

**2022 International Conference on Human-Computer Interaction (HCII)  
The 2nd Annual Workshop on Human-Centered Artificial Intelligence (HCAI)**

**The 6 Grand Challenges for HCAI: A Deep Dive**

Tuesday, June 28, 2022

2:30pm - 7pm (CEST)

**Program Co-Chairs**

Salvatore Andolina, Constantinos K. Coursaris, Christina Strobel, Jia Zhou

**Workshop Program**

Session	Time	Presentation
<p><i>HCAI Session I:</i> <b>Governance &amp; Responsible AI</b></p> <p><i>Co-Chairs: Anja Bodenschatz, Gregory Wheeler</i></p>	14:30 - 14:45 (CEST)	<b>Program Chairs' Welcome Remarks</b>
	14:45 - 15:00 (CEST)	<b>Enhancing AI with Body Intelligence</b> Shuichi Fukuda*
	15:00 - 15:15 (CEST)	<b>From Principled to Applied AI Ethics in organizations: A Scoping Review</b> <i>Aude Marie Marcoux*, Joé T. Martineau</i>
	15:15 - 15:30 (CEST)	<b>An Enterprise Risk Management Framework to Design Pro-Ethical AI Solutions</b> <i>Quintin McGrath*, Alan Hevner, Gert-Jan de Vreede</i>
	15:30 - 15:45 (CEST)	<b>Hey ASR System! Why Aren't You More Inclusive? Automatic Speech Recognition Systems' Bias and Proposed Bias Mitigation Techniques. A Literature Review</b> <i>Mikel Ngueajio K*, Gloria Washington</i>
	15:45 - 16:00 (CEST)	<b>Responsible Artificial Intelligence in Knowledge Work: User Experience Design Problems and Implications</b> Burak Oz*, Ruojun Wang, Chantel Chandler, Alexander John Karran, Constantinos K. Coursaris, Pierre-Majorique Léger
	16:00 - 16:15 (CEST)	<b>Responsible Human-Centered Artificial Intelligence for the Cognitive Enhancement of Knowledge Workers</b> Troy Weekes*, Thomas Eskridge
	16:15 - 16:30 (CEST)	<b>Understanding the Nature and Constituent Elements of Artificial Intelligence-Based Applications: a Scoping Review Research in Progress</b> <i>Marion Korosec-Serfaty*, Bogdan Negoita, Ana Ortiz de Guinea, Gregory Vial, Jared Boasen, Juan Fernández-Shaw, Pierre-Majorique Léger</i>
	16:30 - 17:00 (CEST)	<b>Break</b>

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<p><i>HCAI Session II:</i> <b>Human-Centered AI Design &amp; Human Well-Being</b></p> <p><i>Co-Chairs:</i> <i>Joe Kider,</i> <i>Sean Koon</i></p>	17:00 - 17:15 (CEST)	<b>Program Chairs' Remarks</b>
	17:15 - 17:30 (CEST)	<p><b>Human-Centred AI in the Age of Industry 5.0: A Systematic Review Protocol</b></p> <p>Mario Passalacqua*, Robert Pellerin, Philippe Doyon-Poulin, Laurène Del-Aguila, Jared Boasen, Pierre-Majorique Léger</p>
	17:30 - 17:45 (CEST)	<p><b>Designing Explainable Artificial Intelligence (XAI) User Interfaces for Solving a Rubik's Cube</b></p> <p>Cassidy Bradley*, Dezhi Wu</p>
	17:45 - 18:00 (CEST)	<p><b>Understanding the patients' adoption and usage of AI solution in mental health: A scoping review</b></p> <p>Nguyen Nguyen*, Élise Labonté-Lemoyne, Yany Gregoire, Marie Louise Radanielina-Hita, Sylvain Sénécal</p>
	18:00 - 18:15 (CEST)	<p><b>Using Artificial Intelligence Methods to Identify Barriers and Facilitators for Perinatal Alcohol Health Services on Twitter</b></p> <p>Dezhi Wu, Yang Ren*, Peiyin Hung, Phyllis Raynor, Shan Qiao, Xiaoming Li, Kacey Y. Eichelberger, Jiajia Zhang, Constance Guille</p>
	18:15 - 18:30 (CEST)	<p><b>Attention And Human AI Collaboration, The Context of Automated Vehicles</b></p> <p><i>Zoubeir Tkiouat*, Élise Labonté-Lemoyne, Ryad Titah, Nicolas Saunier, Pierre-Majorique Léger, Sylvain Sénécal</i></p>
	18:30 - 18:45 (CEST)	<p><b>What Are The Factors That Drive AI Acceptance: A Meta-Analysis Approach</b></p> <p><i>Aslı Gül Kurt*, Alexander John Karran, Ruxandra Monica Luca, Sylvain Sénécal</i></p>
	18:30 - 18:45 (CEST)	<p><b>Exploring the Role of Trust during Human-AI Collaboration in Managerial Decision-Making Processes</b></p> <p><i>Serdar Tuncer, Alejandro Ramirez</i></p>
	18:45 - 19:00 (CEST)	<b>Program Chairs' Closing Remarks</b>

