UW CISA

ANNUAL REPORT 2025

CENTRE FOR INFORMATION INTEGRITY AND INFORMATION SYSTEMS ASSURANCE

UNIVERSITY OF WATERLOO

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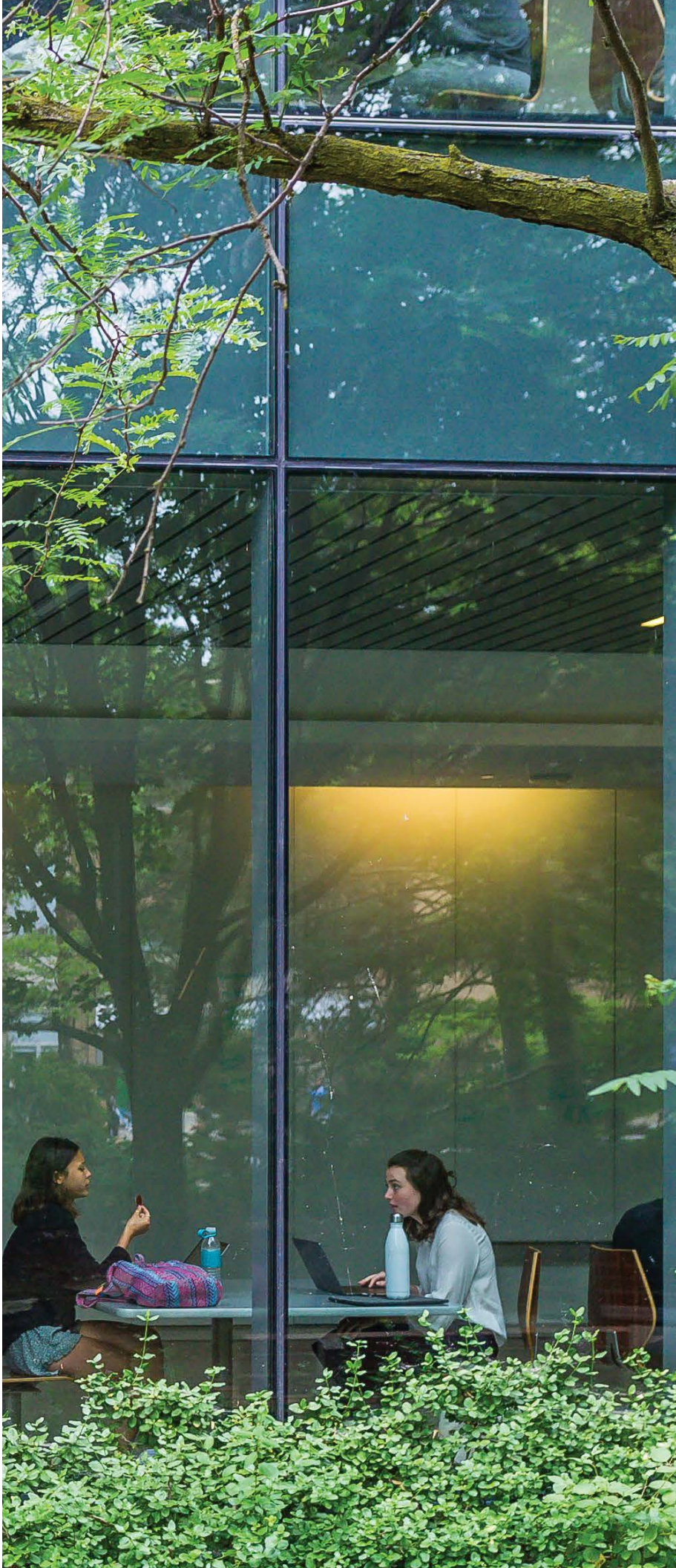
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Mission

The mission of the University of Waterloo Centre for Information Integrity and Information Systems Assurance (UWCISA) is to identify, address and communicate issues related to the impact of current and emerging technologies on both information integrity and information system assurance. Focusing on these issues, UWCISA promotes and supports:

RESEARCH

Creation and distribution of investigative projects that provide professional, social, economic, and behavioural results and insights.

EDUCATION AND KNOWLEDGE TRANSFER

Marketing and delivery of innovative informing activities.

INTERACTION

Dialogue among practitioners, educators, students, and other interested parties.

Overview

UWCISA was founded in 1998 by the School of Accounting and Finance and is an administrative sub-unit within the Centre of Accounting Research and Education (CARE), at the University of Waterloo (UW).

UW is a leading university in Canada and is well known for its information technology related research, teaching, and entrepreneurship. The School of Accounting and Finance (SAF) is one of Canada's leading academic units in the accounting and finance fields and has both a Canada-wide and international reputation.

The SAF is a strong supporter of the information integrity and information systems assurance fields, as shown by its leading courses and programs in these areas and related research they have spawned.

Valued sponsors of UWCISA are ISACA (since inception) and IIA Canada (since 2018)[1]. The sponsors' objectives continue to include:

- improving the quality of education and research in information integrity and information systems assurance; and
- fostering a close and continuing working relationship between the SAF, the sponsors, and other partners with an interest in information integrity and information systems assurance.



1. The Chartered Professional Accountants of Canada (CPA Canada) was a founding sponsor that continues to sponsor UWCISA initiatives on a project-by-project basis. Note that the following name changes have taken place since the founding of UWCISA. ISACA began using its acronym only, replacing the Information Systems Audit and Control Association, on January 1, 2006. CPA Canada replaced the Canadian Institute of Chartered Accountants on April 1, 2013. The School of Accounting and Finance replaced The School of Accountancy on November 19, 2007. UWCISA retained its acronym but was renamed from the Centre for Information Systems Assurance to the Centre for Information Integrity and Information Systems Assurance in 2008, in recognition of the need to broaden UWCISA's mandate and activities beyond systems assurance to information integrity.

Organization

UWCISA was reorganized in 2022. It consists of five focus areas headed by Associate Directors reporting to the Executive Director. Each area engages in research, education, and interaction activities as described in the mission statement of UWCISA.



ADAM VITALIS

Assurance Services

Focused on topics such as external FS audits, IT controls and assurance, use of specialists in FS audit and other assurance engagements, ESG and sustainability reporting and assurance practices, other emerging assurance service areas and related technologies and tools, and professional responsibilities of assurance providers.



THEO STRATOPOULOS

Data Analytics

Focused on topics such as the development and application of statistical, quantitative, and computational methods to analyze and interpret financial data, aiming to improve decision-making, forecast financial trends, and enhance auditing processes.



ALEC CRAM

Cybersecurity and AIS

Focused on topics such as cyber incident notifications and disclosures, behavioural cybersecurity, national cybersecurity strategies, cybersecurity policy compliance, board-level cybersecurity governance, and cybersecurity regulations.



THEO STRATOPOULOS

Emerging Technologies

Focused on topics such as enhancing accuracy, efficiency, and transparency of emerging technologies in financial reporting, audit processes, tax preparation, and compliance management, development of new accounting frameworks and standards to accommodate the integration of these technologies, and assessing their impact on data security, privacy, and ethical considerations within the financial sector.



ADAM VITALIS

Internal Audit

Focused on topics such as enhancing governance through the application of the three lines of defence model, emerging needs of the internal audit function, internal controls and audit assurance processes, the strategic role of internal audit in risk management, integrating technology and data analytics to improve internal audit effectiveness, and highlighting the professional responsibilities of internal auditors in developing an effective audit function.

Note from the Director

To the Board of Directors:

I am pleased to present this report on the operations and activities of UWCISA during 2025, our twenty-eighth year of operation.

With both gratitude and sadness we say farewell to Efrim Boritz, who served as Executive Director of UWCISA from its inception in 1998 until his retirement in 2025. Efrim has been a pioneer in all things assurance and trust services, information systems and technology (IS and IT), accounting, and emerging technologies. He remains a shining light and beacon of integrity for these professions, UWCISA, and SAF. Personally, I extend my heartfelt appreciation for his mentorship and guidance in all my years as an academic, but especially in the last few years as I took on an associate director and now the executive director role at UWCISA.

