



## President's Letter

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Dear AIS Section Members,

I hope this finds everyone well and settling into summer routines.

As you begin registering for the AAA Annual meeting in NYC, you will notice that there will not be an AIS breakfast this year. We are trying something a little different. Last year as I was rushing out of the breakfast to attend a meeting, I saw that many others were having the same problem... AIS members had gotten into good conversations but had to leave to attend other sessions. After discussing this with the AAA, it was suggested that we try a networking session. So during the last session on Tuesday afternoon (August 9), we will meet for a short business meeting, and then will use the remainder of the session for networking. (I do not have all of the details just yet, but I know there will be snacks and drinks and it will be in the conference hotel).

Because it is the last session of the day, AIS members can continue their conversations, whether it be about research or teaching without worrying about missing a session. I hope that we all find this to be beneficial and perhaps we can interest some non-AIS members to join us.

Tickets for the networking session will be sold on-site, and I will update you with more information as it becomes available.

We haven't even gone to NYC yet, but I want to remind you to get your papers ready for submission to the 2017 Midyear Meeting which will be held in ORLANDO the third weekend in January.

I look forward to seeing you all in NYC!

Tina Loraas



Tina Loraas  
Auburn University,  
AIS Section President

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## JISC2016

### An Accounting Information Systems Perspective on Data Analytics and Big Data

Planning is well underway for the 2<sup>nd</sup> JIS Research conference (JISC2016). The conference will be held on October 13 & 14, 2016 at the offices of Workday, Inc. in Pleasanton, CA. The theme of the conference is *An Accounting Information Systems Perspective on Data Analytics and Big Data*. Papers presented at JISC2016 will appear in a theme issue of *JIS*, edited by Dr. A. Faye Borthick of Georgia State University and Dr. Robin Pennington of North Carolina State University. Dr Eileen Taylor of North Carolina State University will be the Chair of the Conference. Elsewhere in this newsletter is a commentary by Dr. A. Faye Borthick, *In a sea of Big Data, what becomes of accounting and auditing?* This commentary sets the scene for issues that will be discussed at the conference.

The design of JISC2016 is to provide an opportunity for intense discussion between academics and professionals on research in a targeted area of concern to the broad AIS community. The conference will involve research presentations, round-table discussions, and a keynote presentation. There will be three panels at the conference on the following topics: privacy; the evolving role of technology in accounting; and people and big data.

Attendance at the conference is limited to those on the program. Participation at the conference is strictly limited to 45 people, approximately equally divided between professionals and academics. This allows us to hold the conference at the offices of the sponsors. For 2015, the conference was in the excellent meeting room at the AICPA in Durham. This year we are in the brand new training facility at the offices of Workday in Pleasanton. This relatively small number of attendees allows close interaction and high quality feedback for authors.

Participants from the profession include senior practitioners from accounting and consulting firms, the leadership of the AICPA's IMTA division as well as a small number of professionals from the Bay area. Participants from the academy are authors, moderators, commentators and the JISC2016 team.

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## In a sea of Big Data, what becomes of accounting and auditing? A. Faye Borthick, Georgia State University

### Evolution of Big Data and Its Insinuation in Organizations

Big Data and the software for doing interesting things with the data have developed far enough that some trends have emerged. People are clever. Leave them alone with resources, and they will do interesting things with them, giving both intended and unintended consequences. This commentary highlights the landscape of Big Data, not the technical aspects per se but how organizations are starting to use data in different ways. While it is true that some of what this commentary offers does not, strictly speaking, require Big Data with respect to volume, diversity, and structure, the connotations that Big Data bestowed have prompted new ways to stage and use data. For example, "70% of firms now say that big data is of critical importance to their firms" (Malone 2016 A17).

We invite you to reflect on burgeoning data and its emerging uses highlighted below as you consider innovative practice on aspects related to data analytics and Big Data.

### Accounting

Managers and investors are tantalized by the prospects of using more data to make companies more profitable and to make organizations more responsive to their constituents (Dwoskin 2014). The growing number of fintech company startups making loans based only on digital data illustrates the phenomenon (Rudegear 2015). Furthermore, ideas about how to take advantage of data can come from anywhere. This is the phenomenon that propels startup companies into billion dollar IPOs (initial public offerings of stock) in just a few years.

With new insights into consumer/buyer behavior and product performance, companies and organizations have been compelled to accelerate changes to their business processes to stay current with their product and service offerings (Zetlin 2015). Instead of weeks, General Motors' profitability analysis of the Chevrolet brand in Europe took only days (Monga 2014). Food companies have noticed declines in sales of the worst offenders of packaged foods associated with packing on the pounds (Esterl 2016) or foods containing GMOs (Brat 2015). How fast can packaged food makers adjust to such a shift? When Ben & Jerry's set out to source only organic products for its ice cream, it discovered that a key ingredient, organic milk, was not available in sufficient quantity for its volume (Gasparro 2014). The company is caught between consumers whose tastes change rapidly and a supply chain that requires years to evolve.

As much as companies aspire to change their information systems to take advantage of the business insights that analysis of data can afford, they are hindered by existing systems that have accreted over decades. The bigger and older the company, typically the more systems a company has and the less they are integrated. For example, General Electric hired Amazon to help it "reduce internal applications to 5,000 from more than 9,000 and move them to Amazon and other cloud services," in order to "allow GE to eliminate 30 of its 34 worldwide data centers and roll out new applications in as little as five minutes" (McMillan and Barr 2015 B5). Other companies such as Whole Foods Market Inc. and Wal-Mart Stores Inc. are "plowing into years-long efforts to merge disparate data sets, in the hope of extracting cost savings and insights about customers" (Norton 2015 B4).

