

# AIS Newsletter

## Fall 2016

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### President's Letter

Hello all and welcome to the Fall 2016 term. I hope everyone has a smooth transition from summer. Before I begin, I want to thank my Presidential predecessors, most immediately Rick Dull and Tina Loraas, for their hard work and dedication. I also want to thank everyone who is volunteering within the section this academic year. You are the ones who improve the AIS section each and every year.

We all try to do things the “right way,” but we, as human beings, are inherently imperfect. When you ask my wife about my imperfections, she could give you a long list...well, she is still listing them as I compose this letter. I knew I should not have broached the topic. I have been a member of the AIS section for approximately 15 years. When I first was getting acquainted with the section, and AIS in general, the running joke was to ask 10 AIS Professors to define AIS and get back 12 different responses. One could argue that joke is still relevant today. So what does it say about our section and what we stand for? Imperfection. There are those among us that would argue we need to be more precise defining AIS. These colleagues provide compelling reasons for taking this action. For example, a



precise AIS definition is likely to reduce ambiguity for our members and for those colleagues in other accounting academic domains, which could potentially increase understanding and “acceptance” from those who would better understand our roles within accounting departments. Perhaps “acceptance” is too strong a term in this case, but it may be that too many non-AIS accounting faculty do not really understand what it is we teach and research.

Although I agree we, as a section, should take action to narrow this “understanding gap,” I believe that imperfection provides continuous opportunities. Precisely defining AIS is a daunting task on its own, but it takes on added risk of unnecessarily limiting us where we have not been limited before. We all know that AIS touches all of the other accounting domains (as well as computer science, corporate governance, and other non-accounting domains). This ideal allows us flexibility to publish and teach in areas that AIS faculty have their greatest knowledge in even though it may not be the same, exact area as the AIS faculty member next door. Why risk limiting ourselves to areas that AIS faculty may not be as well versed in? This is an interesting and important topic for AIS faculty to consider. Whatever side you fall on, I welcome further discussion and debate to help all of us move forward.

In a related vein, one of my goals this year as AIS section President is to better understand the current supply and demand of AIS Ph.Ds. in the US. My interest is not intentioned to be detrimental to the non-tenure track AIS colleagues who provide critical teaching and service needs to their universities. Rather, I would like to know why there are so few AIS Ph.D. graduates nationwide on an annual basis; the current and estimable future demand for AIS Ph.Ds.; and where folks like me (an AIS Ph.D.) are headed in the future. In aggregate, I refer to these issues as the “value” of an AIS Ph.D. Responses to these issues are not likely to be simple or limited to one “reason.” Yet, more fully understanding these issues is vital to the current and future success of AIS faculty. Our upcoming AIS midyear meeting provides an excellent forum for us to discuss these, among other important issues. I invite you to attend, participate, and share your insights along with your research and/or pedagogical innovations, although as someone who is currently situated in Florida I know how challenging being in Orlando in January can be (you may detect a note of sarcasm at your own risk).

I believe that the outcomes from the most recent AIS section Executive Meeting (occurring at the Annual Meeting) are moving us in the right direction. JIS is now open access to all AAA members. The upcoming and second-ever JIS Conference in October provides an excellent program of research papers, as well as crucial practitioner participation. I am indebted to conference Chair Eileen Taylor, JIS co-Senior Editors Mary Curtis and Roger Debreceeny among others who have worked so diligently to make this conference a reality. In addition, 1) the AIS section is working to have joint midyear meetings with other sections in addition to SET and 2) the section has contacted AAA to setup an opt-out infrastructure where all newly-accepted AAA journal articles are emailed to every AAA member. All of these actions are geared at getting our work exposed to AAA members from other sections in order to increase their understanding of what we do. We are moving forward. Please join in and participate in section activities so we can all realize the benefits. To reiterate an earlier point, the AIS section serves all of us.

Have a great fall term. I look forward to seeing you in Orlando.

Rob Pinsker  
2016-17 AIS Section President

# Big Data Resources

## EY ARC (Academic Resource Center)

- Must e-mail Catherine Banks for access: [catherine.banks@ey.com](mailto:catherine.banks@ey.com)
- Once you have access go to [www.ey.com](http://www.ey.com) and click on Client Portal to go to Faculty Resources
- Under Analytics Mindset the following materials are available: PowerPoints, Surveys, Videos, Articles, Tableau Exercise with Data and Answer Keys and Discussion Questions (case called Big Deals)
- Lots of other topics with teaching resources available as well.