## Author Bios

### **Alan Hevner**

Alan R. Hevner is a Distinguished University Professor and Eminent Scholar in the School of Information Systems and Management in the Muma College of Business at the University of South Florida. He holds the Citigroup/Hidden River Chair of Distributed Technology. Hevner's areas of research interest include design science research, digital innovation, information systems development, software engineering, distributed database systems, and healthcare systems. He has published over 300 research papers on these topics with nearly 30,000 citations to his papers. Hevner received a PhD in computer science from Purdue University. He has held faculty positions at the University of Maryland and the University of Minnesota. Hevner is a Fellow of the American Association for the Advancement of Science, a Fellow of the Association for Information Systems, and a Fellow of IEEE. He is a member of ACM and INFORMS. Additional honors include selection as a Parnas Fellow at Lero, the Irish software research center, a Schoeller Senior Fellow at Friedrich Alexander University in Germany, and the 2018 Distinguished Alumnus award from the Purdue University Computer Science Department. From 2006 to 2009, he served as a program manager at the U.S. National Science Foundation in the Computer and Information Science and Engineering Directorate.

### **Alejandro Ramirez**

Alejandro Ramirez joined the Information Systems Area at the Sprott School of Business in 1998. He obtained his Ph.D. from the Molson School of Business – Concordia University. He works on the adoption of emerging information technologies, especially decision support information systems in organizations. Adoption is a complex issue that includes behavioral and social issues, not only technical. He is currently working with colleagues at Carleton University in a New Frontiers in Research project funded by the Government of Canada “Imagining Canada’s Digital Twin.” Also, with colleagues from the University of Ottawa and the University of Quebec in the Outaouais in several projects in analytics in Canada’s Capital Region. He is a founding member of the Government Analytics Research Institute (GARI) and member of the editorial board of Analytics in Government Quarterly. He is a member of Carleton University’s cross disciplinary Institute for Data Science and the Human Computer Interaction group.

### **Alexander John Karran**

Alexander John Karran is an AI research associate at Tech3lab HEC Montréal. He holds a Ph.D. in Psychology from Liverpool John Moores University United Kingdom. His research orbits around physiologically adaptive systems using algorithmic and machine learning approaches applied in the automotive, aerospace and A.I. decision support domains.

### **Ana Ortiz de Guinea**

Ana Ortiz-de-Guinea is an Associate Professor in the Department of Information Technologies at HEC Montréal, where she holds the Professorship in Strategy and Management of Information Systems, and she is also a Distinguished Research Professor at the University of Exeter Business School. Her research interests include the application of machine learning to research as well as the adoption, use, and impacts of digital technology for individuals, groups,

and organizations. Her research has been published in top-tier journals such as MIS Quarterly, Journal of Management Information Systems, Journal of the Association for Information Systems, European Journal of Information Systems, and IEEE Transactions on Software Engineering. Prior to joining academia, Professor Ortiz de Guinea worked a number of years as a consultant in Information Systems in firms such as PwC (PriceWaterhouseCoopers). There she was involved in numerous Information Systems projects dealing with the launching of new telecommunications companies.

