has been put into PSHFES, both past and present. The executive council is an amazing group of diverse, creative and energetic people who have supported me as I learn the ropes. I just want to say thank you for your support and your patience.

We are heading into our second holiday season under a pandemic, and I am sure we are not where we hoped we would be but I am full of optimism. 2021 brought new opportunities for me to collaborate with many other HFE professionals in our state and in other states. I am hoping that 2022 brings the same.

It never ceases to amaze me the breadth and depth of speakers who are willing to share their knowledge with our membership. From a webinar focused on students preparing to enter the workplace to our annual symposium, the topics offered something for everyone. I thank all of our remote speakers throughout this year - Cary Calkins from Seattle Housing Authority; Jamie Harmon from Embry-Riddle Aeronautical University; Dr. Behnoosh Parsi at Amazon; Edie Adams, Ryan Chang and Kelly Schmidtbauer, also from Amazon; Lora Cavuoto of University of Buffalo; Marisol Barrero, Amazon Web Services; Blake McGowan, Velocity EHS; Sara Bazell, ViVA Health at Work; and Anjali Joseph, Clemson University. For the second year, we had a virtual symposium but unlike last year, it covered two half days. I want to give a heartfelt thanks to the chairs Ram Maikala and Kimo Hudson. And to Kelly Lynch and

Carrie Lin, whose technical support for the symposium is always invaluable.

I would also like to congratulate Miriam Joffe from the Boeing Company, named our 2021 HFE Professional of Year. Every year, PSHFES awards this honor to an individual in our region, based on their academic background, their work experience and contribution to the HFE field and his or her leadership promoting awareness in our field. Miriam has given tirelessly throughout her career, including serving on the PSHFES executive council in many roles since 2014 and mentoring for many years. Congratulations, Miriam! You certainly deserved this award.

Finally, I do not think I really need to say this but musculoskeletal disorder continues to be the most prevalent occupational injury in the state. And I feel all that we do is more important than ever as new technologies and new challenges continue to change how we do work.

Thank you, as always, for supporting PSHFES. Hope to "see" everyone in 2022.

Be safe. Be kind.

Niki Howard, President, PSHFES



Announcement

2021 Year End Webinar on Dec. 15, 2021

5:45 – 6:45 pm PST

"Towards Next Generation Footwear"

Dr. Ravi Goonetilleke

See Page 8 for speaker bio and abstract.

Visit our website to register for the event.

<https://www.pshfes.org/event-4591996>

2021 PSHFES Symposium in review

This year, for the safety of our members and the flexibility of inviting notable speakers from around the country, PSHFES decided to hold the 2021 Symposium virtually. Instead of a full-day event, this year, the symposium was spread out to two half days on October 14 and 15. Across the two days, we had 94 attendees. Taking advantage of the virtual platform, we made the best use of it by having speakers from as close as the Seattle area, to as far as the east coast of the US (Clemson and Buffalo) and Australia! Three UW students gave 5-minute presentations to highlight the works they were engaged in.

Our symposium sponsors also had the opportunity to demonstrate their services and products to the attendees. Additionally, Ergotron generously donated to our prize drawing for this year's symposium. Congratulations to Crystal Arreguin, our prize drawing winner!

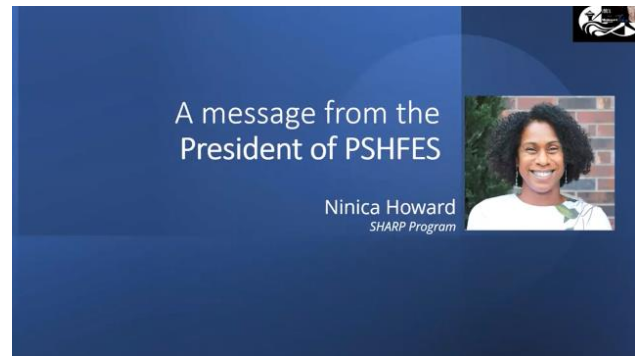
Overall, the symposium was engaging, informative, and positive feedback was received from many of our attendees.

One other benefit of the virtual platform is that symposium registrants are able to watch the recordings of the symposium should they miss any portion during the days. Recording links were sent out shortly after the event. If that email is missing, please feel free to contact PSHFES at info@pshfes.org.

No matter what the format for the 2022 Symposium, we certainly hope to have you join us again.

Below are some of the highlights captured on the screen.

