



## 2019 Grainger Annual Report and BOD Update

### WIHSE updates

#### WIHSE continues to grow

- New Associate Director, Assistant Professor Nicole Werner, joined the WIHSE leadership team
- Associate Professor Robert Batt (School of Business), Assistant Professor Gabriel Zayas-Caban (Industrial and Systems Engineering) and Professor Hongrui Jiang (Electrical and Computer Engineering) joined the WIHSE Executive Committee

#### WIHSE faculty recognition and awards

- Jingshan Li selected as an Institute of Electrical and Electronics Engineers (IEEE) Distinguished Lecturer (<https://www.ieee-ras.org/educational-resources-outreach/distinguished-lecturer-program/distinguished-lecturers-by-name>)
- Beth Meyerand received the 2019 Slesinger Award for Excellence in Mentoring (<https://www.engr.wisc.edu/news/meyerands-mentoring-earns-award/>)
- Pascale Carayon received the Byron Bird Award for Excellence in a Research Publication (<https://graingerinstitute.engr.wisc.edu/college-recognizes-the-work-of-eight-outstanding-faculty-and-staff/>)
- Pascale Carayon was highlighted in Agency for Healthcare Research and Quality (AHRQ) Grantee Profiles for application of human factors and systems engineering to improve patient safety (<https://www.ahrq.gov/funding/grantee-profiles/grtprofile-carayon.html>)
- Pascale Carayon received the inaugural Leon and Elizabeth Janssen Professorship
- Pascale Carayon was designated as a National Associate by the National Academies of Sciences, Engineering, and Medicine (<https://www.engr.wisc.edu/news/national-academies-honor-carayon-for-service/>)
- Nicole Werner received the Harvey D. Spangler Assistant Professor Award
- Doug Wiegmann was elected fellow by The Human Factors and Ergonomics Society (<https://www.engr.wisc.edu/news/human-factors-ergonomics-society-elects-wiegmann-fellow/>)
- Nicole Werner elected chair of Healthcare Technical Group of the Human Factors and Ergonomics Society (<https://www.engr.wisc.edu/news/werner-help-lead-human-factors-healthcare-group/>)
- Oguz appointed as Editor in Chief of IISE Transactions on Healthcare Systems Engineering (<https://www.engr.wisc.edu/news/alagoz-new-editor-in-chief-of-healthcare-systems-engineering-journal/>)
- Pascale served as co-chair of the Committee on Systems Approaches to Improve Patient Care by Supporting Clinician Well-Being that published the report "[Taking Action Against Clinician Burnout: A Systems Approach to Professional Well-Being](#)". She was first author of the Journal of the American Medical Association (JAMA) viewpoint, "[Improving Systems to Support Clinician Well-Being as a Means to Promote Better Patient Care](#)" and was interviewed by [Milwaukee NPR](#). <https://www.engr.wisc.edu/news/national-experts-recommend-systemic-improvements-reduce-clinician-burnout/>





#### WIHSE and COVID-19

- On April 29, WIHSE Director Pascale Carayon and Shawna Perry, Associate Professor, University of Florida Health Department of Emergency Medicine present a webinar, "An Overlooked Intersection: Human Factors Systems Approach and The COVID-19 Healthcare Crisis", organized by the International Society for Quality in Health Care (ISQua) <https://www.isqua.org/resources-blog/blog/an-overlooked-intersection-human-factors-systems-approach-and-the-covid-19-healthcare-crisis.html>.
- A team consisting of Dan Shirley, Abby Mapes, and Vishala Parmasad, and WIHSE members Pascale Carayon, Peter Hoonakker, and Roger Brown submitted a proposal to the Wisconsin Partnership Program (WPP) to study use of personal protective equipment (PPE) during the COVID-19 crisis and to examine the effects of PPE training in the simulation center.
- WIHSE Associate Director Oguzhan Alagoz has led the development of models that are among the tools aiding health officials in Dane County and south-central Wisconsin as they prepare for and respond to COVID-19. He has worked with the UW School of Medicine and Public Health and UW Health to develop and refine the models and has shared his efforts with the WI DHS. Press releases:
  - <https://news.wisc.edu/uw-madison-engineer-works-with-local-health-leaders-to-develop-covid-19-prediction-models/>
  - [https://www.engr.wisc.edu/news/uw-madison-engineer-works-with-local-health-leaders-to-develop-covid-19-prediction-models/?utm\\_medium=social&utm\\_source=twitter&utm\\_campaign=COE\\_MKT&utm\\_content=ISYE](https://www.engr.wisc.edu/news/uw-madison-engineer-works-with-local-health-leaders-to-develop-covid-19-prediction-models/?utm_medium=social&utm_source=twitter&utm_campaign=COE_MKT&utm_content=ISYE)
  - <https://www.jsonline.com/story/news/2020/04/22/covid-19-hasnt-spiked-after-wisconsin-election-experts-urge-caution/2997394001/>
- Through the Badger Shield Initiative, WIHSE collaborator Professor Justin Boutilier worked with Biomedical Engineering graduate student Rebecca Alcock and Professor Auyon Siddiq at UCLA Anderson School of Business to develop an optimization model that automates the process of matching manufacturers with organizations in need of face shields (website: <https://shield-net.org/>). Their work has been highlighted by many organizations including [UW news](#), [Wired](#), [The Cap Times](#), and the [Wall Street Journal](#). They submitted and received an NSF RAPID grant proposal for this project (<https://www.engr.wisc.edu/news/boutilier-lands-nsf-grant-for-ppe-matching-platform/>).

#### Grants

- Gabriel Zayas-Caban, Oguzhan Alagoz and Maureen Smith received an NSF grant to improve patient transitions from hospitals to skilled nursing facilities (<https://www.engr.wisc.edu/news/zayas-caban-alagoz-use-nsf-grant-guide-care-transitions/>).
- Doug Wiegmann submitted a proposal to implement robust methods for analyzing and correcting root causes of patient harm
- Jingshan Li led a proposal submitted to UW2020 to model and analyze care coordination for complex chronic patients





- Bhuvana Krishnaswamy led a proposal submitted to UW2020 for smart and connected sensing for healthy and safe aging
- Pascale Carayon, Peter Hoonakker, Nasia Safdar, and Dan Shirley submitted a proposal to WPP to assess healthcare worker perception and impact of PPE use.
- Justin Boutilier and team were awarded an NSF RAPID grant proposal for their optimization model work associated with the Badger Shield Initiative (<https://www.engr.wisc.edu/news/boutilier-lands-nsf-grant-for-ppe-matching-platform/>).

#### Collaborative relationships

- Justin Boutilier is developing a contract with iNICU (Harpreet Singh) and UW Health to develop a predictive modelling framework that can provide early detection of sepsis in neonatal intensive care units.