This year marked the first year in a three-year plan approved by UWCISA's sponsors for the period 2025–2027, inclusive. Nevertheless, we continue to navigate changes and challenges as the world of information, technologies, and assurance continues to evolve — as do the priorities of our sponsors, strategic partners, universities, and governments. Expect more changes for UWCISA in 2026, including integration and coordination within CARE. I expect this to yield new funding opportunities but also a reevaluation of the key activities that UWCISA will be known for.

Reflecting our sharpening focus, during 2025 we absorbed the ESG Assurance focus area into the Assurance Services focus area. Associate Director Adam Vitalis leads this latter area as well as the Internal Audit focus area. Associate Director Alec Cram continues to lead the Cybersecurity and AIS focus area and Associate Director Theo Stratopoulos continues to lead the Data Analytics and Emerging Technologies focus areas.

During the year, we fulfilled our thought leadership role through members' service on various boards and advisory groups including the American Institute of Certified Public Accountants' (AICPA) Trust Services Information Integrity and Cybersecurity Assurance Task Forces, CPA Canada's Audit and Assurance Technology Committee, and the CPA Canada/AICPA AI Project Advisory Group. Members of the Centre also serve as editors and/or on editorial boards of several academic journals, including Accounting Forum, Accounting, Organizations and Society, Accounting Perspectives, Auditing: A Journal of Practice and Theory, Contemporary Accounting Research, Information Systems Journal, International Journal of Accounting Information Systems, Journal of Emerging Technologies in Accounting, and Journal of Information Systems.

We continued work on major projects on assurance innovation and internal audit competencies, continued our research activities on several other projects which have resulted in publications in high quality journals, and presented our research at academic and practitioner conferences, all detailed in this report. Our work in progress includes a variety of interesting projects addressing key topics in the broad fields of assurance, information systems, information integrity, cybersecurity, and more.

We hosted our 14th Biennial Research Symposium in September 2025. Focusing on the intersection of sustainability and advanced technologies, the Symposium was a great success highlighted by research and practice-oriented sessions on GenAI use in sustainability and financial statement assurance, cybersecurity matters, and quantum computing. Thank you to EY for providing the incredible venue and to our sponsors — ISACA, IIA Canada, and the Hub for Sustainability Integration — for generously supporting the Symposium.

This year we also offered very successful in-person and virtual professional development (PD) sessions on SOC 2 assurance services, robotic process automation, and GenAI for audiences comprised of academics, internal and external audit professionals, IT risk and other advisory professionals, and students.

We continue to work with other Centres with similar purposes such as the one at Rutgers University, strengthening an international network for mutual support of our respective missions. We are members of the University of Waterloo's Cybersecurity and Privacy Institute and Waterloo.AI.

UWCISA welcomes new partners to share in our mission. I thank UWCISA's Board members and sponsors for their continued support and look forward to another productive year.



TIM BAUER, CPA, PHD
EXECUTIVE DIRECTOR

RECOGNITION OF UWCISA MEMBERS

Awards

UWCISA personnel were recognized for their contributions to research, education, and/or the accounting profession during 2025.



Efrim Boritz

2025 ISACA Educational Excellence Award

- Won by Efrim Boritz, for his leadership and contributions in the promotion of research and education in the field of audit and assurance of IT.
- The ISACA Educational Excellence Award annually recognizes an inspiring educator, academic, or educational institution who has empowered students to pursue careers advancing technology.
- It is one of four Global Achievement Awards that constitute the highest honour bestowed by ISACA for distinguished service, exemplary achievements, and noteworthy contributions to advancing technology worldwide.
- Efrim accepted the award in May 2025 at ISACA's annual North America Conference.

RECOGNITION OF UWCISA MEMBERS

Grants

UWCISA personnel held research grants and support in 2025, awarded for their ongoing research.



Tim Bauer

Social Sciences and Humanities Research Council — Insight Grant

Awarded to Tim Bauer (Principal Investigator) for the research proposal *Troublesome Clients: What do Auditors Experience and How Do They Deal With It.*

Total grant — $94,676 for the years 2023–2026.

Social Sciences and Humanities Research Council — Insight Development Grant

Awarded to Tim Bauer (Co-Investigator), Samanatha Seto at Simon Fraser University (Principal Investigator) and Jenny Ulla at University of Illinois Urbana-Champaign (Collaborator) for the research proposal *Managing the Remote Audit - The Effect of Management Style and Algorithmic vs. Human Managers on Auditor Behaviors and Outcomes.*

Total grant — $71,780 for the years 2023–2025.



Alec Cram

National Cybersecurity Consortium Project Funding

Awarded to Alec Cram (Principal Investigator), John D'Arcy at the University of Delaware, and Alex Benlian at TU Darmstadt for the research proposal *May We Have Your Attention Please? Exploring How Employee Attention Influences Cybersecurity Behaviour.*

Total grant — $223,529 for the years 2026–2029



Sepideh Ebrahimi

Social Sciences and Humanities Research Council — Insight Grant

Awarded to Sepideh Ebrahimi (Principal Investigator) and Christian Matt at University of Bern (Collaborator) for the research proposal *Understanding how Task Complexity and Employees' Expertise Impact Adopting Discriminatory Data Analytics Recommendations and Developing Potential Countermeasures.*

Total grant — $98,416 for the years 2021–2028



Sasan Saiy

Social Sciences and Humanities Research Council — Insight Grant

Awarded to Sasan Saiy (Co-Investigator) and Amr ElAlfy (Principal Investigator) for the research proposal *The Sustainable Aeronautics and the Readiness for New International Sustainability Standards Board (ISSB) Mandates: Assessing the Impact of Net Zero Targets and Sustainability Reporting on Financial Performance.*

Total grant — $66,337 for the years 2024–2026

Social Sciences and Humanities Research Council – Partnership Engage Grant

Awarded to Sasan Saiy (Co-Investigator) and Amr ElAlfy (Principal Investigator) for the research proposal *The Sustainable Aeronautics and the Readiness for New International Sustainability Standards Board (ISSB) Mandates: Assessing the Impact of Net Zero Targets and Sustainability Reporting on Financial Performance.*

Total grant — $25,000 for the years 2024–2026

Smart Prosperity Institute Research Funding

Awarded to Sasan Saiy (Co-Investigator) and Amr ElAlfy (Principal Investigator) for the research proposal *The Path to a Low-carbon Economy: A Detailed Study of Canada in a Global Context.*

Total grant — $22,610 for the years 2024–2026



Krista Fiolleau

Social Sciences and Humanities Research Council-Insight Grant

Awarded to Krista Fiolleau (Co-Investigator), Joanna Andrejkow at Western University (Principal Investigator), Tisha King (Co-Investigator), and Jeremy Douthit at the University of Arizona (Co-Applicant) for the research proposal *The Effect of Formal and Informal Control Systems on Employees' Honesty.*

Total grant — $93,526 for the years 2024–2027

RECOGNITION OF UWCISA MEMBERS

Fellowships and scholarships

UWCISA makes funds available for Visiting Fellows and doctoral students. Interested applicants should contact the Executive Director.

UWCISA and its members have also established three scholarships that are awarded annually to students enrolled in the Master of Accounting (MAcc) or PhD programs at SAF, as detailed below:

Borys and Rose Boritz Accounting Graduate Scholarship

- Awarded to an MAcc student based on an excellent academic record at the undergraduate level.
- Preference given to students with a minor in International Studies.
- Borys and Rose Boritz were immigrants who escaped persecution and settled in Canada. Although their own opportunities for higher education were curtailed by World War II and its aftermath, they inculcated the importance of education, cultural sensitivity, and international awareness in their children. This endowment is a lasting tribute to their memory.
- The scholarship was graciously established by Efrim Boritz.

Bill Swirsky Graduate Accounting Innovation Scholarship

- Awarded to an MAcc student based on an excellent academic record at the undergraduate level and demonstrated interest in emerging technologies or other innovations that exemplify Bill Swirsky's commitment to accounting innovation.
- Bill Swirsky was a tireless promoter of innovation in the accounting profession, helped establish UWCISA, and was Chair of its Board from inception in 1998 until 2023.
- The scholarship was graciously established by Bill's family, colleagues, friends, and admirers.