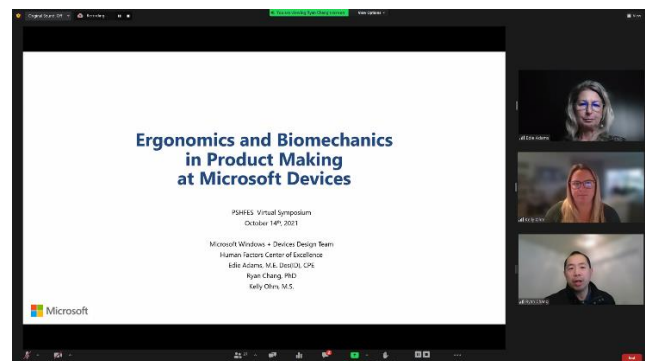
PSHFES President Niki delivered the opening message



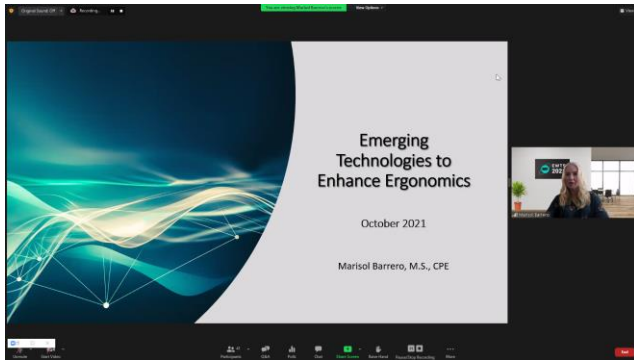
Immediate past HFES President Peter Hancock sent his congratulatory remarks to open the symposium



First presentation from the Ergonomics team at Microsoft showcasing their design process



Lessons from Amazon



Welcome message from the current HFES President



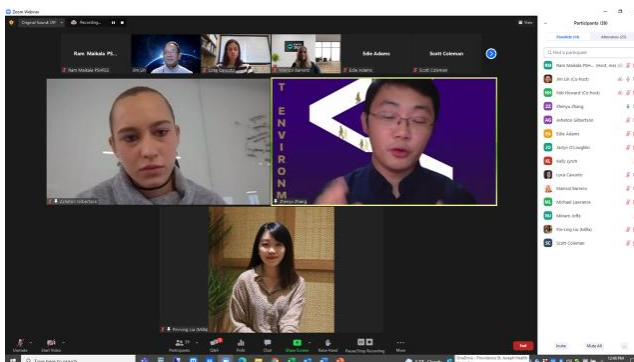
Fatigue research update from SUNY Buffalo



Healthcare design tips from Clemson University



Three student showcases from UW



Business case example for ergonomics



Ergonomics in an equipment design example



2021 Professional of the Year



2021 Professional of the Year – Miriam Joffe.

Congratulations on being presented with this honor, Miriam!

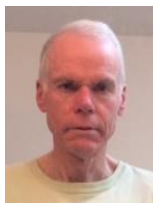
“This year I was honored to be selected as PSHFES’s 2021 Human Factors & Ergonomics Professional of the Year. To me, this is a reflection of my career-long contribution to the field. I am most proud of

organizing 3 PSHFES symposiums and mentoring regional grad students, organizing tours and sessions for two HFES Annual Meetings, co-organizing Texas regional meetings, organizing and leading the Austin Area Ergonomics Roundtable, and networking with others in the field who teach me something new every day. Thank you PSHFES for this incredible award.”

-- Miriam

Get to know your PSHFES officers

PSHFES is organized for professionals and students of common interests in the Puget Sound region. It is a non-profit organization, purely staffed by volunteers over the years. In this column, we would like you to get to know more about the people who are making this organization possible. The readers may know many of them professionally, so here we try to dig into their lesser-known aspects through virtual interview questions. It is our hope that by the time we have in-person events, you will feel like you have known them as old friends already! In our previous newsletter, we introduced our current president Ninica (Niki) Howard, past Treasurer Trevor James Bryant, and Outreach Chair Miriam Joffe. This time we continue with three more officers.



Gary Davis, Director

How long have you been in the Puget Sound area?

I moved to the Puget Sound area in 2000, to work as an Ergonomist at L&I in Tumwater to help develop and deploy the Washington State Ergonomics Rule.

How long have you been working in the HF/E field? And what do you do now in your job? And any other HF/E activities outside of your regular job?