### **Aude Marie Marcoux**

Aude Marie Marcoux is a Lecturer and Ph.D. Candidate at the School of Management Sciences of the Université du Québec à Montréal (UQAM). She specializes in managing and institutionalizing the ethical dimension of artificial intelligence (AI Ethics) in organizations. She is part of the Joint Ph.D. Program in Business Administration (ESG UQAM, HEC MONTRÉAL, MCGILL, CONCORDIA). She is also a Scholarship Holder and a Research Professional for the International Observatory on the Societal Impacts of AI and Digital Technologies (OBVIA) and for the “Human-centered AI: From Responsible Algorithm Development to Human Adoption of AI project” funded by IVADO Strategic Research Funding Program.

### **Aslı Gül Kurt**

Asli Gul Kurt is a doctoral student at Department of Marketing in HEC Montreal, Canada. She holds an M.Sc. degree in Neuroscience and a B.A. in Psychology in Bilkent University, Turkey. Her research interests are AI-based technology applications in service, consumer neuroscience and online consumer behavior. She has also worked as a user experience researcher while doing her Master's.

### **Bogdan Negoita**

Bogdan Negoita is Associate Professor of Information Technology at HEC Montréal. He holds a PhD in Management (Information Systems) and MBA from the Desautels Faculty of Management at McGill University, and an Honours BSc. in Computing and Computer Electronics from Wilfrid Laurier University. His research interests include information systems use, the championing of IT implementations, and the management of opensource software development projects. He has published in Information Systems Research, Journal of Information Technology, and MIS Quarterly.

### **Burak Öz**

Burak Öz is a PhD candidate in the Department of Information Technologies at HEC Montréal. He holds a master's degree in Industrial Engineering from the Middle East Technical University, Turkey. His research interests include IT and AI in supply chain management, effective use of IT, feature-level IT use and acceptance, and technology-mediated experiential learning.

### **Chantel Chandler**

Chantel Chandler is a first-year MSc student in User Experience (UX) at HEC Montréal in Canada. She obtained her bachelor's degree in Psychology and Sociology and her master's degree in Experimental Psychology at Iona College in New Rochelle, New York. Her current

research is focused on designing museum visit experiences which incorporate Augmented Reality (AR) technology and elements of gamification. Her other research interests include social Virtual Reality (VR), digital mental health interventions, and human-centered Artificial Intelligence (AI).

### **Cassidy Bradley**

While getting her Master's in Computer Science this past year at the University of South Carolina, Cassidy Bradley began research with a focus on Human-Computer Interaction and Explainable Artificial Intelligence. Cassidy Bradley discovered her passion for developing technology that the user trusts, enjoys, and learns from during an internship in the Summer of 2020. Through her research, she has strived to understand more about designing the language and interfaces used to facilitate effective communication between humans and technology.

### **Constance Guille**

Constance Guille is the founder and director of the Women's Reproductive Behavioral Health Division at the Medical University of South Carolina. This division provides integrated mental health and substance use disorder treatment to pregnant and postpartum women in obstetric and pediatric settings, affords clinical and clinical research training in Reproductive Psychiatry and conducts clinical research that aims to improve the identification and treatment of peripartum mental health and substance use disorders. I receive research support through the National Institute of Health and foundations to develop treatments to improve women's health. Additionally I am a Co-Investigator on the Intern Health Study – a large prospective study examining stress and depression among medical trainees. I have published widely on topics including women's health, stress, and depression.

### **Constantinos K. Coursaris**

Constantinos K. Coursaris is Associate Professor of Information Technology, Academic Director of M.Sc. User Experience, Co-Director of Tech3Lab, and Principal Collaborator for the NSERC-Prompt Industrial Research Chair in User Experience at HEC Montréal. Constantinos was elected Chair of AIS SIGHCI in 2019 and was appointed AIS AVP Research Resources in 2020.

