

# RIT

Center for  
Human-aware  
Artificial  
Intelligence



## CHAI Seminar Series

*Refreshments will be served.*

**DATE:** Monday, April 17, 2023, 12:00-1:00 PM

**SPEAKER:** **Mark H. Chignell, PhD**  
Professor of Mechanical and Industrial Engineering,  
University of Toronto; Director of the Interactive Media Lab;  
and Founder of Centivizer, Inc.

**TITLE:** **Interactive Machine Learning: Building Effective and  
Ergonomic Human-AI Interaction**

**IN PERSON:** Golisano Hall, Room 2400

**ABSTRACT:** Can HCI (human-computer interaction) and human factors engineering work together to solve the increasingly urgent challenges of human-AI interaction? In this talk I start by reviewing the history of HCI and Human Factors focusing on their different assumptions about the person (user vs. operator), interaction (discretionary vs. non-discretionary) and method (e.g., task analysis vs ethnography). I then contrast two views of HCI as either user experience design or human augmentation and argue that what we are currently dealing with in the latter view is not human augmentation, but rather AI augmentation, where humans help AI systems to be smarter. After setting the historical and theoretical context I then introduce current approaches to interactive machine learning, where humans facilitate machine learning based prediction and classification in various ways. I illustrate the challenges and opportunities of interactive machine learning with two case studies, one in the area of healthcare and the other in the area of cybersecurity. I will conclude the talk with a discussion of future research issues in human-AI interaction and the need for more effective collaboration between human factors and HCI in order to address human-AI interaction challenges.



**BIO:** Mark Chignell has a Ph.D in mathematical psychology (University of Canterbury, 1981) and a Masters in Industrial and Systems Engineering (Ohio State, 1984). He was an Assistant Professor in Industrial and Systems Engineering at the University of Southern California from 1984 to 1990. He joined the Industrial Engineering Department at the University of Toronto as an Associate Professor of Industrial Engineering in 1990 and is currently a Professor of Mechanical and Industrial Engineering at the University of Toronto, with a status-only appointment in the Department of Computer Science. He is the director of the Interactive Media Lab and the founder of Centivizer Inc., a University of Toronto spinoff company. He carries out research in human factors and user interface design, with particular interest in aging, interactive machine learning, and healthcare.