Efrim Boritz Doctoral Scholarship in Emerging Technologies

- Awarded to a PhD student in SAF based on academic excellence and demonstrated interest in emerging technologies or accounting information systems (AIS) that exemplify Efrim Boritz's passions and contributions to the fields of accounting and assurance.
- Efrim Boritz is a champion of AIS, information integrity, and assurance in the accounting profession, helped establish UWCISA, and served as its Executive Director from inception in 1998 to his retirement in 2025.
- The scholarship was graciously established by Doug Johnson, Efrim Boritz, and their friends and colleagues.

Farewell and thank you!



We couldn't include just one paragraph in the Director's note about the retirement of Efrim Boritz, the co-founder of UWCISA and our visionary leader and executive director from 1998 to 2025. Efrim has taken UWCISA, its members and board, and the assurance, information systems, and accounting professions on an incredible journey centered around integrity and trust within a constantly evolving landscape of assurance services and information and other technologies.

Since co-founding UWCISA through a landmark partnership between the SAF, CPA Canada, and ISACA, Efrim has been the intellectual architect and guiding force behind UWCISA's mission. He championed the advancement of research, education, and interaction in the fields of information integrity and information systems assurance, recognizing early the profound impact emerging technologies would have on governance, assurance, and public trust. Under his leadership, UWCISA established its internationally respected biennial symposium, fostered interdisciplinary thought leadership, supported high-impact scholarly research, developed educational resources, and built enduring relationships across academia and practice.

Efrim's own research—focused on professional judgment in external and internal auditing, the determinants of judgment quality, and the enhancement of decision-making through decision aids and systems—deeply shaped the UWCISA's intellectual direction. Over a distinguished 40-year career at UW, he authored 24 books and monographs and more than 40 refereed journal articles, supervised doctoral students, served on Canada's Auditing and Accounting Standards Boards, and held numerous leadership roles, including President of the Canadian Academic Accounting Association (CAAA).

He is one of only two individuals to receive all three of the CAAA's top awards — for his contributions to each of research, education, and service — and in 2023 he was inducted into the Canadian Accounting Hall of Fame in further recognition of his extraordinary contributions to the accounting profession in Canada and across the globe. As acknowledgement of all his contributions to the University of Waterloo, Efrim will be awarded the title of Distinguished Professor Emeritus in 2026.

UWCISA expresses its profound gratitude to Efrim for his vision, integrity, scholarship, and unwavering commitment to advancing the fields of information integrity and information systems assurance. His leadership established a strong and principled foundation that will continue to guide UWCISA for years to come. On behalf of the Board, partners, colleagues, and students whose lives and careers he has influenced, we extend our heartfelt thanks and warmest wishes as he enters this well-deserved next chapter. His legacy at UWCISA, SAF, and UW will endure.

Research


TIM BAUER


EFRIM BORITZ


KRISTA FIOLLEAU


BRAD POMEROY


ADAM VITALIS


PEI WANG

THOUGHT LEADERSHIP

Through its research activities, UWCISA provided thought leadership in several areas during 2025.

FOCUS AREA: ASSURANCE

Assurance Solutions and Services: Current and Future Opportunities

Research team: Tim Bauer, Efrim Boritz, Krista Fiolleau, Brad Pomeroy, Adam Vitalis and Pei Wang.

Summary: This project examines the marketplace of assurance services and solutions currently being offered by CPA firms and non-CPAs. Doing so informs the CPA profession and scholars about opportunities, barriers, competition, and trends for CPA firms in the ever-evolving areas of assurance services and tools and technologies used in or assessed within those services. Across two phases of the project, the research team collected data that has contributed to three papers.

Data collection began in Phase 1 with an initial review of practitioner-oriented sources and academic literature to compile a database of the evolution of assurance-related services, and tools and technologies used in such services, to date. Subsequently, the research team conducted 20 interviews with practitioners addressing issues related to the development of new assurance services. In Phase 2 data collection continued with an additional eight interviews. Next, the research team conducted a survey with mainly CPA firm representatives about technologies and tools used in assurance services (with assistance from CPA Canada). Finally, the research team held roundtable discussions with assurance leaders in Canada (with assistance from CPA Canada) and the US (with assistance from the AICPA) about priorities and competition for emerging assurance service areas.

This project has received support from UWCISA.

Developing New Assurance Services

Research team: Tim Bauer, Efrim Boritz, Krista Fiolleau, Brad Pomeroy and Adam Vitalis.

Summary: As part of the Assurance Solutions and Services Project, this paper interviews CPA and other professionals to investigate how new assurance services are developed, informing research and practice about the key factors and the process through which new assurance service offerings emerge.

Data analysis is ongoing and a paper is being prepared for dissemination at conferences by Fall 2026. This paper has received support from UWCISA.


TIM BAUER


EFRIM BORITZ


KRISTA FIOLLEAU


BRAD POMEROY


ADAM VITALIS


LOUISE HAYES

Business Models and Business Model Descriptions: A Research Synthesis

Research team: Efrim Boritz and Louise Hayes, University of Guelph.

Summary: This paper addresses a series of research questions that explore the nature of business models and business model descriptions to better understand how they are and can be used in accounting and auditing.

This paper has been presented at several conferences prior to 2025. It is being revised for resubmission to an academic journal. This paper has received support from UWCISA.

Do Differences in CFO Background Matter to Financial Statement Quality? An Application of Machine Learning and Textual Analytics

Research team: Louise Hayes, University of Guelph and Efrim Boritz.

Summary: This paper evaluates whether CPA competencies contribute to firm performance and reporting quality, including both conventional financial reporting and ESG-oriented reporting. Further, the paper explores uses of machine learning technologies with applications to accounting and auditing.

This paper has received grant funding from various sources including the CAAA and CPA Ontario. It was presented at several conferences in 2024 and at the CAAA Annual Conference in Toronto, ON in June 2025. This paper is being finalized for submission to an academic journal. This paper is co-led by Efrim Boritz, past executive director of UWCISA.

SOC 2 and Related Services as Seen Through Corporate Press Releases

Research team: Efrim Boritz.

Summary: This paper attempts to glean information about SOC 2 reports by searching for and analyzing press releases distributed by service organizations seeking to publicize their SOC 2 reports, presumably to attract customers. While this source of information has limitations, it may help to fill gaps in existing information about SOC 2 reports.

This paper is being prepared for submission to a conference. This paper is led by Efrim Boritz, past executive director of UWCISA.

Improving Specialists' Contributions to Audits

Research team: Tim Bauer, Cassandra Estep, Emory University and Emily Griffith, University of Wisconsin-Madison.

Summary: This paper examines how to motivate specialists to deliver high quality work to auditors, in light of prior findings that specialists and auditors do not always work together effectively. Survey findings indicate valuation specialists feel a range of psychological ownership over their audit work, from low to high. Experimental findings indicate valuation specialists identify more contradictions in audit evidence and make higher quality judgments when they have higher psychological ownership, but only when auditor behavior does not infringe on their work.

This paper is under review for a fourth round at *Contemporary Accounting Research*. This paper is co-led by Tim Bauer, executive director of UWCISA.


CASSANDRA ESTEP


EMILY GRIFFITH

How Are Goodwill Impairments Audited? A Study of Auditors and Valuation Specialists

Research team: Efrim Boritz and Lev Timoshenko, University of Calgary.

Summary: This paper examines how auditors and valuation specialists perform the audit of goodwill/cash generating unit impairment under IFRS, focusing on both interpretation and application of fair value accounting and auditing standards by the two groups.

The paper is being revised for resubmission to Accounting Organizations and Society (AOS). This paper has received support from UWCISA.

Rules of Thumb Used by Auditors and Valuation Specialists when Auditing Complex Fair Values

Research team: Lev Timoshenko, University of Calgary and Efrim Boritz.

Summary: This paper examines the rules of thumb used by auditors and valuation specialists when performing the audit of goodwill/cash generating unit impairment under IFRS, focusing on their effectiveness and compliance with standards.

This paper is under review at Current Issues in Auditing. This paper is co-led by Efrim Boritz, past executive director of UWCISA.

Management Use of Valuation Specialists

Research team: Efrim Boritz, Cedric Leung, Deloitte, and Lev Timoshenko, University of Calgary.

Summary: This paper investigates current business practices related to management's use of valuation specialists, focusing on how specialists are selected, how their work is managed, and how valuation outputs are used within organizations.

