IEEE Biomedical and Health Informatics (BHI) and the Body Sensor Networks (BSN) Conferences EMB

BHI & BSN 2018

4-7, March 2018 Treasure Island Hotel & Casino, Las Vegas, Nevada – USA

Workshop/Tutorial title: Wearable and Mobile Computing for Construction and the Built Environment

Organizers	Amir Behzadan, Texas A&M University Ryan Ahn, Texas A&M University Eric Du, Texas A&M University Youngjib Ham, Texas A&M University
Short description	Construction and infrastructure projects are labor-intensive and often take place in harsh uncontrolled environments. At the same time, the industry is almost always ranked as one of the most hazardous occupations given a wide range of ergonomic and health conditions, safety-related incidents and close calls, and high rate of injuries. Despite the unparalleled benefits of sensor systems and networks, the interface between heterogeneous process-level sensor data and operations-level decision-making in construction is still blurred, and research innovations in these areas have yet to be fully integrated and implemented in practice.
Contents	In light of these challenges, this workshop will showcase breakthrough work in body-worn and mobile sensor systems, machine learning, and data analytics and decision support tools with direct applications in construction projects (safety, productivity, ergonomics), and built environment (building energy, occupant thermal comfort, and human factors). The ultimate goal of this workshop is to create a synergetic environment to brainstorm and exchange ideas, form multidisciplinary teams of researchers, scholars, and practitioners from diverse backgrounds of science and technology in an effort to increase awareness of emerging trends in construction and infrastructure domains, and advance the research frontiers in these areas.
CVs of the organizers	**Dr. Behzadan** is interested in artificial intelligence, machine learning, automation, and stochastic simulation for construction safety and health, productivity, and planning. **Dr. Ahn** is interested in humans' collective behavior patterns characterized from wearable sensor data, to design safe construction workplaces, smart and connected urban communities, and intelligent and energy-efficient building systems. **Dr. Du** is interested in understanding the role of human decision processes and behaviors in design, construction, and management of the built environment through the use of wearable sensors and data analytics. **Dr. Ham** is interested in multimodal sensing and data analytics for sustainable and resilient built environments such as building energy performance, and occupant health and comfort.