## Rutgers AICPA Data Analytics Research Initiative (RADAR)

Contacts: Miklos Vasarhelyi & Jun Dai

- Designed to facilitate the further integration of data analytics into the audit process, and to demonstrate through research how this can effectively lead to advancements in the public accounting profession (the "Profession").
- Focuses on testing of theory and methodology (not building tools) to inform the development of audit data analytics guidance.
- Will encourage collaboration in other scholarly, practical research into audit analytics, and will seek to spread learning in the field via publications, colloquia, conferences and networking opportunities.
- Will seek to establish a process for open dialog with U.S. standards setters, regulators and other interested parties.
- Will involve individuals with specific skill sets and perspectives as needed to support the process including experts in related fields such as artificial intelligence, machine learning, statistics, Big Data analytics and researchers from other academic institutions.
- Participants include: Big Four (KPMG, Deloitte, EY, PWC), other firms (GT, Crowe Horwath, BDO, RSM/US), AICPA, and CPA Canada
- Example cases:
  1. Deloitte: Inventory
  2. EY: Revenue
  3. PwC: Journal Entry Testing
  4. KPMG: Purchase to Pay
- Current Projects:

### In Process:

1. Sandbox: Automating the Evaluation of Internal Control Systems
2. Multivariate Exceptional Exceptions
3. Visualization
4. Member survey

Under Consideration: Is data evidence?

Long-term Potential Projects:

1. Process Mining Operationalization in Auditing
2. Deep Learning in Auditing

## Call for Papers – Special Theme

### *International Journal of Accounting Information Systems*

In 2010 the International Accounting Standards Board introduced “Faithful Representation” as one the two fundamental qualitative characteristics of financial reporting. Of all the research domains in accounting, the concept of “representation” has arguably played the most significant role in accounting information systems (as indeed it has more broadly in information systems). The view of accounting as a practice for generating useful representations of economic phenomena is very much an accounting information systems view dating back at least to the 1970s. Surely then accounting information system (AIS) and cognate researchers are well positioned to contribute substantially to the broader field’s understanding of the notion of representation and faithful representation in particular.

The *International Journal of Accounting Information Systems* therefore is calling for papers for a special theme, (to run across multiple issues), on “Faithful Representation: A Fundamental Characteristic in Accounting (and) Information Systems”. The purpose of this special theme is to encourage contributions that showcase the fundamental role of AIS issues in accounting research and practice. Submissions are invited that address the centrality of representation in accounting information systems and accounting more broadly. Papers should address a question of accounting arising from AIS, and enhance our understanding of representation. Possible topics could include:

The development of reporting systems and technologies (e.g., XBRL) and their impact on faithful representation.

Enhancing faithful representation by AIS enabling a broader scope for reporting either externally (e.g., integrated reporting, sustainability reporting) or internally (e.g., risk management, non-financial performance measures).

The role of AIS in providing access to more complete, error free and unbiased data for fair value accounting and measurement more broadly.

AIS processes and internal controls and faithful representation of accounting phenomena.

The role of IT in facilitating audit and assurance to achieve more faithful representation of accounting phenomena (e.g., continuous audit, audit analytics).

Faithful representation of IT value.

Semantic modelling of accounting phenomena and faithful representation.

Judgment and decision making with AIS-delivered faithful (or indeed unfaithful) representations.

Please contact the Guest Editor, Professor Michael Davern (mjdavern@unimelb.edu.au), The University of Melbourne, to discuss any other additional topics that you believe are appropriate for inclusion in the special theme.

The intention is to run this special theme in two volumes of the *International Journal of Accounting Information Systems* in 2017 and 2018. The **submission deadline** for the first volume with the special theme is 31 October 2016. The anticipated deadline for the subsequent volume is 31 October 2017.

The call is also available on-line at:

<http://www.journals.elsevier.com/international-journal-of-accounting-information-systems/call-for-papers/faitful-representation-a-fundamental-characteristic>

## Call for Papers-Theme Issue of the *Journal of Information Systems* New and Innovative Sources of Research Data

The *Journal of Information Systems (JIS)* is the journal of the Accounting Information Systems (AIS) Section of the American Accounting Association ([www.jisonline.com](http://www.jisonline.com)). *JIS* will publish a theme issue of *JIS* entitled "Sources of Data."

