UNIVERSITY of GUELPH

COLLEGE of ENGINEERING AND PHYSICAL SCIENCES

SCHOOL OF COMPUTER SCIENCE

Research Areas

Artificial Intelligence / Machine Learning
Faculty: D. Calvert, A. Hamilton-Wright, S. Kremer, P. Matsakis, F. Song, D. Stacey, F. Wang, Y. Xiang
- Information Retrieval and Natural Language Processing
- Uncertainty Management, Bayesian Networks, and Fuzzy Set Theory
- Artificial Neural Networks and Deep Learning Models
- Computer Vision and Image Analysis
- Intelligent Tutorial Systems
- Decision Exploration, Support and Confidence

Cybersecurity
Faculty: A. Dehghantanha, H. Khan, C. Obimbo
- Intrusion Detection, Cryptography and Crypt-Analysis
- Cyber Threat Intelligence (CTI) and Analytics
- Cyber Threat Hunting (CTH) and Digital Forensics
- Internet of Things (IoT) and Advanced Systems Security
- Malware Analysis and Software Exploitation
- Intrusion Detection

Data Science
Faculty: L. Antonie, Calvert, D. Chiu, R. Dara, D. Gillis, G. Grewal, A. Hamilton-Wright, P. Matsakis, B. Nonnecke, C. Obimbo, F. Song, D. Stacey
- Data Integration and Mining
- Big Data Analysis
- Information Visualization
- Classification and Clustering Analysis
- Privacy Policy Analysis

Human Computer Interaction
Faculty: D. Flatla, D. Gillis, H. Khan, J. McCuaig, B. Nonnecke, S. Scott, M. Wirth
- Usability, Accessibility and User Analysis
- Lurker Identification and Ranking
- Interface and Interaction Design
- Experimental Design
- Sensory Impairment

Bioinformatics
Faculty: D. Chiu, S. Kremer
- Bimolecular and Biosequence Analysis
- Prediction Algorithms and Time Series Analysis
- Pattern Induction and Recognition

Applied Modeling and Theory

Faculty: D. Calvert, P. Matsakis, B. Nonnecke, C. Obimbo, J. Sawada

- De Bruijns Sequences, Gray Codes and Graph Theory
- Modeling (Spatial, Temporal, Agricultural, Ecological, Health, Music)
- Internet of Things, Smart City and Smart Transportation

Hardware and Distributed Systems

Faculty: G. Grewal and X. Li

- Reconfigurable Computing
- Hardware and Software Co-design
- Intelligent Mobile Agents
- Design Automation for Embedded Systems
- Routing and Placement