Constantinos is a seasoned user experience researcher, who studies user motivations, expectations, and experiences with new media and the consequent design implications for information systems in business and healthcare. His interdisciplinary research has been published widely in top peer-reviewed journals, such Information & Management, New Media & Society, Computers in Human Behavior, Transactions on Human-Computer Interaction, and Online Information Review among others. His research has been financially supported by more than \$4 million from the Natural Sciences and Engineering Research Council of Canada (NSERC), Patient Centered Outcomes Research Initiative (PCORI), McKesson Foundation, U.S. Department of Agriculture, and Leo Burnett Detroit, among others. Constantinos consults on user experience and social media for governance, marketing, and healthcare around the world. Connect with him on LinkedIn: <http://linkedin.com/in/coursaris>.

## **Dezhi Wu**

Dezhi Wu is an Associate Professor in the Department of Integrated Information Technology at the [University of South Carolina](#), Columbia, SC, USA. She earned her Ph. D. degree in Information Systems with a concentration on Human-Computer Interaction (HCI) from the New Jersey Institute of Technology, USA. She also obtained her "Human Factors" Certificate from the University of Michigan. She is a certified [Project Management Professional \(PMP\)](#). She is the former President for [the Association of Information Systems](#) (AIS) Special Interest Group on HCI ([SIGHCI](#)) and is now serving as the SIGHCI's Advisory Board Member. She is the recipient of the globally prestigious technology award - "AIS Technology Challenge Award" and "SIGHCI Outstanding Service Award" issued by [the AIS](#) in 2011. In the past, she has won multiple university-level of faculty awards including "Outstanding Scholar of the Year" (2014), "Distinguished Scholarly/Creative Activity Award" (2017), "Distinguished Educator Award" (2018), "Campus Influencer Award" (2016), and "Quality Service Award" (2013) along with numerous college and departmental levels of outstanding faculty awards. Dezhi Wu is a passionate interdisciplinary scholar in the information technology field, especially as it pertains to the intersection of human-computer/AI interaction, health informatics, health IT, cybersecurity, biometrics, and other emerging technologies. Her academic work explores how users interact with computer systems, AI-driven technologies, robotics, and IoT smart devices to accomplish their goals. Her passion also extends to creating innovative intelligent user interfaces (UIs), user experiences (UX), and systems. She designs and evaluates novel transformative experiences for user engagement and behavior changes that fill the gaps between different types of users (i.e., patients, health providers, STEM learners, and cybersecurity trainees) and today's evolving smart technologies and addresses socio-technical challenges in various research domains such as healthcare, cybersecurity, and education. Her recent research projects primarily focus on human-AI/robot interactions, explainable AI (XAI), conversational UI design, health informatics, social media analytics, and mobile security notification (MSN) systems. Through all this, Dr. Wu engages and inspires her students through experiential learning methods to foster their lifelong learning experiences.

## **Élise Labonté-LeMoyné**

Élise Labonté is an Associate Researcher at Tech3Lab at HEC Montréal. Her research interests include behavioral neuroscience, social cognitive science, human-centered AI and user experience. She has published in various journals such as *Journal of clinical and experimental neuropsychology*, *Computers in Human Behavior* and *Information systems and neuroscience*.

## **Gert-Jan de Vreede**

GJ de Vreede is the Associate Dean for research and professional programs and a professor in the School of Information Systems and Management. He has taught undergraduate, graduate, doctoral and executive courses in areas such as agile software development, systems analysis and design, teamwork/facilitation and research methods. His research focuses on AI, crowdsourcing, and collaboration engineering. His work has been cited over 10,000 times and appeared in journals such as the *Journal of Management Information Systems*, the *Journal of the Association for Information Systems*, *Management Information Systems Quarterly Executive*, *Information & Management*, *Small Group Research*, and the *Communications of the*

ACM. Throughout his career, he has received more than \$6.5 million in funding as (co)-principal investigator from federal, state, industry, military and private sources. His h-factor (51) places him in the all-time top-100 in his discipline. A Stanford University study identified him as a top 2% researcher worldwide across all fields of study, based on his career-long citation impact up until the end of 2020. In 2011, he received the GDN Section Award from the INFORMS Group Decision & Negotiation Section for accomplishments and contributions both to the research area of group decision and negotiation as well as to the INFORMS GDN section. He received both a PhD and a MS in Information Systems from Delft University of Technology in the Netherlands.