Accounting researchers have recently gained access to inexpensive and plentiful research data and participants through new outlets, including online labor markets and for-profit data aggregators. Services such as Amazon's Mechanical Turk allow for rapid collection of data, and there has been significant growth in the use of participants from online markets in accounting research. Researchers are also using massive datasets from sources such as corporate transaction archives, Google Search Analytics, weather records, social media and other external data. These big data sources require data management and analytical techniques not often employed in accounting research. This theme issue seeks papers that examine opportunities and risks created by the use of these new and emerging sources of data.

Examples of relevant topics include:

- Online labor markets:
  - \* Evaluation of emerging sources of research participants (i.e., new sources other than Amazon's Mechanical Turk, Qualtrics, and Survey Monkey Audience) and sources of participants that are new to the accounting discipline
  - \* Discussion of the risks of fast access to inexpensive participants
  - \* Discussion of opportunities associated with fast access to inexpensive participants (for example, enhanced capacity to conduct longitudinal, cross-cultural and multi-method studies)
  - \* Evaluation of methods to improve research designs that use online workers (for example, to deal with new threats such as repeated exposure to established psychological measures and common research paradigms)

- \* Examination of the population of online workers (e.g., is the population large enough to accommodate the growth of the use of these workers?)
  - \* Examination of the differences between online work environments and traditional laboratory environments or traditional distributions of surveys and the potential influences of such differences on research findings
  - \* Replication of seminal and recent experiments where there is reason to believe that paid online participants may yield different results or new insights
  - \* Examination of reviewer and editor perceptions of data obtained through online labor markets and other data sources
  - \* Evaluation of the effects of incentives and incentive amounts on the behavior of participants in online experiments
- Identification and comparison of sources of data for specific research streams, such as corporate social reporting (CSR), data analytics, judgment and decision making, etc.
  - Discussion of online sources for qualitative research including Delphi studies and focus groups
  - Review of research conducted in other disciplines employing a particular innovative data source
  - Evaluation of new databases and datasets that may be applicable to research in accounting and auditing
  - Methods for data management and analysis of large and complex data sets
  - Ethical questions and academic publication issues that arise in dealing with these new data sources

All research methods are welcome, including experimental, survey, case study, archival and literature review. The editors also welcome the submission of short papers that are appropriate for publication as a Research Note. In addition to research papers, the editors would be interested in publishing commentaries and calls for action on the issues raised in the theme issue. Please contact the theme issue editors for further information. Submissions should follow the *JIS* editorial guidelines at [www.jisonline.com](http://www.jisonline.com). Submissions for the special issue are due on **December 15, 2016**. Earlier submission is encouraged. The co-editors of the theme issue are Jake Rose, Professor of Accounting, Victoria University of Wellington, Email: [jake.rose@vuw.ac.nz](mailto:jake.rose@vuw.ac.nz) and Ania Rose, Associate Professor, Victoria University of Wellington, Email: [ania.rose@vuw.ac.nz](mailto:ania.rose@vuw.ac.nz).

## The 2017 International Symposium on Accounting Information Systems (ISAIS) Announcement and Call for papers

**May 8-9, 2017 • Valencia, Spain**

Tilburg University is pleased to announce the seventh **International Symposium on Accounting Information Systems (ISAIS)**, immediately preceding the 40<sup>th</sup> Annual Congress of the European

Accounting Association. **ISAIS** is held annually and rotated between the University of Central Florida (USA), Tilburg University (The Netherlands) and the University of Melbourne (Australia).

The objective of **ISAIS** is to bring together researchers from all disciplines related to *Accounting Information Systems (AIS)*. Topics of interest include, but are not limited to: *AIS* development, distributed ledger technology, internal control developments, strategic information systems, cultural influences on *AIS*, business intelligence, decision aids, business process management, audit and assurance regarding *AIS*, continuous auditing and reporting, enterprise resource planning, knowledge management, XBRL, process mining, and data-analytics.

The **2017 ISAIS** program will tentatively consist of a keynote speech, journal quality paper presentations, and a workshop. The emphasis is on a high level of interaction, discussion and debate in a friendly, supportive and relaxed atmosphere. At the same time, the intent of **ISAIS** is to provide a global forum for bringing the leading *AIS* researchers and developing scholars together to discuss and critique leading edge research in the field.

### **PAPER SUBMISSION**

Only completed research papers should be submitted. Accepted papers will receive a conditional acceptance for publication in the *International Journal of Accounting Information Systems*. Papers are not required to be dually considered for the journal and authors should advise in their cover letter whether they wish to have their paper considered for *IJAIS*. We encourage doctoral students and junior researchers to submit their research.