This paper has been accepted for presentation at the CAAA Annual Conference, Banff, AB June 18-20, 2026. This paper is led by Efrim Boritz, past executive director of UWCISA.


EFRIM BORITZ


CEDRIC LEUNG

The Influence of Client Incivility and Coping Strategies on Audit Professionals' Judgments

Research team: Tim Bauer, Sean Hillison, Virginia Tech and Ala Mokhtar, McMaster University.

Summary: This paper examines whether client incivility negatively influences auditors' judgments and whether any adverse effects are mitigated using coping strategies. Survey findings indicate auditors experience client incivility at rates too frequent to ignore and they commonly cope in both passive and active ways. Experimental findings indicate auditors who experience client incivility are less likely to challenge aggressive client reporting, while prompting auditors to cope actively (but not passively) mitigates adverse effects of client incivility for some (but not all) judgments.

This paper was published in *Contemporary Accounting Research*, Vol. 42, No. 3, 2025. This paper is co-led by Tim Bauer, executive director of UWCISA.


TIM BAUER


SEAN HILLISON


ALA MOKHTAR

Workplace Incivility Initiated by Clients Against Accounting Professionals

Research team: Tim Bauer, Sean Hillison, Virginia Tech, and Ala Mokhtar, McMaster University.

Summary: This paper examines the prevalence and types of client incivility experienced by professional accountants in auditing, tax, and advisory service lines. Survey findings indicate few differences in the incivility experienced by auditors compared to tax and advisory professionals. Rather, regardless of service line, seniors and managers experience incivility more than staff and partners, with such incivility primarily instigated by clients of a similar rank. Findings suggest that client incivility is not just an issue within auditing but is widespread across the accounting profession.

This paper was presented at the University of Central Florida in April 2025 and at the McMaster Accounting Research Symposium in May 2025. It is being prepared for submission to an accounting journal. This paper is co-led by Tim Bauer, executive director of UWCISA.

Do Non-Professional Investors Weight Auditor Disclosures in their Valuation Judgments? A Replication of Dennis, Griffin, and Zehms (2019)

Research team: Brad Pomeroy, Adam Vitalis, and Donnie Young, Indiana University.

Summary: This paper conducts four replication studies to investigate whether variation in need for cognitive closure (NFCC) can explain Dennis, Griffin, and Zehms' (2019) surprising null result that suggests non-professional investors "struggle to weight" auditor disclosures in their valuation judgments. The paper's results suggest that investors DO weight auditor disclosures even in the absence of management disclosures and visual cues, BUT this conclusion is NOT sensitive to NFCC.

This paper received an Insight Grant from the Social Sciences and Human Research Council of Canada. It was presented at several conferences and workshops prior to 2025. It is under review at *Auditing: A Journal of Practice and Theory*. This paper is co-led by Adam Vitalis, an associate director of UWCISA.


BRAD POMEROY


ADAM VITALIS


DONNIE YOUNG

Do firms provide informative disclosures in an environment of extreme uncertainty? Evidence from the COVID-19 pandemic

Research team: Changling Chen, Theo Stratopoulos, Victor Xiaoqi Wang, California State University Long Beach, and Bin (Betty) Xing, Baylor University.

Summary: This paper analyzes firm reactions in the first quarter (January-March) of 2020, as they are manifested in firm disclosures and the value of accounting information, in a setting where there were no prior disclosures to follow nor guidance from the Security and Exchange Committee (SEC).

The paper was presented at a conference prior to 2025. It is currently under journal review. This paper is co-led by Theo Stratopoulos, an associate director of UWCISA.


CHANGLING CHEN


THEO STRATOPOULOS


VICTOR XIAOQI WANG


BIN (BETTY) XING


YIYANG ZHANG


RUSSELL BARBER

The Impact of IT Capability on ESG Performance

Research Team: Theo Stratopoulos, Yiyang Zhang, Youngstown State University, and Russell Barber, University of Colorado-Denver.

Summary: This paper investigates the link between a firm's IT Capability and its Environmental, Social, and Governance (ESG) performance, addressing the empirical gap concerning the impact of technology investments on ESG outcomes. Findings indicate that stronger IT capability generally improves a firm's environmental performance, but the effect is weaker in tech-heavy firms and firms with overly optimistic views about technology.

This paper was presented at the annual Accounting Information Systems Midyear Meeting in Boca Raton, Florida in February 2025, the CAAA Annual Conference in Toronto, ON in June 2025, and the 65th World Continuous Audit and Reporting Symposium in Sharjah, United Arab Emirates in December 2025. The paper is co-led by Theo Stratopoulos, an associate director of UWCISA.

Auditors or consultants? How IT specialists' dual roles impact ICFR judgments

Research team: Tim Bauer, Paige Csere, Auburn University, and Cassandra Estep, Emory University.

Summary: This paper examines whether the way IT specialists think about their dual roles of auditor and consultant impacts how they respond to management persuasion attempts when evaluating internal control deficiencies. Experimental findings indicate that, among IT specialists who perceive higher role conflict: 1) those who think about their dual roles as less integrated are more swayed by management and provide lower severity assessments when management persuasion attempts are present versus absent; but 2) those who think about their roles as more integrated are not swayed by persuasion attempts and consistently provide higher severity assessments.

This paper was presented at several workshops in the Netherlands in June 2025, including RSM Erasmus University, Tilburg University, University of Amsterdam, and Vrije University Amsterdam. It will be presented at additional workshops in 2026 before preparing for journal submission. This paper is co-led by Tim Bauer, executive director of UWCISA.


TIM BAUER


PAIGE CSERE


CASSANDRA ESTEP


ALEC CRAM


JONATHAN YUAN


JEFFREY PROUDFOOT


HAARIS MIAN


JOHN D'ARCY


ALEX BENLIAN

FOCUS AREA: CYBERSECURITY AND AIS

Cyber Warrior or Cyber Washing? Examining the Expertise of Board Members Serving on Cybersecurity Committees

Research team: Alec Cram, Jonathan Yuan, University of Saskatchewan, Jeff Proudfoot, Bentley University, and Haaris Mian.

Summary: This paper draws on expertise theory to investigate if the background of board members serving on cybersecurity committees is sufficient to fulfill their governance responsibilities. We examine the education, work experience, and training of 239 cybersecurity committee members across 62 firms and find that most directors are experienced board members and/or business executives, but very few have expertise in cybersecurity.

This paper was presented at the Annual Security Conference in Las Vegas, Nevada in April 2025 and an updated version was submitted to Information Systems Management. This paper is led by Alec Cram, an associate director of UWCISA.

Barking Up the Wrong Tree? Reconsidering Policy Compliance as a Dependent Variable within Behavioral Cybersecurity Research

Research team: Alec Cram, John D'Arcy, University of Delaware

Summary: This paper considers the limitations of using cybersecurity policy compliance as a dependent variable and suggests that studying compliance reveals only a partial picture of employee behavior. Recommendations are offered for future research.

This paper was published in Information Systems Frontiers, 2025. This paper is led by Alec Cram, an Associate Director of UWCISA.

The Only Thing We Have to Fear Is Fear Itself: The Influence of Instability in the Cybersecurity Fear Control Process

Research team: Alec Cram, John D'Arcy, University of Delaware and Alex Benlian, Technische Universität Darmstadt.

Summary: This paper involves a longitudinal study that draws on the fear control process and extends our understanding of it in the organizational cybersecurity context, with employees completing experience-sampling surveys with multiple measurements each week over an eight-week period. Results from our study reveal

important insights regarding the impact of varying cybersecurity stimuli on individual-level threat and efficacy perceptions, alongside an increased clarity on the importance of short-term fluctuations in fear and maladaptive responses, as well as the role of an organization's cybersecurity climate in this process.

This paper was conditionally accepted to the MIS Quarterly Special Issue on Registered Reports. This paper is led by Alec Cram, an associate director of UWCISA.

Now and Later? Comparing a Nomothetic and Idiographic Analysis of Cybersecurity Fatigue

Research team: Alec Cram, John D'Arcy, University of Delaware and Alex Benlian, Technische Universität Darmstadt.

