



Ph.D. DISSERTATION DEFENSE

Candidate: Safa Elkefi
Degree: Doctor of Philosophy
School/Department: School of Systems and Enterprises / Engineering Management
Date: Tuesday, April 4th, 2023
Time/Location: 10:00 a.m./ <https://stevens.zoom.us/j/91709625207>
Title: Validation of a sociotechnical framework, EPACCC- (Effectiveness of Patient-centered cancer care in the technology era): A mixed-methods study

Chairperson: Onur Asan, School of Systems and Enterprises, Stevens Institute of Technology

Committee Members: Mo Mansouri, School of Systems and Enterprises, Stevens Institute of Technology
Zhongyuan Yu, School of Systems and Enterprises, Stevens Institute of Technology
Tina Yen, Department of Surgery, Medical College of Wisconsin

ABSTRACT

Communicating with cancer patients is more challenging due to the complexity of the disease, the death fear, and the emotional and psychological toll it can take on patients and their families. Cancer care also requires greater coordination and communication between providers, patients, and families and often involves a more intensive level of monitoring and follow-up care. In the very early stages after diagnosis, it is more challenging for patients to cope with the changes in their lives and adhere to treatments. That's where the need for a more customized patient-centered care approach appears. To date, no framework considers the needs of patient-centered cancer care in consideration of the work system factors (organization, people, processes & tasks, and technology & devices) in the early stages of cancer. In addition, more focus is given to doctors' load, but little attention has been given to the patients' workload. Furthermore, in the era of technology-driven care, organizing frameworks should be system-driven, consider patients' needs, and account for technology as a pillar of the care processes. In this work, I will present a framework EPACCC that I created from human factors literature to support patients' experiences in the early stages of cancer care and its validation process. I use a mixed-methods study (interviews and surveys) to validate it. This framework can inform the design of cancer-care technologies and patient-centered interventions from a socio-technical perspective.