ISAIS (Symposium Only) Submissions:

To submit an original research paper, e-mail your complete manuscript to both: Professors Eddy Vaassen at [e.h.j.vaassen@tilburguniversity.edu](mailto:e.h.j.vaassen@tilburguniversity.edu) and Mieke Jans at [mieke.jans@uhasselt.be](mailto:mieke.jans@uhasselt.be).

ISAIS and *IJAIS* (Dual Consideration) Submissions:

At the authors' prerogative, submitted papers can also be considered for publication in the *International Journal of Accounting Information Systems (IJAIS)*. These papers should constitute original research that is not currently being considered for publication or has not been previously published elsewhere. For concurrent consideration at both the ISAIS symposium and *IJAIS*, authors should submit their manuscripts using the *IJAIS* online submission system at <http://ees.elsevier.com/accinf/default.asp> and e-mail their complete manuscript to both: Eddy Vaassen at [e.h.j.vaassen@tilburguniversity.edu](mailto:e.h.j.vaassen@tilburguniversity.edu) and Mieke Jans at [mieke.jans@uhasselt.be](mailto:mieke.jans@uhasselt.be). The ISAIS organizing and program chairs will serve as the *IJAIS* editors on these papers in close collaboration with the *IJAIS* editors, Professors Sev Grabski and Stewart Leech. Please clearly specify in your cover letters to *IJAIS* and ISAIS that your submission is a dual submission and is intended for presentation at ISAIS 2017.

### **CONFERENCE WEBSITE**

Please visit the conference website for further information and registration at: [www.tilburguniversity.edu/isais2017](http://www.tilburguniversity.edu/isais2017)

### **KEY DATES AND CONFERENCE FEE**

Submission deadline: February 1, 2017

Notification of decision: March 15, 2017

Registration deadline and conference fee: registration before April 1, 2017 conference fee €175,-, after that date conference fee €225,-

## **VENUE**

The conference will be held in the ADEIT building of the University of Valencia in the city center. See: <http://www.adeituv.es/>

## **ORGANIZING COMMITTEE**

Eddy Vaassen (Chair, Tilburg University, The Netherlands)

Mieke Jans (Hasselt University, Belgium)

Iuliana Sandu (Rotterdam School of Management, The Netherlands)

## **PROGRAM COMMITTEE**

Vicky Arnold (University of Central Florida, United States)

Michael Davern (University of Melbourne, Australia)

Anna Gold (VU Free University Amsterdam, The Netherlands)

Severin Grabski (Michigan State University, United States)

Mieke Jans (Chair, Hasselt University, Belgium)

Stewart Leech (University of Melbourne, Australia)

Steve Sutton (University of Central Florida, United States)

Eddy Vaassen (Tilburg University, The Netherlands)

Miklos Vasarhelyi (Rutgers, The State University of New Jersey, United States)

## **CONTACT**

For more information, please contact Iuliana Sandu at [sandu@rsm.nl](mailto:sandu@rsm.nl).

# In Memoriam

On January 16, 2016, James C. Lampe (COBA Dean's Distinguished Professor of Ethics at Missouri State University) passed away from pancreatic cancer ending a career as a scholar that spanned 47 years. Jim was one of the early drivers of AIS in the 1970s where he was on the forefront of the integration of general audit software in the auditing process. He developed the MARS system, a fully working general audit software system for pulling data from mainframe systems, but designed specifically for free distribution to other academics for integration into their classroom. Later in the mid-1980s he helped convert PriceWaterhouse's first PC-based audit support software to a modular form that could be implemented in the academic environment and included free case sets for use with the system. Jim was perhaps best known to our current senior AIS members for his spirited academic debates in discussing other leading AIS academics' papers at the "Phoenix Symposium" which served as the Section's primary research conference prior to the starting of the annual mid-year meeting.



Jim represented what is unfortunately a dying breed of accounting scholar—he sought difficult questions facing the accounting profession, including the integration of technology and automation of the audit process, and assumed the traditional academic role of looking at ways to improve practice and/or fulfilling the traditional academic responsibility of being a conscientious for society promoting the public interest. He always attacked these questions with professionalism and academic rigor. The goal was never to simply “get a publication” or “publish in the right journal”, the goal was to take on an interesting, contemporary issue and to have a voice in how the profession could or should address the issue. Jim supervised a generation of AIS scholars that now represent a significant part of the senior scholars in the Section. He will be severely missed by his students, his colleagues, our profession, and most of all some very close friends in our Section.