Summary: This paper uses a three-wave, repeated measures survey over a period of seven months and compares the nomothetic results at wave 1 with the idiographic results spanning waves 1-3. Together, the analysis reveals conflicting theoretical conclusions; namely, that only two of the four significant relationships at wave 1 were significant over waves 1-3. We draw on ego-depletion theory as a preliminary theoretical explanation for this finding and highlight paths for future inquiry.

This paper is to be presented at the Hawaii International Conference on System Sciences in Maui in January 2026. This paper is led by Alec Cram, an associate director of UWCISA.

Weathering the Storm: Charting a Course for Organizations to Navigate the Raging Tempest of Cybersecurity Regulations

Research team: Jeffery Proudfoot, Bentley University, Alec Cram, and Stuart Madnick, MIT Sloan School of Management.

Summary: This paper aims to clarify how cybersecurity regulations are operationalized in organizations, as well as reveal the compliance and performance consequences of cybersecurity regulations.

This paper was published in the European Journal of Information Systems, Vol. 34, No. 3, 2025. This paper is co-led by Alec Cram, an associate director of UWCISA.


JEFFREY PROUDFOOT


STUART MADNICK

Conceal or Communicate? Organizational Notifications to Stakeholders Following Ransomware Attacks

Research team: Alec Cram, Albert Chan, Jonathan Yuan, University of Saskatchewan, and Dennis Joo.

Summary: The paper examines the organizational communications following 101 ransomware attacks. The study's results indicate that stakeholder notifications tend to be either customer-focused or investor-focused, but are rarely both. Findings also reveal that that most notifications contain at least a basic level of detail, but that about one in ten communications are insufficiently informative.

This paper was presented at an academic conference in 2024. This paper is led by Alec Cram, an associate director of UWCISA.

May We Have Your Attention Please? Exploring How Employee Attention Influences Cybersecurity Behaviour

Research team: Alec Cram, John D'Arcy, University of Delaware and Alex Benlian, Technische Universität Darmstadt.

Summary: This project will address the managerial challenge of directing employee attention towards the fulfillment of day-to-day cybersecurity responsibilities. Rooted in a human-centric view of cybersecurity, we seek to understand how fluctuations in employee attention to cybersecurity responsibilities relate to (in)secure behaviour.

This three-year project received funding of $223,529 from the National Cybersecurity Consortium in November 2025. Project activities will commence in January 2026. This project is led by Alec Cram, an associate director of UWCISA.


ALEC CRAM


JOHN D'ARCY


ALBERT CHAN


DENNIS JOO


JONATHAN YUAN


ALEX BENLIAN

FOCUS AREA: DATA ANALYTICS

Reducing the Incidence of Biased Algorithmic Decisions Through Feature Importance Transparency: An Empirical Study

Research team: Sepideh Ebrahimi, Esraa Abdelhalim, University of Windsor, Khaled Hassanein, McMaster University and Milena Head, McMaster University.

Summary: As firms move toward data-driven decision making using algorithmic systems, concerns are raised about the lack of transparency of these systems which could have ramifications related to users' trust and the potential for provoking discriminatory decisions. This paper finds that feature importance, a common transparency-enhancing approach, is effective when biased recommendations include direct discrimination (e.g., based on protected grounds such as gender) but is of little assistance when discrimination is indirect.

This paper was published in the *European Journal of Information Systems*, Vol. 34, No. 4, 2025. This paper is co-led by Sepideh Ebrahimi, a member of UWCISA.


SEPIDEH EBRAHIMI


ESRAA ABDELHALIM


KHALED HASSANEIN


EFRIM BORITZ


MALIK DATARDINA


MILENA HEAD


THEO STRATOPOULOS


DUANE KENNEDY

How to Implement a Data Analytics and Emerging Technologies-Enabled Accounting Curriculum

Research team: Duane Kennedy and Theo Stratopoulos.

Summary: This paper provides a framework to help educators integrate Data Analytics and Emerging Technologies (AET) into the accounting program at their institutions, which will equip students with essential and advanced AET skills to employ in tools like spreadsheets, Tableau, Alteryx, R, Python, RPA, and blockchain. The paper also outlines the strategic development and implementation challenges experienced by the authors in developing their program.

The paper was published in the *Journal of Emerging Technologies in Accounting*, Vol. 22, No. 1, 2025. The paper is co-led by Theo Stratopoulos, an associate director of UWCISA.

Information Integrity Control Guidelines

Research team: Efrim Boritz and Malik Datardina.

Summary: The objectives of the project are to 1) define information integrity and to identify information integrity risks and controls for mitigating those risks, 2) define assurance practices for information integrity services, and 3) interview or survey audit team members about their views on information integrity risks, controls and assurance practices.

Funding is being provided by CPA Canada. Prior to 2025, this project led to publications and/or guidance on information integrity and data integrity assurance produced by CPA Canada and the AICPA. This project has received support from UWCISA.

FOCUS AREA: EMERGING TECHNOLOGIES

Does Industry Classification Matter: Evidence from IT Budgets

Research team: Duane Kennedy, Byron Song, Hong Kong Baptist University, and Theo Stratopoulos.

Summary: The paper aims to discover if the industry classification and/or the level of aggregation within a selected classification matter. Empirical studies tend to control for industry structure using proxies from one of the common industry classifications (e.g., SIC, Fama-French, NAICS) and select a level of aggregation within this classification (e.g., SIC2 or SIC3). Given these choices are not justified, one could assume that they do not seem to matter. The paper is being prepared for submission to the *Journal of Information Systems*. This paper is co-led by Theo Stratopoulos, an associate director of UWCISA.

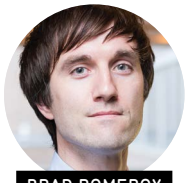

DUANE KENNEDY


THEO STRATOPOULOS


BYRON SONG


EFRIM BORITZ


KRISTA FIOLLEAU


BRAD POMEROY

CPA Familiarity with Emerging Technologies and Tools

Research team: Tim Bauer, Efrim Boritz, Krista Fiolleau, Brad Pomeroy, Adam Vitalis

Summary: As part of the Assurance Solutions and Services Project, this paper surveys CPA professionals to examine emerging technologies and tools (T&T's) they encounter or use in practice, and which T&T's they believe will have the most impact or interest. These perspectives show which T&T's have most penetrated the CPA workplace and which require additional factors to become prominent in the profession.

This paper was presented at several workshops and conferences prior to 2025 and it has been invited for second round submission at the *International Journal of Accounting Information Systems*. This paper has received support from UWCISA.

Algorithm versus Human Managers: The Impact of Manager Type and Communication Frequency on Auditors' Underreporting Behavior

Research team: Tim Bauer, Samantha Seto, Simon Fraser University, and Jenny Ulla, University of Illinois at Urbana-Champaign.

Summary: This paper examines how auditors respond to varying approaches to managing audits, via new technology or management style. In particular, we predict and find that auditors underreport the time they spend on audit tasks more when the manager in charge of time/budget is a human vs. an algorithm, but increase (decrease) their underreporting as the algorithm (human) manager increases reminders about the budget.

This paper received an Insight Development Grant from the Social Sciences and Human Research Council of Canada. It was presented at several conferences and workshops in 2024 and at the European Accounting Association Annual Congress in Rome, Italy in May 2025. Additional data collection occurred in Fall 2025 and the paper is being prepared for submission to an academic journal.

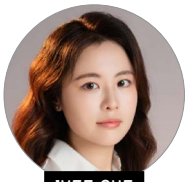
This paper is co-led by Tim Bauer, an associate director of UWCISA.


ADAM VITALIS


TIM BAUER


SAMANTHA SETO


JENNY ULLA


IVEE CHE


ERIC COHEN

From VisiCalc to ChatGPT: Unraveling the Perfect Storm of Emerging Technologies and its Implications for the Accounting Profession

Research team: Theo Stratopoulos, Ivee Che, Xiamen University, and Eric Cohen .

Summary: The rapid evolution of technology in the past 30 years has transformed various industries, including accounting. The aim of the paper is to explore the interconnectedness and evolution of emerging technologies and their profound implications for the accounting profession.

This paper is currently at the manuscript write-up stage.This paper is led by Theo Stratopoulos, an associate director of UWCISA.

The Impact of Anthropomorphism on Users' Adoption of Conversational Agents' Recommendations

Research team: Sepideh Ebrahimi, Christian Matt, University of Bern and Izak Benbasat, University of British Columbia.