### **Gloria Washington**

Gloria Washington is an Assistant Professor in Computer Science with a demonstrated history of working in the computing industry. Skilled in Computer Science, Affective Computing, Human Computer Interaction, C++ (Programming Language), and Systems Engineering. Strong education professional with a Doctor of Philosophy (Ph.D.) focused in Computer Science from The George Washington University.

### **Gregory Vial**

Gregory Vial is Associate Professor of Information Technology (IT) at HEC Montreal. His research interests are in the areas of digital transformation, systems development practices and methodologies, and data-based value creation, . His work has been published in MIT Sloan Management Review, Journal of Strategic Information Systems, European Journal of Information Systems, IEEE Software as well as in several IS conferences.

### **Jared Boasen**

Jared Boasen is a cognitive neuroscientist and Postdoctoral Fellow at the Tech3Lab at HEC Montréal. He is also a Guest Research Associate in the Faculty of Health Sciences at Hokkaido University where he is one of the founding members of the magnetoencephalographic hyperscanning research group. His research interests include sensory processing, musical, aging and social neuroscience.

### **Jiajia Zhang**

Jiajia Zhang's main research and teaching interests focus on investigating the association between the mortality/incidence of a certain disease with its potential risk factors using survival analysis. Specifically, her methodological research interests include investigating advanced survival models including survival model with longitudinal predictors, mixture cure model, illness death model, spatial survival model, frailty model, and linear transformation model. Jiajia Zhang also extends her interests in developing advanced statistical methodologies in handling the complex data from the electronic health record, such as developing the new prediction model based on longitudinal electronic health record.

### **Joé T. Martineau**

Joé T. Martineau is an Associate Professor of organizational ethics in the Department of Management at HEC Montréal. Her research, teaching and organizational intervention interests focus on ethical and governance issues affecting private, public and health sector organizations.

Her work has led her to reflect on the composition and effectiveness of ethics programs and the diversity of ethics management practices in organizations, on the various factors that influence the ethical reflection and behavior of organizational actors, and on the ethical issues related to the digital transition and the development and deployment of artificial intelligence in organizations. She is an associate member of the Pragmatic Health Ethics Research Unit at the Montreal Clinical Research Institute (IRCM), a regular member of the Institute of Applied Ethics (IDEA), Laval University, and a regular member of the International Observatory on the Societal Impacts of AI and Digital Technology (OBVIA).

### **Juan Fernández-Shaw**

Juan Fernández-Shaw is a bachelor's in business administration graduate from IE University. Currently in Canada, he is studying a M.Sc. in User Experience at HEC Montréal and researching multi-device/omnichannel customer experiences at the Tech3Lab. With more than three years of experience in the technology and customer service industry, he has helped companies of all sectors connect with their customers in innovative and integrated ways. His main research interests are: innovations in B2C communication, physiological data collection on interactions over multiple devices and the impact of AI-based systems on user acceptance and continuance.

### **Kacey Y. Eichelberger**

Kacey Eichelberger, MD currently serves as Chair of the Department of Obstetrics and Gynecology at the University of South Carolina School of Medicine Greenville/Prisma Health-Upstate, as well as a practicing physician in the Division of Maternal-Fetal Medicine. After receiving a Bachelors of Arts in Social Justice and Community Activism from Duke University, Dr Eichelberger completed medical school at the Medical University of South Carolina, followed by a residency in Obstetrics and Gynecology and fellowship in Maternal Fetal Medicine at the University of North Carolina Chapel Hill. She is board certified in both fields by the American Board of Obstetrics and Gynecology. Clinically, Dr Eichelberger practices the full scope of Maternal-Fetal Medicine, including prenatal diagnosis, maternal consultation, and the management of medically complex pregnancies. She has a particular interest in substance use disorders, health equity, and care of LGBTQIA+ families. In addition to her current clinical and advocacy work, she also serves as the site Principal Investigator for the NICHD's Maternal-Fetal Medicine Unit (MFMU) Network at Prisma Health and Medical Director of the Magdalene Clinic, a comprehensive trauma-informed prenatal and addiction care clinic for women with substance use disorder (SUD).