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A budding scholar and great mind, the AIS community was robbed of one of its bright young energetic scholars, Acklesh Prasad (Queensland University of Technology) after he passed away in his sleep in the early hours of June 15, 2016. Acklesh received his Ph.D. from the University of Queensland in 2009, and after returning home for a short stint at the University of the South Pacific (Fiji) he joined the faculty at QUT in 2012. Within a very short time after receiving his PhD, Acklesh became an active AIS scholar engaged in all of our Section and other Global AIS conferences and symposia, and was well-published in both the Journal of Information Systems and the International Journal of Accounting Information Systems. He had all the attributes of a rising star in our discipline.

Those of us that knew Acklesh through his global travels or as a colleague knew him as a kind, gentle soul that exuded a peace and calmness. He was warm and caring, while also being quite humble amidst his early successes. He should have been one of our research community’s leaders, but unfortunately he has been taken from us much too soon.

## Two Vacancies in Accounting Information Systems, School of Accountancy, Shidler College of Business, University of Hawai’i at Manoa

The School of Accountancy, Shidler College of Business, University of Hawai’i at Manoa invites applications to fill two tenure-track positions in accounting at all levels, subject to budget. The School of Accountancy is a key component in the Shidler College of Business. Endowment funds support a range of research and teaching objectives, including faculty support for enhanced research outcomes. These positions will further enhance the School’s research and teaching objectives. Our teaching need is in accounting information systems. We offer several courses in our undergraduate and graduate programs that have strong information technology foundations. We expect the importance of these offerings to grow over the coming years. Faculty will be in attendance at the AAA PhD Rookie camp in December.

Further details are at <http://workatuh.hawaii.edu/Jobs/NAdvert/23205/3992964/1/postdate/desc> or contact the Chair of the Search Committee, Dr. Roger Debreceeny (rogersd@hawaii.edu)

## Congratulations!

**Marianne Bradford** was promoted to Full Professor at North Carolina State University.

**Jane Fedorowicz** of Bentley University was awarded the 2016 Mee Family Prize at Bentley University's Convocation ceremony on August 24. This annual award recognizes lifetime scholarly achievement that has enhanced the standing and reputation of the University.

**Ismail Gomaa** received two new awards: Alexandria University Award of Excellence, and the Taha Hussein Award for Pioneering Works offered by Alexandria University.

This Fall 2016 semester **Margarita Maria Lenk** will be teaching financial accounting, business ethics and social entrepreneurship on the Semester at Sea ship. The 4 month voyage will take us to the following countries, with 5 days in each port: Germany, Greece, Italy, Spain, Morocco, Senegal, Brazil, Trinidad/Tobago, Panama, Peru, Ecuador, and Costa Rica. The ship has 700 students from 250 universities from around the world and faculty from 60 different universities. Colorado State University is the new host/partner of the ISE Semester at Sea organization, and each voyage is different! Please send interested students to [www.semesteratsea.org](http://www.semesteratsea.org) and send any faculty interest inquiries to [margarita.lenk@colostate.edu](mailto:margarita.lenk@colostate.edu) after the new year!

## In the Literature by Lane Lambert

**Accounting Horizons** had a Big Data special issue (Vol. 29, No. 2, 2015) that included the following articles:

Title: Big Data in Accounting: An Overview

Authors: Miklos A. Vasarhelyi, Alexander Kogan, and Brad M. Tuttle

Topic: Discusses an overall framework of Big Data in accounting, setting the stage for the ensuing collection of essays that presents the ongoing evolution of corporate data into Big Data, ranging from the structured data contained in modern ERPs to loosely connected unstructured and semi-structured information from the environment.

Title: Big Data as Complementary Audit Evidence

Authors: Kyunghye Yoon, Lucas Hoogduin, and Li Zhang

Topic: Evaluates the applicability of Big Data using the audit evidence criteria framework and provides cost-benefit analysis for sufficiency, reliability, and relevance considerations.

Title: Toward Effective Big Data Analysis in Continuous Auditing

Authors: Juan Zhang, Xiongsheng Yang, and Deniz Appelbaum

Topic: This paper focuses on the gaps between Big Data and the current capabilities of data analysis in continuous auditing.