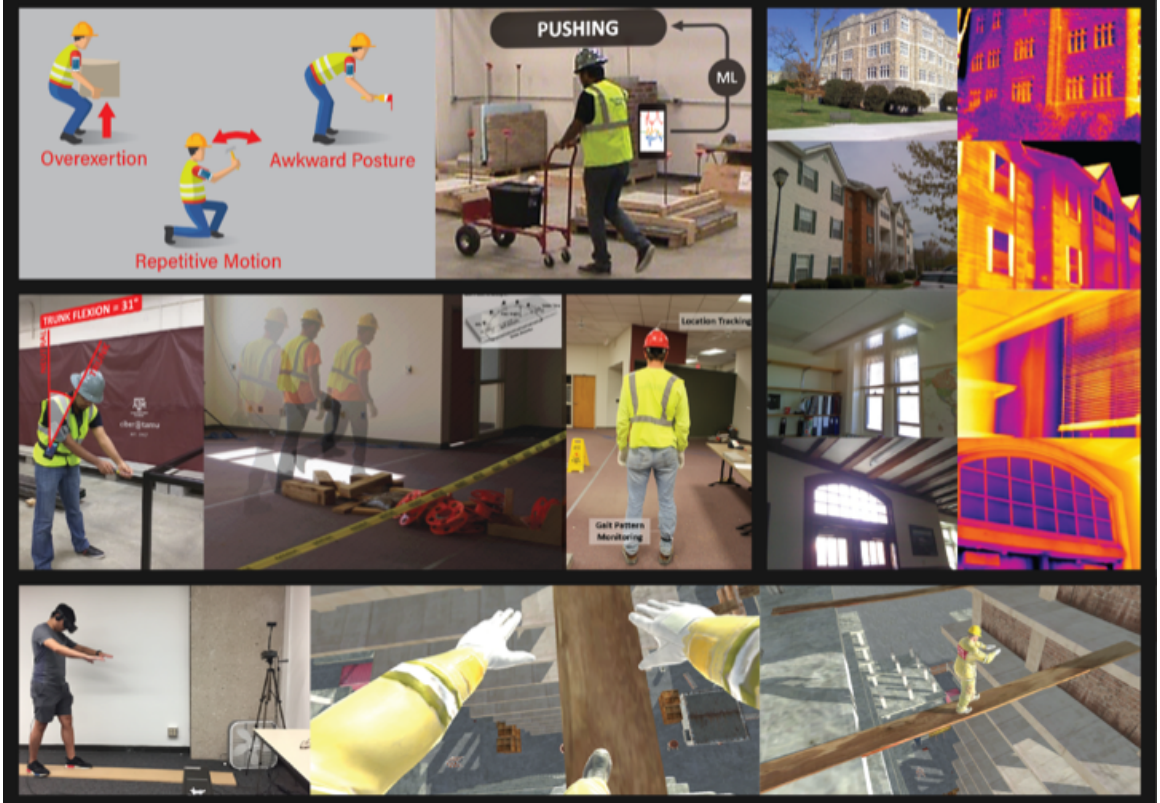
IEEE https://bhi-bsn.embs.org/2018/ EMB

Workshop on

Wearable and Mobile Computing for Construction and the Built Environment

IEEE Conference on Body Sensor Networks (BSN) 2018

Organizers: Amir Behzadan, Ryan Ahn, Eric Du, Youngjib Ham



WORKSHOP TOPICS

- Emerging trends in sensors and wearable devices.
- Online and offline algorithms and systems for data analytics and visualization.
- Just-in-time interventions for behavior change.

Treasure Island Hotel & Casino
Las Vegas, Nevada, USA

4 March, 2018 @ 1:30-5:00 pm

(979) 458-0182

abehzadan@tamu.edu

https://bhi-bsn.embs.org/2018/

TEXAS A&M UNIVERSITY

Department of Construction Science, College Station, TX 77843-3137

Workshop Schedule

2018 IEEE Body Sensor Networks (BSN)
Workshop on Wearable and Mobile Computing for Construction and the Built Environment
Sunday (March 4, 2018) – Treasure Island F

1:30	1:35	PM	Welcome remarks	*Amir Behzadan, Texas A&M University*
1:35	1:45	PM	Opening and speaker introduction	*Ryan Ahn, Texas A&M University*
1:45	2:15	PM	Feature speaker (I)	*Sanghyun Lee, University of Michigan*
			Wearables for construction workers' safety and health: challenges and opportunities	
2:15	2:35	PM	Invited talk (I)	*Ryan Ahn, Texas A&M University*
			Sensing workers' responsive behaviors for identifying safety hazards in construction	
2:35	2:45	PM	Break and discussion	
2:45	2:50	PM	Opening and speaker introduction	*Eric Du, Texas A&M University*
2:50	3:10	PM	Invited talk (II)	*Eric Du, Texas A&M University*
			Understanding indoor navigation behaviors with wearable VR devices	
3:10	3:30	PM	Invited talk (III)	*Xiaowei Luo, City University of Hong Kong*
			Integration of sensing technologies for monitoring works at height	
3:30	3:45	PM	Poster session and discussion	
3:45	3:55	PM	Opening and speaker introduction	*Youngjib Ham, Texas A&M University*
3:55	4:25	PM	Feature Speaker (II)	*Carol Menassa, University of Michigan*
			Achieving group thermal comfort in office buildings through human data and personalized comfort models	
4:25	4:45	PM	Invited talk (IV)	*Ryan Wang, Northeastern University*
			Urban mobility and geosocial network resilience	
4:45	5:00	PM	Closing remarks and Q&A	*Amir Behzadan, Texas A&M University*

Workshop Organizers –

Amir H. Behzadan, Ryan Ahn, Eric Du, Youngjib Ham
Department of Construction Science, Texas A&M University