### **Laurène Del-Aguila**

Laurène Del Aguila is a Master's candidate in User Experience at HEC Montréal. She holds a bachelor's degree in Marketing and IT at HEC Montréal. Her current research interest is regarding Mobile Multitasking while Walking.

### **Mario Passalacqua**

Mario Passalacqua is a Ph.D. candidate in industrial engineering at École de Polytechnique de Montréal. He holds a master's degree in User Experience from HEC Montréal and a bachelor's



degree in Psychology from McGill University. Broadly speaking, his research examines human-computer interaction in an industrial context, with a particular focus on Industry 4.0 and 5.0.

### **Marion Korosec-Serfaty**

Marion Korosec-Serfaty is a PhD student in Information Technologies at Tech3Lab, HEC Montreal and a Research and Graduate Teaching Assistant. Her research focuses on technostress and digital financial services. She has +15 years experience as digital marketing account director for mainstreams companies such as Accenture. She also holds a M.Sc. in International Management, with specialization in organizational socio-anthropology from HEC Montreal.

### **Marie Louise Radanielina-Hita**

Marie Louise Radanielina-Hita is a lecturer and researcher at HEC Montréal in the department of Marketing. Dr Radanielina-Hita's research interests include advertising, social media marketing, intercultural communication and media and youth. Her work has been published in leading journals such as the Journal of the Academy of Marketing Science, Journal of Business Ethics and Journal of Intercultural Communication Research.

### **Mikel Ngueajio**

Mikel Ngueajio is a Research Assistant at the Affective Biometrics Lab. Her research interest includes Machine learning applications to Business and finance, Data science, Natural Language processing, Aerial Image detection, Affective Computing.

### **Nguyen Nguyen**

Nguyen Nguyen is a PhD candidate at HEC Montréal in the department of Marketing, Omer DeSerres Chair of Retailing and Tech3Lab at the same institution. Her research interests include AI adoption and usage, service failure and recovery and parasocial relationship in various consumption contexts. She is also interested in employing biological measures in online consumer behaviors and consumer neurosciences.

### **Nicolas Saunier**

Nicolas Saunier is a Full Professor at Polytechnique Montreal in the Department of Civil, Geological and Mining Engineering. His main fields of interests include intelligent transportation, road safety, and data science for transportation (data collection, storage, processing, analysis (machine learning), and visualization).

### **Peiyin Hung**

Peiyin Hung's primary research interests include rural health disparity, quality of care, spatial access to health services, and women's health. Her research focuses on geographic disparities in hospital services and quality of health care in the national, state, and institutional levels (e.g. hospital, nursing home, etc.). Peiyin Hung specializes in quantitative methods for health services research, using surveys and administrative data, along with econometrics to understand the effects of organizational structure, clinical, and policy intervention.

### **Philippe Doyon-Poulin**

Philippe Doyon-Poulin is an Assistant Professor in the Department of Mathematics and Industrial Engineering at Polytechnique Montreal. He holds a PhD in Industrial Engineering. His research focuses on human interactivity and decision-making with automated systems in aviation and health care.

### **Phyllis Raynor**

Phyllis Raynor is a nationally certified psychiatric mental health and Addictions Advanced Practice Registered Nurse and has completed my PhD in Nursing at the Medical University of South Carolina in Charleston, SC. He has a strong desire to become a public health nurse scientist focusing on research, prevention, public advocacy, and health promotion initiatives for low-income minority families affected by substance use disorders (SUD).