Summary: This paper intends to investigate whether the anthropomorphism of CAs impact users' perception of the quality of their recommendation and whether participants are likely to be more forgiving of low quality recommendations when they are given by anthropomorphized agents.

This paper is currently at the manuscript write-up stage. This paper is co-led by Sepideh Ebrahimi, a member of UWCISA.


IZAK BENBASAT


CHRISTIAN MATT


SEPIDEH EBRAHIMI


KAMRAN ESHGHI


SAMIRA FARIVAR


THEO STRATOPOULOS


VICTOR XIAOQI WANG


EFRIM BORITZ

Artificial intelligence and accounting research: a framework and agenda

Research Team: Theo Stratopoulos and Victor Xiaoqi Wang, California State University Long Beach

Summary: This paper proposes a framework that classifies AI-accounting research along two dimensions: research focus (accounting-centric versus AI-centric) and methodological approach (AI-based versus traditional methods). We apply this framework to papers from the IJAIS special issue and recent AI-accounting research published in leading accounting journals to map existing studies and identify research opportunities.

This paper was published in the International Journal of Accounting Information Systems, Vol. 56, 2025. The paper is co-led by Theo Stratopoulos, an associate director of UWCISA.

The rise of conversational agents: can they keep up with humans? Evidence from a meta-analysis

Research team: Sepideh Ebrahimi, Samira Farivar, Carleton University and Kamran Eshghi, Laurentian University.

Summary: The paper investigates human users' cognitive, affective, and behavioural responses to interactions with conversational agents versus human agents. Results reveal few differences between the two types of agents, except that users' cognitive responses are more influenced by conversational agents than human agents.

This paper is being considered for publication at Behaviour and Information Technology. This paper is co-led by Sepideh Ebrahimi, a member of UWCISA.

Using Generative AI for Research: Evidence from a Study of Management's Use of Valuation Specialists

Research team: Efrim Boritz and Joel Palmer.

Summary: This paper reports on how to use generative AI tools (Perplexity, Claude, ChatGPT and AIRA) to conduct a literature review, demonstrating its method in the area of management's use of valuation specialists.

This paper was presented at the 2025 UWCISA Symposium and is being revised for submission to a journal. This paper is led by Efrim Boritz, past executive director of UWCISA.

FOCUS AREA: INTERNAL AUDIT

Internal Auditors' Experience with Emerging Technologies and Tools

Research lead: Efrim Boritz.

Summary: The paper surveys IIA Toronto chapter members to understand their *experience with emerging technologies* and tools.

The completed survey served as the basis for presentations to the IIA Toronto Chapter and at the Municipal Internal Auditors Association of Ontario Fall Workshop in 2023.

The paper is currently under review at the *International Auditing Journal*. This paper has received support from UWCISA.



EFRIM BORITZ



Sponsoring of Research Symposia

The 14th Biennial Research Symposium was successfully held in a hybrid format from September 25–27, 2025. In-person sessions took place at EY Tower, 100 Adelaide Street West, Toronto, ON, alongside virtual participation via Zoom.

The symposium brought together academics and practitioners to explore emerging issues in information integrity and information systems assurance — with this year's focus on sustainability and its intersection with advanced technologies — continuing the Centre's strong tradition of fostering collaboration and knowledge exchange.

Day 1 focused on practitioner-oriented workshops, Day 2 blended both practitioner-oriented panels and research-oriented presentations, and Day 3 focused on research-oriented presentations.

Explore the program

Thank you to our sponsors of UWCISA's 2025 Symposium!

PLATINUM

The Hub for Sustainability Integration

GOLD

ISACA Toronto Chapter

ISACA Toronto Chapter

IIA Canada

The Institute of Internal Auditors
L'Institut des auditeurs internes
Canada

BRONZE

International Journal of Accounting Information Systems

Looking ahead, the 15th Biennial Research Symposium is planned for September 2027. Further details regarding dates and location will be announced in due course.



Education and Knowledge Transfer

Courses and programs

Business Analytics and Emerging Technologies

Under the leadership of Malik Datardina, UWCISA sponsored the development of a capstone course on business analytics and emerging technologies. The course provides students hands-on experience building apps and tools. It was offered at the undergraduate level for the first time in Fall 2025; in the Fall of 2027 it will transition to be offered as part of the +Tech specialization in the new AFM undergraduate curriculum.

Internal Audit

Under the leadership of Adam Vitalis, and with input of an advisory committee of representatives from IIA Canada and IIA Toronto Chapter, UWCISA sponsored the development of an undergraduate internal audit course. Upon creation, it was the only such course being offered at Canadian universities. Beginning in Spring 2026, the course will be offered at both the undergraduate and graduate levels. In Fall 2027 it will transition to be offered as part of the Assurance specialization in the new AFM undergraduate curriculum.



MALIK DATARDINA



GISELLE OBENDORF



ADAM VITALIS

Advanced Technologies and Audit Procedures

With support from UWCISA and its directors, Giselle Obendorf developed a Masters of Accounting course on advanced technologies and audit procedures, first offered in Spring 2023 and continuing annually in the MAcc program through Spring 2027. The course explores how to use data analytic techniques and advanced technologies to address both external and internal audit issues. Beginning in 2028, the course will be adapted into a new elective on Audit Analytics and Technology-Enabled Assurance within the redesigned MAcc program.

In addition, Giselle Obendorf developed AFM 445, an undergraduate audit data analytics course, first offered in Fall 2024 and continuing each Fall term since. While related to the MAcc course, AFM 445 includes distinct content and assessments tailored to undergraduate students. This course will transition into the Assurance specialization within the new AFM undergraduate curriculum beginning in Fall 2027.

Sustainability and Financial Management (SFM) program

The Sustainability and Financial Management (SFM) program is a relatively new program developed at the University of Waterloo in collaboration with the School of Accounting and Finance (SAF) and the School of Environment, Enterprise and Development (SEED). Students can earn their CPA or CFA designation, grounding their accounting and finance skills with faculty in SAF while gaining a deep understanding of sustainability issues from faculty in SEED. Sasan Saiy is a co-director of the SFM program and Adam Vitalis is a member of the SFM curriculum committee.


SASAN SAIY


ADAM VITALIS

Emerging Technologies Advisory Group

Under the leadership of Theo Stratopoulos and Nancy Vanden Bosch, UWCISA has organized a team of industry experts with the objective of meeting periodically to discuss and identify emerging technologies and how they will affect the curriculum in SAF programs. The team also includes Will Xiang (Independent Cybersecurity Consultant), Andrew Morgan (Partner Assurance, EY), Bo Wang (VP Taxation, Treasury and Intelligent Process Automation, Cineplex), May Leung (Senior Manager Global Audit and Assurance Analytics, Deloitte), and Brandon Weekes (Partner Assurance – Controls, Deloitte).


THEO STRATOPOULOS


NANCY VANDEN BOSCH


TYLER THOMAS


BEHRAM FAROOGH


EFRIM BORITZ

School of Accounting and Finance (SAF) Master's Research Paper

The MAcc Program in SAF at the University of Waterloo offers students the option to complete a Master's Research Paper (MRP) instead of a 4th elective course, over the eight months (Jan–Aug) of the program.

In August 2025, one student successfully completed an MRP in the assurance area: Timothy Chen, as supervised by Tyler Thomas.

ISACA Toronto Chapter Tech Track Event — Southwestern Ontario

Under the leadership of Behram Faroogh, Faroogh Consulting Services, UWCISA helped to create a Southwestern Ontario (SWO) version of the Toronto Chapter's Tech Track event, which was held at the University of Waterloo in October 2025 and featured Efrim Boritz as a keynote speaker. The event is aimed at students, alumni, and professionals in the SWO area who would like to learn more about Cybersecurity, AI and Data Analytics, IT Audit/Risk/Governance, and Cloud Engineering.

Textbooks and curriculum

Data Analytics and Emerging Technologies

Under the leadership of Theo Stratopoulos, UWCISA sponsored the development and rollout of a Data Analytics and Emerging Technologies (DAandET) curriculum within the accounting program at the University of Waterloo.

For more details about the curriculum please read the article by Duane Kennedy and Theo Stratopoulos: How to Implement a Data Analytics Enabled Accounting Curriculum.


