About WIHSE

The Wisconsin Institute for Healthcare Systems Engineering (WIHSE) is an interdisciplinary research center at the University of Wisconsin–Madison’s College of Engineering.

WIHSE Research

WIHSE research applies Healthcare Systems Engineering (HSE) to address the Quadruple Aim:

- To revolutionize the patient experience
- To improve population health
- To control healthcare costs
- To enhance clinician satisfaction

We aim to be the hub for research innovations in HSE. To achieve this, WIHSE brings together engineers and health scientists as well as healthcare delivery and technology companies to transform health care into an integrated system. We do this by expanding our knowledge and developing smart and connected healthcare systems and technologies.

History

Discussion and planning for WIHSE was initiated in 2015 by Professor Pascale Carayon. It was formally recognized as an Institute by the University in July of 2017. Since its inception, WIHSE activities have been led by an interdisciplinary executive committee with representatives from 4 schools/colleges on the University of Wisconsin-Madison campus including: Engineering, Medicine and Public Health, Nursing and Pharmacy. This model gives WIHSE a strong and unique position to implement interdisciplinary HSE research.

WIHSE Executive Committee

Pascale Carayon – Director, Department of Industrial and Systems Engineering, College of Engineering

- Oguzhan Alagoz, Department of Industrial and Systems Engineering, College of Engineering
- Barbara Bowers, School of Nursing
- Michelle Chui, School of Pharmacy
- Ann Schoofs Hundt, Center for Quality and Productivity Improvement, College of Engineering
- Jingshan Li, Department of Industrial and Systems Engineering, College of Engineering
- M. Elizabeth Meyerand, Department of Biomedical Engineering, College of Engineering
- Maureen Smith, Department of Population Health Sciences, School of Medicine and Public Health
- Nicole Werner, Department of Industrial and Systems Engineering, College of Engineering
- Douglas Wiegmann, Department of Industrial and Systems Engineering, College of Engineering

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Vision: To be the premier research institute that transforms health care through engineering
WIHSE Research Themes

WIHSE research will serve as a catalyst to transform health care into an engineered, information-rich system that provides patient-centered, effective, efficient and safe care. It focuses on 4 themes:

1. Monitoring and anticipating for safe care transitions for vulnerable populations (e.g., children, elderly patients).
2. Smart automation and technologies for coordinating and communicating diagnosis and treatment: Application to cancer and diabetes.
3. Smart and connected patient-centered care: Implications for clinical decision support, telehealth and sensing technologies.
4. Modeling, forecasting and responding to healthcare-associated complications (e.g., infections, medication safety)

Events

As WIHSE grows we will offer events for faculty and staff on campus as well as individuals off campus. This will afford attendees the opportunity to become more familiar with our research and build research collaborations.

Save the Date!

The WIHSE 2018 Conference will be held May 2, 2018 at the Wisconsin Institutes for Discovery, University of Wisconsin-Madison. Please see our website for the most up-to-date information.

http://wihse.engr.wisc.edu/

Past Events:

- August 2016 – College of Engineering Roundtable
- January 2017 – When Healthcare Meets Engineering Roundtable
- March 2017 – WIHSE Inaugural Conference

WIHSE Consortium

As WIHSE develops we will continue to reach out to healthcare delivery and technology companies to become research partners. By partnering with industry we strive to develop innovative and impactful engineering concepts and methods to improve processes and decision making at all levels of healthcare delivery and across the continuum of care.

If you are interested in becoming an industry partner or learning more, please contact us!

wihse@engr.wisc.edu

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