Ultimately, improvements in the health of these families come from long-term recovery. His dissertation research is focused on the development of self-care interventions for parents recovering from SUD with an ultimate goal of improving their long-term recovery outcomes and the health outcomes of their children.

### **Pierre-Majorique Léger**

Professor Pierre-Majorique Léger is a professor at HEC Montréal and holds the NSERC-Prompt Industrial Research Chair in User Experience. He holds a Ph.D. in Industrial Engineering from École Polytechnique de Montréal. His research aims to improve the user experience (UX) experienced when learning or using information technology (IT), by mobilizing the massive biophysiological data generated during an interaction in order to qualify the user's emotion and cognition.

### **Quintin McGrath**

Quintin McGrath is an Electronic Engineer by profession, holding an MS Degree in Engineering from the University of Cape Town. He also has a Business Leadership MBA from the University of South Africa and a MA from Wheaton College in Chicago. In 2001, he moved with Deloitte to the US as a key member of the Global CIO's leadership team. He continues to serve on Deloitte's Global Technology Executive team. He is the Former Global Senior Managing Director, Technology Management & Enablement, Global Shared Technology Services, Business Solutions at Deloitte (Retired). He spent 8 years leading the Global Application Development team. In 2015, he initiated the transition of Deloitte to becoming a shared services-based organization and now leads a global group that covers a range of IT disciplines to provide frameworks, tools, and capabilities to enable a more agile and responsive global IT team. As a proponent of life-long learning, he is currently pursuing a Doctor of Business Administration from the University of South Florida with a focus on ethics and AI. Quintin McGrath is a driver of global-scale business growth and transformation with a focus on ethics, risk management, sustainability (environmental, social, and economic) and emerging technologies.

**Ruxandra Monica Luca**

Ruxandra Luca is an Assistant Professor in Marketing at HEC Montréal. She has an MSc in psychology from University of Toronto and a PhD in marketing from Imperial College London. Her research interests include digital marketing, consumer behaviour, and visual attention.

**Robert Pellerin**

Robert Pellerin is Full Professor in the Department of Mathematics and Industrial Engineering at Polytechnique Montreal. He holds degrees in engineering management (B.Eng.) and industrial engineering (Ph.D.). His research interests include project management and enterprise system implementation. He is the current chairman of the Jarislowsky/SNC-Lavalin Research Chair and he is a member of the CIRRELT and IVADO research groups.

**Ryad Titah**

Ryad Titah is an Associate Professor of Information Systems at HEC Montréal. His main research interests are in information technology acceptance, use and impact in both public and private organizations. His research focuses on issues related to e-government, and digital cities. His work has been published in journals such as Computers in Human Behavior, Information Systems Research, Information Technology and People, International Journal of Electronic Government Research, Journal of Management Information Systems, the Journal of the Association for Information Systems and MIS Quarterly.

**Serdar Tunçer**

Serdar Tuncer holds a Ph.D. in Communications and Public Relations from the University of Istanbul. He is currently pursuing a master's degree in Human-Computer Interaction at Carleton University under the supervision of Professor Alex Ramirez. Additionally, he is a Research Assistant for the Imagining Canada's Digital Twin (ICDT) project. Tuncer's current work consists of two fields and the interconnectivity between them: Decision-making for complex systems and Misinformation and Trust in Artificial Intelligence.

**Shan Qiao**

Shan Qiao's academic training is in sociology, anthropology and public health and her research projects use both quantitative and qualitative methodologies. Her interests are in HIV prevention and treatment in the context of global health, as well as women living with HIV/AIDS in South Carolina.