THEO STRATOPOULOS


HAARIS MIAN


DUANE KENNEDY

Robotic Process Automation

Under the leadership of Theo Stratopoulos, UWCISA has arranged an academic partnership with UiPath to provide SAF students with access to its software and teaching material.

In addition, under the leadership of Haaris Mian, UWCISA developed a hands-on workshop of the use of MS Power Automate for SOC 2. It was offered to MAcc students in the ACC 690 Topics in Assurance course to demonstrate automation possibilities for SOC 2 services.

Piloting LLM-Enabled Interactive Avatars for Accounting and Finance Education

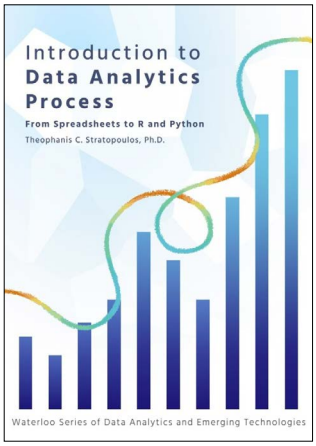
Under the leadership of Theo Stratopoulos, Malik Datardina, and Nancy Vanden Bosch, UWCISA has begun a pilot project to assist undergraduate accounting and finance students who often struggle with foundational quantitative concepts. The pilot seeks to address these learning gaps by investigating the use of AI-driven avatars that provide scalable, on-demand support via personalized, interactive tutoring.


MALIK DATARDINA

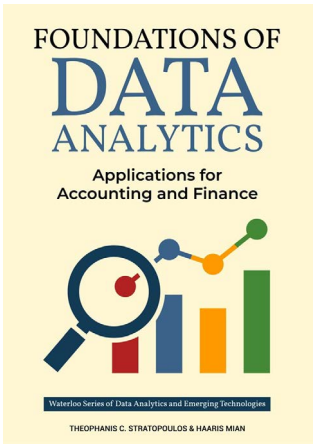

NANCY VANDEN BOSCH

Waterloo Series on Data Analytics and Emerging Technologies

To establish SAF as a leader in data analytics and emerging technologies, UWCISA – through the leadership of Theo Stratopoulos – has embarked on a campaign to develop a series of books, cases, and other teaching material. Royalties generated from sales to SAF students are donated to UWCISA to support scholarships. Two textbooks have been published to date:



Introduction to Data Analytics Process: From Spreadsheets to R and Python (First Edition) by Theo Stratopoulos; published by VitalSource.



Foundations of Data Analytics: Accounting and Finance Applications by Theo Stratopoulos and Haaris Mian; published by VitalSource.

Several integrated cases have also been developed. The latest case is:

- **Cinema Paradiso** by Theo Stratopoulos, Nancy Vanden Bosch, and Bo Wang, VP Finance and Process Automation at Cineplex; the case and its dataset were featured in the 6th Annual Dashboard Competition (2025) and can be used to introduce data analytics in performance management classes.

Student case competitions, mentorship, and awards

Interactive Business Dashboard Competition

Co-sponsored by UWCISA and the ISACA Toronto Chapter and led by Theo Stratopoulos, the 6th Annual Interactive Business Dashboard Competition was held in December 2025. The competition began with over 120 teams (all 500+ AFM112 students). Three teams advanced to the final round and presented their dashboards to a panel of industry and academic experts: Bo Wang (VP Finance and Process Automation at Cineplex) and Nancy Vanden Bosch (Professor at SAF).



Congratulations to the first prize winners who will share the $1,000 prize: Hafiz Murty, David Thangarajah, Mashen Topalovic, Allison Xu, and Natasha Zaborski.

A4S Competition

Sasan Saiy and Adam Vitalis have partnered with Brookfield to mentor SFM student teams for the annual A4S Competition. The competition challenges teams to develop sustainable business models. Two teams who are competing in the 2026 competition began preparing their materials in Fall 2025, with finals to occur in Winter 2026. Two teams competed in the Winter 2025 competition but did not advance to the finals.

PhD and Academic Career Mentorship Program in Audit and Assurance, Cybersecurity, or Accounting Information Systems (AIS)

Under the leadership of Tim Bauer and sponsored by ISACA Toronto Chapter, UWCISA created the UWCISA PhD and Academic Career Mentorship Program in Audit and Assurance, Cybersecurity, or Accounting Information Systems (AIS). Its purpose is to provide UW SAF undergraduate and MAcc students who are interested in pursuing a PhD with an opportunity to learn more about an academic career in audit, assurance, cybersecurity, AIS, or related fields.

In 2025, two previous undergraduate mentees, Aradhna Karwal and Emma Xie, worked as a research assistant for Tim Bauer and both have proposed research ideas that they are working on with Tim as they consider applying to PhD programs in the next couple of years.

Practitioner resources

AI and Other Technologies, Cybersecurity, and More

ThinkTwenty20 Magazine invited UWCISA to convert several magazine articles into podcasts. These podcasts span a variety of AI and technology-related, cyber-related, and other topics.

CPD service and workshops

COFFEE BREAK PD™

Under the leadership of Malik Datardina, in the Fall of 2023 UWCISA created Coffee Break PD™, which offers short-form CPD to practitioners for a fee. This project has been paused as UWCISA seeks to devote consistent time and resources to manage the content.

WORKSHOPS

Workshops are generally half day sessions on topics of interest to academics and practitioners. Past workshops have covered topics such as Data Value Creation, Robotic Program Automation, and AI. Typically, workshops invite presentations from panels composed of industry leaders as well as academics and give rise to extensive interaction between the panel and audience members.

Workshops offered in 2025 included:

1. SOC 2 and SOC 2+ Assurance Services; February.
2. Hands-On Use of UiPath; March.
3. ChatGPT Essentials for Internal Auditors; March.
4. SOC 2 Essentials; April and November.
5. The Accountability Crisis of AI in Assurance; December.

Workshops to be offered in 2026 include:

1. Generative AI Tools and Prompt Engineering Essentials; January.
2. Advanced AI Prompting, Agentic AI, and Issues in AI Use for Internal Auditors; February.





Interaction

ALLIANCES AND RELATIONSHIPS

As part of its mission to interact with academe and practice, UWCISA seeks to create and sustain relationships with academic units with similar objectives and professional associations with an interest in information integrity and information systems assurance.

During the year, UWCISA supported the following activities and organizations:

AICPA

- Efrim Boritz is a member of the AICPA's Trust Services Information Integrity Task Force and Cybersecurity Assurance Task Force.
- Theo Stratopoulos is a member of the joint CPA Canada/ AICPA AI Project Advisory Group.

CPA CANADA

- Malik Datardina is a member of CPA Canada's Audit and Assurance Technology Committee.
- Louise Hayes is a member of CPA Canada's Audit and Assurance Technology Committee.
- Theo Stratopoulos is a member of the joint CPA Canada/ AICPA AI Project Advisory Group.

INSTITUTE OF INTERNAL AUDITORS (IIA)

- Adam Vitalis is the UWCISA liaison with IIA and is leading UWCISA's initiative in assisting the School of Accounting and Finance to maintain its accredited program under the IIA's IAEP (Internal Audit Education Program). Adam and Tim Bauer are updating course offerings to continue this initiative.

ThinkTWENTY20 Magazine

- UWCISA has an alliance with ThinkTWENTY20 Magazine and various members of UWCISA contribute to the magazine's articles and/or create podcasts from the magazine's articles.

UNIVERSITY OF WATERLOO CYBERSECURITY AND PRIVACY INSTITUTE (CPI)

- Efrim Boritz is a member of the CPI's Operational Security expertise area.
- Alec Cram is on the CPI Board of Directors and is a member of the CPI's Human and Societal Aspects of Security and Privacy, and Operational Security expertise areas.
- Theo Stratopoulos is a member of the CPI's Human and Societal Aspects of Security and Privacy, Data Science Security and Privacy, and Privacy-enhancing Technologies expertise areas.

WATERLOO ARTIFICIAL INTELLIGENCE INSTITUTE (WATERLOO.AI)

- Efrim Boritz is an academic member of Waterloo.AI.
- Theo Stratopoulos is an academic member of Waterloo.AI.