Title: How Big Data Will Change Accounting

Authors: J. Donald Warren, Jr., Kevin C. Moffitt, and Paul Byrnes

Topic: The video, audio, and textual information made available via Big Data can provide for improved managerial accounting, financial accounting, and financial reporting practices.

Title: Big Data Analytics in Financial Statement Audits

Authors: Min Cao, Roman Chychyla, and Trevor Stewart

Topic: This paper explains how Big Data analytics applied in other domains might be applied in auditing.

Title: Drivers of the Use and Facilitators and Obstacles of the Evolution of Big Data by the Audit Profession

Authors: Michael G. Alles

Topic: Given the growing significance of Big Data as a business tool, this paper considers the extent to which Big Data will be embraced by the audit profession and how that usage will evolve over time.

Title: Consequences of Big Data and Formalization on Accounting and Auditing Standards

Authors: John Peter Krahel and William R. Titera

Topic: This paper argues that a change in standards to focus on data, the processes that generate them, and their analysis, rather than their presentation, will add value and relevance to the accounting profession, empower end users, and improve the efficiency of the capital markets.

Title: Behavioral Implications of Big Data's Impact on Audit Judgment and Decision Making and Future Research Directions

Authors: Helen Brown-Liburd, Hussein Issa, and Danielle Lombardi

Topic: This paper addresses information processing weaknesses and limitations that can impede the effective use and analysis of Big Data in an audit environment.

***Journal of Information Systems*** had a special IT Audit issue (Vol. 30, No. 1, 2016) that included the following articles:

Title: The Current State and Future Direction of IT Audit: Challenges and Opportunities Making and Future Research Directions

Authors: Ann C. Dzuranin and Irina Malaescu

Topic: This commentary provides a review and synthesis of the issues facing the IT audit profession as a result of the increasing volume of data available (for example, Big Data), coupled with changing technology and increasing regulatory requirements.

Title: A Method to Evaluate Information Systems Control Alignment

Authors: W. Alec Cram and R. Brent Gallupe

Topic: Managers can understanding how to design and implement information systems controls that align with important factors within the settings that they operate, such as organizational structure, staff expectations, and technical innovations.

Title: Repairing Organizational Legitimacy Following Information Technology (IT) Material Weaknesses: Executive Turnover, IT Expertise, and IT System Upgrades

Authors: Jacob Z. Haislip, Adi Masli, Vernon J. Richardson, Juan Manuel Sanchez

Topic: Collectively, this paper's findings suggest that firms make significant monitoring changes to re-establish organizational legitimacy after receiving an IT-related material weakness.

Title: The Effect of Frequency and Automation of Internal Control Testing on External Auditor Reliance on the Internal Audit Function

Authors: Maia J. Farkas and Rina M. Hirsch

Topic: This paper finds that automated remediation strategies of failures to detect significant deficiencies fully remediate external auditors' perceptions of poor internal audit function (IAF) work performance and low degree of reliance on the IAF, whereas manual remediation strategies result in only partial remediation and reliance.

Title: SECURQUAL: An Instrument for Evaluating the Effectiveness of Enterprise Information Security Programs

Authors: Paul John Steinbart, Robyn L. Raschke, Graham Gal, William N. Dilla

Topic: While some research has used subjective assessments as a surrogate for objective security measures, such an approach raises questions about scope and reliability. To remedy these deficiencies, this study uses the COBIT Version 4.1 Maturity Model Rubrics to develop an instrument (SECURQUAL) that obtains an objective measure of the effectiveness of enterprise information security programs.

New *JIS* papers posted on the blog at: <http://commons.aaahq.org/hives/c7b49f141e/summary>

***Journal of Emerging Technologies in Accounting***, Vol. 13, No. 1 (2016) had the following articles:

Title: Securing Big Data Provenance for Auditors: The Big Data Provenance Black Box as Reliable Evidence

Author: Deniz Appelbaum

Topic: This paper contributes to the discussion of Big Data provenance through the lens of public company auditing, where the provenance and reliability of data sources and audit evidence are of paramount importance. This paper also proposes a system of secure provenance collection, the Big Data Provenance Black Box, which is derived from several streams of extant research.