I have worked in the HF/E field for almost 40 years, at Lockheed, WA State L&I, and Boeing. Currently I am an Occupational Ergonomist at Boeing. I lead small engineering teams, designing modifications to shop floor powered hand tools (such as sanders) that reduce ergo risk exposures for shop floor workers.

What made you first decide to serve in PSHFES?

I joined PSHFES in 2000, as soon as I started working for L&I. I was a co-presenter (with Rick Goggins) at my first PSHFES Symposium. I became a PSHFES council officer in 2006 (Treasurer, later President, and currently Director). Serving on the council was a means of becoming more involved with PSHFES, working with the other council officers to promote and support HF/E in the Puget Sound area.

What have you learned the most working on the PSHFES council?

Working on the PSHFES council has networked me with the other council members that have served. Together we have learned how best to make PSHFES (an all-volunteer organization) function effectively and be rewarding for all of the council members, as well as for the general chapter membership.

If you were willing to give a bold vision, what would you like to see PSHFES in 2040?

In 2040, I anticipate that HF/E will have become more tightly integrated into many other product design and occupational safety disciplines/activities, and that the PSHFES mission to educate and connect HF/E practitioners will still be relevant.

What do you enjoy doing off work?

Outside of work, I enjoy neighborhood walking, maintaining my house and yard, watching a wide range of music videos, and daily reading of news and business highlights.

Jia-Hua (Jim) Lin, Newsletter Editor**What brought you to the Puget Sound area?**

I worked at Liberty Mutual Research Institute for Safety in Massachusetts for 13 years, and sensed that it was not in a good situation with the leadership. I decided to change job. As it happened, the world renowned SHARP at the Washington State Department of Labor and Industries had an opening then. The rest is history.

How long have you been working in the HF/E field? And what do you do now in your job? And any other HF/E activities outside of your regular job?

Wow, I have been in this field for 20 years if counting since I received my PhD degree. If learning counts as well, then it's about 25 years. I have been a research ergonomist since the beginning. I create knowledge for other researchers and practitioners to use. I am currently a Scientific Editor for the journal Applied Ergonomics, an Associate Editor for the journal

Ergonomics in Design, and an Affiliate Associate Professor with UW in Seattle.

What made you first decide to serve in PSHFES?

My previous colleague Ram Maikala and I moved to this area in the same year. He was engaged with PSHFES, and encouraged me to be part of it. So I was the symposium chair in my first year. I retreated afterwards, and then decided to help again this year as the Newsletter Editor

What have you learned the most working on the PSHFES council?

I get to learn the operations of a professional organization. Most researchers, professors, or practitioners may not get involved in this area. I am glad that I decided to participate. This is the kind of knowledge never taught in schools.

If you were willing to give a bold (but realistic) vision, what would you like to see PSHFES in 2040?

I hope PSHFES can continue to operate as a model for the HFES local chapters. It will continue to grow, and attract many professionals at this time that may be very different from us - maybe people involved in artificial intelligence, autonomous driving, huge dynamic systems, robots, renewable energy, and environment innovations, etc. Each technology development needs to have HF/E professional to be hand-in-hand. And Puget Sound will continue to lead the nation, or even the world in such development.

Carrie Lin, Treasurer**How long have you been in the Puget Sound area?**

Nineteen years.

How long have you been working in the HF/E field?

I have been in this field for 10 years. I am currently working as a human factors engineer to support product development for Boeing Commercial Airplane. I provide design guidance and prepare human factors requirements to ensure human centered design is integrated into Boeing product

and production systems.

What made you first decide to serve in PSHFES?

I joined PSHFES in 2017. I wanted to expand social networks to know HF/E professionals outside of Boeing, to give back to the community, and to broaden my skills.

What have you learned the most working on the PSHFES council?

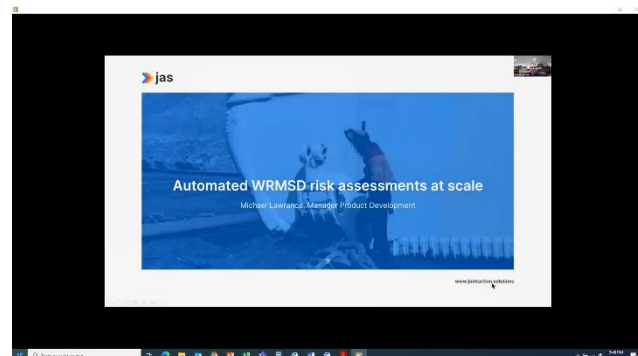
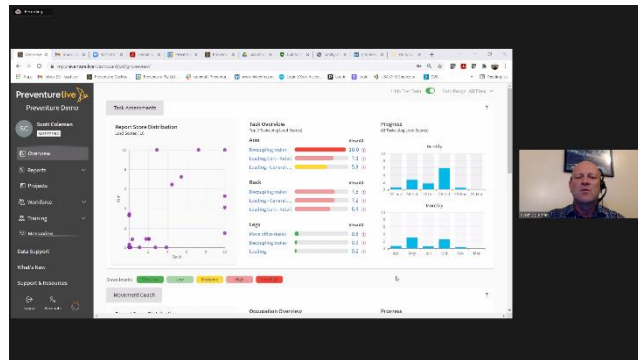
I learned skills related to [keeping] a website up and running, to manage financial assets for the organization, and other activities that members see throughout the year.