EDITORIAL BOARDS AND JOURNALS

- Accounting Forum — Krista Fiolleau
- Accounting, Organizations, and Society (AOS) — Tim Bauer
- Accounting Perspectives (AP) — Louise Hayes, Krista Fiolleau (associate editor), Adam Vitalis (associate editor)
- Auditing: A Journal of Practice and Theory (AJPT) — Tim Bauer (also ad-hoc editor), Adam Vitalis
- Contemporary Accounting Research (CAR) — Tim Bauer (also ad-hoc editor), Krista Fiolleau
- Information Systems Journal (ISJ) — Alec Cram (associate editor)
- International Journal of Accounting Information Systems (IJAIS) — Efrim Boritz, Theo Stratopoulos (associate editor)
- Journal of Emerging Technologies in Accounting (JETA) — Efrim Boritz (editor)
- Journal of Information Systems (JIS) — Louise Hayes (editor)

Special issue of the *International Journal of Accounting Information Systems*

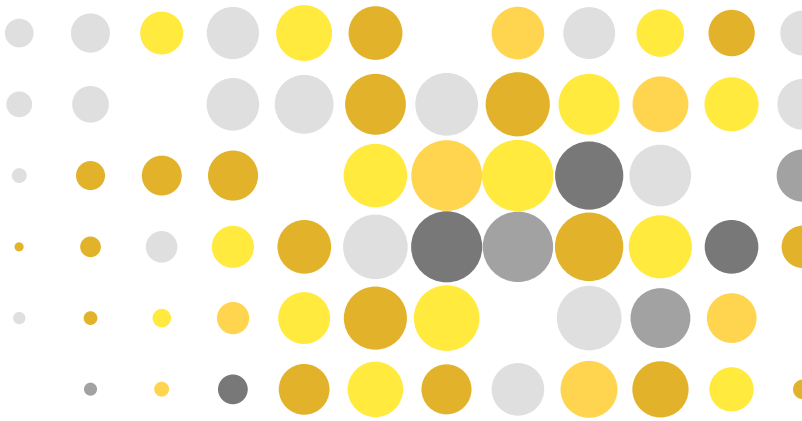
Theo Stratopoulos and Victor Wang are the guest editors of the *International Journal of Accounting Information Systems* for a special issue on Artificial Intelligence, with a focus on Large Language Models, in Accounting. This special issue aims to explore the transformative impact of AI and LLMs on accounting practice and research; it was published in December 2025.

Special issue of *Accounting Perspectives*

Tim Bauer is the guest editor of *Accounting Perspectives* for a special issue on Audit and Assurance Research. This special issue aims to provide insights into how audit and assurance practices — in either financial statement or non-financial statement contexts — are being carried out or demanded by individuals, teams, organizations, and/or automated tools. A call for papers was placed in May 2024 and the special issue will be published in 2026.

Special issue of the International Journal of Accounting Information Systems

Efrim Boritz and Tim Bauer are guest editors of the International Journal of Accounting Information Systems for a special issue on the 2025 Research Symposium on Information Integrity and Information Systems Assurance. This special issue showcases papers presented at UWCISA's 14th Biennial Symposium and underwent review at IJAIS; papers accepted for publication will appear at the link above when they are complete.



DISSEMINATING BEST PRACTICES

As further commitment to its mission to interact with academe and practice, UWCISA personnel made presentations at and attended a number of conferences and workshops during 2025.

TIM BAUER

- Presented *Algorithmic versus Human Managers: The Impact of Manager Type and Communication Frequency on Auditors' Underreporting Behavior* at the European Accounting Association Annual Congress; Rome, Italy, May 2025.
- Presented *Client Incivility in Public Accounting* at the 2025 McMaster Accounting Research Symposium; Hamilton, ON, May 2025.
- Presented *Auditors or Consultants? How IT Specialists' Dual Roles Impact ICFR Judgments* at:
  - Tilburg University; Tilburg, Netherlands, June 2025.
  - Rotterdam School of Management at Erasmus University; Rotterdam, Netherlands, June 2025.
  - Vrije University of Amsterdam; Amsterdam, Netherlands, June 2025.
  - University of Amsterdam; Amsterdam, Netherlands, June 2025.

EFRIM BORITZ

- Presented (with Joel Palmer) *Using Generative AI for Research: Evidence from a Study of Management's Use of Valuation Specialists* at the 2025 UWCISA Symposium; online, September 2025.
- Presented *CPA-provided Assurance Services, with a Focus on SOC 2* at Rutgers University, New Brunswick, NJ, April 2025.


TIM BAUER


EFRIM BORITZ


ALEC CRAM


THEO STRATOPOULOS

ALEC CRAM

- Presented *Cyber Warrior or Cyber Washing? Examining the Expertise of Board Members Serving on Cybersecurity Committees* at the Annual Security Conference; Las Vegas, NV, April 2025.
- Presented *The Only Thing We Have to Fear Is Fear Itself: The Influence of Instability in the Cybersecurity Fear Control Process* at Orebro University; Orebro, Sweden, October 2025.

THEO STRATOPOULOS

- Presented (with Ian Zhang) *The Impact of IT Capability on Environmental Performance* at the AIS Mid-year meeting; Boca Raton, Florida, January 2025.
- Presented Assessing the *Impact of IT Investments on Environmental Performance* at the 66th World Continuous Auditing and Reporting Symposium; Lisbon, Portugal, May 2025.
- Presented *Tech-Powered Sustainability: The IT–Environmental Performance Nexus* at:
  - Canadian Academic Accounting Association Annual Meeting; Toronto, ON, June 2025.
  - Egyptian Online Seminars in Business Accounting and Economics; online, September 2025.
  - Wilfrid Laurier University; Waterloo, ON, December 2025.



COMMUNICATION

UWCISA shares information with stakeholders and other interested parties through various sources: our website and main portal; our key social networks like Facebook, LinkedIn, X, and Instagram; and our weblog.

UWCISA has once again produced an annual report for 2025. Past reports from 2016-2024 are available and reports from 1998-2015 can be requested here.

UWCISA Facebook

UWCISA LinkedIn

UWCISA X

UWCISA Instagram

UWCISA Website

Our website includes calls for papers and research proposals, a resources section, a number of links and downloadable content, and the UWCISA blog.

UWCISA Weblog

Malik Datardina creates content for the blog about artificial intelligence, technology, security, and innovation in the world of audit and business.

Centre personnel

DIRECTORS



TIM BAUER

PhD, CPA, CA
Associate Professor and
J. Page R. Wadsworth
Junior Chair in Accounting
and Finance
Executive Director, UWCISA



J. EFRIM BORITZ

PhD, FCPA, FCA, CISA
Professor and CPA Ontario
Chair in Accounting
Retired Executive Director,
UWCISA



W. ALEC CRAM

PhD, CISA, CISSP
Associate Professor and
J. Page R. Wadsworth Junior
Chair in Accounting
and Finance
Associate Director, UWCISA



ADAM VITALIS

PhD, CPA (MN)
Associate Professor
Associate Director, UWCISA



THEOPHANIS STRATOPOULOS

PhD
PwC Professor
Associate Director, UWCISA

Faculty



NANCY VANDEN BOSCH

MAcc, CPA, CA, CMA
Stan Laiken Teaching Fellow
Associate Professor –
Teaching Stream



DARREN CHARTERS

JD, MBA
Associate Professor –
Teaching Stream



MALIK DATARDINA

MAcc, CPA, CA, CISA
Assistant Professor –
Teaching Stream



SEPIDEH EBRAHIMI

PhD, MSc, BSc
Assistant Professor



KRISTA FIOLLEAU

PhD, BComm, CPA, CA
Associate Professor



HAARIS MIAN

BBA
Assistant Professor –
Teaching Stream



GISELLE OBENDORF

BBA, MA, CPA, CA
Assistant Professor –
Teaching Stream



BRADLEY POMEROY

PhD, BA, BComm, MSc
Associate Professor



SASAN SAIY

PhD, MASc, MEcon, BASc
Associate Professor

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Tim Bauer, Executive Director
Centre For Information Integrity And Information Systems Assurance
School Of Accounting And Finance University Of Waterloo, ON N2L 3G1
519-888-4567, EXT. 42533 | tdbauer@uwaterloo.ca

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