Title: Continuous Audit and Enterprise Resource Planning Systems: A Case Study of ERP Rollouts in the Houston, TX Oil and Gas Industries

Authors: Robin Haynes and Chunyan Li

Topic: This paper presents a case study of accounting information specialists in different divisions of the same conglomerate in the energy industry in Houston, Texas that engaged in anti-fraud audits following the rollout of enterprise resource planning (ERP) systems by implementing continuous auditing processes (CA). The results indicate that the adoption of an ERP system has a significant impact on the efficiency, fraud risk reduction, knowledge application, as well as the credibility of the auditing team. The most important factors for the successful use of fraud mitigation techniques rely on ERP systems, which have continuous audit functions.

Title: Accounting Automation and Insight at the Speed of Thought

Authors: Dawna M. Drum and Andrew Pulvermacher

Topic: Modern organizations are inundated with data, and they often struggle to organize it in an efficient and effective manner in order to get the most value from the data. The context of this case is, thus, situated in current business practice. Students are given large data files that were extracted from an enterprise system. They must use Microsoft Access and Excel to summarize and organize the data to create a dynamic profit and loss statement.

Title: Computer-Assisted Functions for Auditing XBRL-Related Documents

Authors: J. Efrim Boritz and Won Gyun No

Topic: The main goal of this paper is to introduce computer-assisted audit functions that can be used by auditors to perform audit tasks to attain identified audit objectives. Based on professional guidelines and prior academic studies, this study introduces a set of audit objectives and related audit tasks that auditors might confront if they are asked to provide assurance on XBRL-related documents. The study then demonstrates a set of related computer-assisted audit functions for conducting the audit tasks and discuss how the identified audit objectives could be achieved using these functions.

Title: Data Analytics: Introduction to Using Analytics in Auditing

Authors: David Y. Chan and Alexander Kogan

Topic: This is a hands-on introductory practical data analytics teaching case that can be used in an auditing or related course. Students will learn about data attributes, data creation, structured query language (SQL), basic statistics, and performing basic audit procedures using analytics by utilizing the open source software R.

[CLICK HERE FOR MORE LITERATURE REVIEWS....](#)

## In the Literature —Continued

Other articles reviewed with the source indicated:

Source: ***Journal of International Accounting Research***, Vol. 14, No. 2 (2015)

Title: How Does XBRL Affect the Cost of Equity Capital? Evidence from an Emerging Market

Authors: Songsheng Chen, Ling Harris, Wenying Li, and Donglin Wu

Topic: Applying path analysis, this study examines how eXtensible Business Reporting Language (XBRL) in China affects the cost of equity capital and finds that XBRL reduces the cost of equity capital and that XBRL strengthens the direct linkage of the inverse relationship between financial reporting quality and the cost of equity capital but not the indirect linkage via the mediation of information asymmetry. The findings also show that XBRL adoption leads to a greater reduction in the cost of equity capital, when there is a high level of corporate governance.

Source: ***Journal of Management Accounting Research***, Vol. 27, No. 2 (2015)

Title: Outsourcing the Information System: Determinants, Risks, and Implications for Management Control Systems

Authors: Margaret H. Christ, Natalia Mintchik, Long Chen, James L. Bierstaker

Topic: This paper provides insights for future research on (1) factors influencing companies' decisions to outsource the information system, (2) risks that arise when companies outsource the information system, and (3) implications for management control systems.

Source: ***Journal of Management Information Systems***, Vol. 32 Issue 4 (2015)

Title: How the Use of Big Data Analytics Affects Value Creation in Supply Chain Management.

Authors: Daniel Q. Chen, David S. Preston, and Morgan Swink

Topic: This study addresses (1) How does organizational big data analytics (BDA) usage affect value creation? and (2) What are key antecedents of organizational-level BDA usage? Survey data collected from 161 U.S.-based companies show that: organizational-level BDA usage affects organizational value creation; the degree to which BDA usage influences such creation is moderated by environmental dynamism; technological factors directly influence organizational BDA usage; and organizational and environmental factors indirectly influence organizational BDA usage through top management support. Collectively, these findings provide a theory-based understanding of the impacts and antecedents of organizational BDA usage, while also providing guidance regarding what managers should expect from usage of this rapidly emerging technology.

Source: ***MIS Quarterly***, Vol. 40 Issue 1 (2016)

Title: How Information Technology Strategy and Investments Influence Firm Performance: Conjecture and Empirical Evidence

Authors: Sunil Mithas and Roland T. Rust

Topic: This study finds that at the mean value of IT investments, firms with a dual IT strategic emphasis have a higher market value as measured by Tobin's Q than firms with a revenue or a cost emphasis, but they have similar levels of profitability. Of greater importance, IT strategic emphasis plays a significant role in moderating the relationship between IT investments and firm performance. Overall, these findings imply that, at low levels of IT investment, the firm may need to choose between revenue expansion and cost reduction, but at higher levels of IT investment, dual-emphasis in IT strategy or IT strategic ambidexterity increasingly pays off.