What do you enjoy doing off work?

Gardening, hiking, cooking, reading, playing the piano and accompanying my daughter’s violin performance.

THANK YOU, 2021 ANNUAL SYMPOSIUM SPONSORS

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Silver Sponsor



The PSHFES Executive Council (2021)

President	Niki Howard, SHARP, WA Dept. of L and I
Immediate-Past President	Randy Pickett, Safran Cabin
Treasurer	Carrie Lin, The Boeing Company
Symposium Chairs	Rammohan Maikala, National Safety Council Kimo Hudson, The Metropolitan Development Council (Tacoma, WA)
Communications Chair	Kelly Lynch, The Boeing Company
Newsletter Editor	Jia-Hua (Jim) Lin, SHARP, WA Dept. of L and I
Program Events Chair	Vacant
Outreach Chair	Miriam Joffe, The Boeing Company
Director	Gary Davis, The Boeing Company

Mission Statement

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



Dec. 15, 2021

5:45 – 6:45 pm PST



Towards Next Generation Footwear

Prof. Ravi Goonetilleke

Khalifa University, Abu Dhabi, UAE

In recent years, people seem to resort to using accessories within shoes to improve comfort, reduce foot tiredness, and even eliminate pain. The claim is that the footwear we buy and use does not fit our feet. How well should they fit, and what metrics can we use to determine the right fit? These are questions that will generate very different answers from experts in various fields, and the inserts, orthotics, and other accessories used to customize the shoes can be quite different. With today's technology, we can do much better if we rethink how shoes should be made. Unfortunately, the shoe industry has really not kept abreast with changes in technology and is quite reluctant to move away from the traditional ways of making shoes. In the recent past, some manufacturers have focused on customizing certain aspects of shoes to gain popularity. These have included colors on the various parts of the shoe and the shoe upper fit. Many consumers, quite rightly, feel that this type of customization is inadequate without considering the complete shoe. Regrettably, the shoe industry is not equipped to handle such requests. In this talk, the speaker will discuss a user-centered approach to designing and manufacturing footwear to deliver true customization with modern technology.

Speaker Bio: Dr. Ravi Goonetilleke is a Professor in Industrial and Systems Engineering at Khalifa University in Abu Dhabi, UAE. Prior to that, Ravi taught at the Hong Kong University of Science and Technology (HKUST) for 27 years. After receiving his Ph.D., Ravi worked as a Senior Ergonomist at the Biomechanics Corporation of America (BCA) in Long Island, New York, where he developed the first smart seat and led the development of the first biofeedback device for office workers to improve health and safety. In addition, Ravi has consulted for companies in various industries all around the world. These include Exxon-Mobil Corp., Icon MediaLab (Asia), Honeywell, Inc, Motorola, Procter and Gamble, General Motors, Thomson Consumer Electronics, Dow Corning International, Steelcase, Inc., Lear Seating Corporation, MRC-SKF, Ford, MTR Corporation, Hong Kong Telecom, and many others in Systems and Product Design. He also initiated the Human Factors program at the NIKE Sport Research Lab, USA.

Ravi's research interests are innovative design, product development, and human performance modeling. Lately, Ravi has been extending his work to laparoscopic surgery. He has received eight US and Chinese patents. Ravi is the Editor of the International Journal of Industrial Ergonomics, a Senior Editor of Ergonomics in Design, and the Program Co-Chair of Physical Ergonomics & Human Factors, Applied Ergonomics and Human Factors Conference. He is also the Editor of the book "Science of Footwear" published by the CRC Press. Ravi is a Fellow of the International Ergonomics Association, Human Factors and Ergonomics Society (USA), and the Hong Kong Ergonomics Society.