**Shuichi Fukuda**

Shuichi Fukuda received the B.S., M.S., and Ph.D. degrees in mechanical engineering from the University of Tokyo, Tokyo, Japan, in 1967, 1969, and 1972, respectively. He worked as Associate Professor at the Welding Research Institute, Osaka University, Osaka, Japan, from 1976 to 1991, and, concurrently, as Associate Professor at the Institute of Industrial Science, University of Tokyo, Tokyo, Japan, from 1989 to 1991. He was Chairman of the Design and Systems Division, Japan Society of Mechanical Engineering (JSME), from 1992 to 1993. He was Visiting Professor at Stanford University, Stanford, CA, and Osaka University, Osaka, Japan, concurrently, in 1998. He is currently Dean of Engineering and Professor, Tokyo

Metropolitan Institute of Technology, Tokyo, Japan., Dr. Fukuda was Chair of the Japan chapter of the American Society of Mechanical Engineers (ASME) from 1996 to 1998 and Chairman of the Japan chapter of the IEEE Reliability Society from 1999 to 2000.

### **Sylvain Sénécal**

Sylvain Senecal is Professor of Marketing, RBC Financial Group E-commerce Chair, and Tech3Lab Co-director at HEC Montreal. His research interests are related to consumer marketing on the Internet (decision-making, social influence, personalization, web site evaluation, clickstream analysis) and consumer neuroscience. His work has been presented at several international conferences (e.g., Australia, Canada, Finland, United States) and published in marketing and ecommerce scientific journals such as the Journal of Retailing and the International Journal of Electronic Commerce.

### **Thomas Eskridge**

Tom Eskridge is an Associate Professor at the Florida Institute of Technology. Tom has been working to develop tools and techniques to support the capture, organization, and retrieval of knowledge. This work has led to the development of the CmapTools Ontology Editor (COE) for visualizing, browsing, and editing human-understandable ontologies, and several other extensions to CmapTools used during knowledge elicitation and subsequent knowledge management. His work on ontology development has enabled current efforts in representing and reasoning about various aspects of cybersecurity and multi-agents systems, and in developing systems for policy representation, reasoning, learning, and application in multi-agent systems. Tom Eskridge has also been very involved in performance-oriented information visualization, where the user interface is used to amplify the performance of the system operator. The aircraft cockpit system OZ is a prime example of this work. His other research interests and experience include models of knowledge capture and representation, human analogical reasoning, machine learning, classification, knowledge discovery and data mining, situated cognition, software, and real-world agents and foundational issues in artificial intelligence, cognitive science, and philosophy. His Ph.D. was in Philosophy with an emphasis on artificial intelligence and cognitive science from Binghamton University, and he holds an M.S. and B.S. in Computer Science from Southern Illinois University.

### **Troy Weekes**

Troy Weekes's research focuses on the human-centered design and development of cognitive augmentation technologies that enhance knowledge work. Barbados' national expert for mobile innovation under the World Summit Awards, Troy has been board-certified as an associate human factors professional. Recently, he has gained experience in consulting and working with creatives, engineers, executives, and regulators involved in the design of applications, user interfaces, and user experiences.

### **Xiaoming Li**

Xiaoming Li focuses on the development of compiler and code generation techniques. The main objective is to make programs run faster, perform more reliably, and use resources more efficiently on current and future computing architectures. Compiling and code generating can be

conceived as a transformation from programs to the form that makes the best use of computing architectures. However, the interaction among architectures, programs and inputs is poorly understood. The emerging faster and more complex architectures are more challenging than solutions for compiler research. If we want to squeeze the last bit of performance from computers, we must respond to two major challenges. First, architectures are increasingly complex. In particular, speculative features blur the picture of how a program runs. We are deprived of the luxury to use simple models to formulate the interaction between programs and architectures. We need new methods that can give us insight into how programs run in speculative environments. Second, we are asked more and more about the reverse question of compiling – what is the best architecture for a program. The essence of this question is how to co-design software and architecture. It demands methods to figure out program behaviors on versatile platforms. The two challenges are being answered by our research, which includes the study of how to optimize important applications, such as sorting, and how to map programs into efficient architectures, such as FPGA. In particular, we leverage machine-learning techniques to dig out optimization opportunities that have not been explored before. Our long-term goal is to provide a fundamental understanding of program behaviors, and develop methods that generate efficient code from this understanding.

### **Yang Ren**

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