Source: ***Information Systems Research***, Vol. 27 Issue 2 (2016)

Title: Examining the Continuance of Secure Behavior: A Longitudinal Field Study of Mobile Device Authentication.

Authors: Paul John Steinbart, Mark J. Keith, Jeffrey Babb

Topic: Laptops and desktop computers use full-size physical keyboards. However, users are increasingly adopting mobile devices, which provide either miniature physical keypads or touchscreens for entering authentication credentials. The difference in interface design affects the ease of correctly entering authentication credentials. Thus, the move to use of mobile devices to access systems provides an opportunity to study the effects of the user interface on authentication behaviors. We find that the user interface does affect login success rates. In turn, poor performance (login failures) leads to discontinuance of a secure behavior and the adoption of less-secure behaviors.

Source: ***AIS Educator Journal***, Volume 10, Issue 1 (2015)

Title: Assembly FG: An Education Case Study Using QuickBooks as the AIS for a Small Manufacturing Business

Authors: Sherwood Lane Lambert and Sarah Bee

Topic: This education case uses QuickBooks Premier Accountant to teach students foundation functionalities common to all Enterprise Resource Planning (ERP) systems that support discrete manufacturing. Students configure QuickBooks so that direct materials, direct labor and applied manufacturing overhead costs charged to work-in-process parts manufactured at lower levels of a multilevel bill-of-materials (BOM) are rolled up into the costs of higher-level work-in-process parts and, ultimately, into the costs of the finished goods. The case serves as a capstone QuickBooks assignment.

## *JIS* Author Blogs

### **Forthcoming Papers in JIS:**

Exception Prioritization in the Continuous Auditing Environment: A Framework and Experimental Evaluation

by Pei Li, David Y. Chan and Alexander Kogan

An important potential benefit of a continuous auditing system is the improvement of the efficiency of auditing through the automation of audit procedures. However, the inherent nature of a continuous auditing system may in fact diminish any economic benefits from automation. Researchers have found that the large volume of exceptions generated by a continuous auditing system can be overwhelming for an internal audit department. Exceptions are irregular or suspicious transactions, or internal controls violations identified by the continuous auditing system that need to be manually investigated by the auditor. As a result, a large number of exceptions diminishes the economic efficiency gained through automation.

In this study, we propose a framework that systematically prioritizes exceptions based on the likelihood of an exception being erroneous or fraudulent. The framework is based on an initial set of rules that are generated by internal auditors to detect irregular transactions. These rules are assigned a confidence level depending on their effectiveness in detecting errors or fraud. The continuous auditing system identifies transactions that violate a single rule or multiple rules and labels those transactions as exceptions. The suspicion score of each of these exceptions is generated using the Dempster-Shafer theory of belief functions. Then, the auditors are guided to investigate those exceptions that have the highest suspicion scores.

The framework incorporates an advanced feature that learns from identified errors and fraud after each iterative process through employing the following two methods. First, the confidence level of a rule that contributed to finding erroneous or fraudulent transactions is revised on the basis of investigative results of auditors. Second, a rule learner algorithm is implemented to add new rules to the original set of rules that were developed by the auditors. Although the confidence levels of the auditor-based rules have been refined, the newly identified erroneous and fraudulent transactions might have new attributes,

which are not represented in the existing rules. This method captures the attributes of errors and fraud to create new rules that will attempt to find similar instances subsequently.

The framework consists of six stages: 1) generation of exceptions using defined rules, 2) assignment of suspicion scores to exceptions using belief functions, 3) exception prioritization, 4) exception investigation, 5) rule confidence level update utilizing back propagation, and 6) rule(s) addition utilizing a rule learner algorithm.

We validated the proposed framework using a simulated experiment. The experiment used accounts payable transactional data from a technology company and simulated irregular transactions. The results from the experiment provide evidence that the proposed framework has the ability to effectively prioritize erroneous or fraudulent transactions. Furthermore, the results indicates that using back propagation to refine the confidence levels of rules and using a rule learner algorithm to generate additional rules helped improve the effectiveness of the prioritization of exceptions in subsequent iterations of the process.