Where do the data come from that companies and organizations want to analyze? Some of it is the familiar transaction data in accounting systems, usually highly structured with careful editing before it is permitted to enter the accounting system. Some of the data is about the location or behavior of things, e.g., RFID (radio frequency ID) data, recorded in real time indicating the existence of products or pallets of products in a specific location at a specific time. These data are usually highly structured. Then come the unstructured data of interactions, often from social media, whose existence has spawned whole new categories of analysis.

Lest one think that these data capabilities are only available to large companies, consider the experience of some startups in which middle management has been subsumed in data. Instead of hiring people to get the data needed for decisions (the traditional middle management role), the startups make extensive data dashboards available to everyone in the company. Middle managers are not needed to gather information and make decisions because "every employee can have the tools to monitor progress toward any goal" (Mims 2015). The transparency and accountability afforded by all-employee access to dashboards means that leaders can find out how the business is performing directly without relying on middle management.

Where do the data live? More and more in the cloud, of course, with a dashboard interface most likely designed by the cloud-services provider or a consultant. This approach arose first in startups because it allowed them to run lean, minimizing headcount. Big companies can move to dashboards, but the costs of taming non-integrated systems loom large, and corporate cultures will have to be transformed. Big companies with their non-integrated legacy systems realize that time is of the essence because startup companies commence operations with fully integrated systems run from the cloud (Ismail et al. 2014; Loten 2015).

What are the implications for employment of the people that now summarize, categorize, and report data? Merchandising staff are discovering that management wants to rely more on data analysis than instinct for product selection, much to the dismay of chief merchants, "once lionized for their knack for spotting trends, are finding their intuitions being displaced by algorithms" (Kapner 2015 B7). Floor stock traders have been replaced with software, and now financial analysts are being replaced with software (Popper 2016).

Where is the accountant in this uncharted sea? Because accountants understand traditional accounting data, they are uniquely poised to analyze it, including the related location and interaction data. As more accounting functions are automated in software, managers and investors are expecting higher levels of analysis of all the data. Investors are eager to spot business trends that portend changes in revenue. Thus, they are interested in feeds of transaction data, e.g., summaries by day of consumer purchases at publicly traded companies. The transactions are captured in the normal course of business but become useful for non-transaction purposes, a strategy known as cashing in on "exhaust," i.e., "data collected while doing other business" (Hope 2015).

### Auditing

What happens to auditing when data volumes grow, when data about interactions and observations become available in addition to the traditional transaction data? Transaction data are typically well structured, which makes them amenable to analysis in relational database systems. Interaction data, e.g., from social media or other sources, are typically unstructured. Data about observations may be structured, e.g., RFID data or logs containing process events, or unstructured depending on the context, e.g., comments appearing in logs of process events.

Data proliferation challenges auditing because auditing has been formulated and conducted in a world in which data were limited and there were no good software tools for analyzing large volumes of data. But conditions are changing.

Data limitations in auditing gave rise to sampling as a way to obtain evidence about account balances and flows. In the absence of data and computational software, auditors developed manual procedures based on sampling a small number of items (transactions usually) and checklists to ensure that lower level staff could execute audit procedures. But data limitations are falling away. When they know the whole population of data could be analyzed, people just laugh at the sampling mentality. Instead, they want data analytics applied to the whole population to make the data give up their secrets (Murphy and Tysiac 2015). This presents a problem to auditors in that they have decades invested in a sampling/checklist/procedural approach to auditing in a time when their constituents want data analytics applied to whole data populations. Eventually auditing standards premised on sampling will be revised to embrace better evidence (Titera 2013).

As auditors have dived deeper into company data, the Public Company Accounting Oversight Board (PCAOB) has stepped up its scrutiny of auditors' testing of system-generated data and reports as a means of prompting auditors to detect more of the latent internal control deficiencies. In essence, the PCAOB is demanding that auditors vouch for controls over "the accuracy and completeness of the system-generated data or reports" (Munter 2015). Thus, even as auditors are facing more data, they are being pressed to detect deficiencies in internal control over the data on which they rely for evidence.

Accounting firms are taking advantage of growing data availability and increasing software capabilities to create dashboards populated with operating and other related data streams (PwC 2015). The purpose of the dashboards is twofold: to facilitate auditors thinking analytically about risks and their instantiation in data patterns and to enable drilling down through the data to look for underlying causes for anomalies or for business opportunities. This approach can be called an analytics mindset.

Auditors are shifting from a sampling mentality to a data analytics approach as a competitive necessity. Their investments to reorient audit methodologies are large, in developing auditing based in analytics, retraining staff, and seeking and cultivating an analytic mindset in new staff.

### Education

The ripple effect of Big Data on university level education for accountants comes through calls from employers for entry-level accountants and auditors with analytical skill sets. The business press has documented the shift from armies of people tracking and paying for orders to automation of the task (Monga 2015). "Since 2004, the median number of full-time employees in the finance department of big companies has declined 40% to about 71 people for every \$1 billion of revenue" (Monga 2015).

If manual entries, which used to require armies of people, have been automated, what skills do entry-level accountants need? A typical response usually includes a variant of "analyze data and present findings coherently to colleagues" (Johnson 2015). The data analytics response has been written into AACSB Standards for Accounting in the form of Standard A7 on data analytics (AACSB 2013).

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## 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).

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**Association for Information Systems  
Special Interest Group on Accounting Information Systems (SIG ASYS)**

**8th Annual Pre-ICIS Workshop on  
Accounting Information Systems  
Saturday, December 10, 2016  
Held in conjunction with the International Conference on Information Systems  
Dublin, Ireland**

**CALL FOR PAPERS AND PANEL PROPOSALS**

SIG ASYS cordially invites academics and practitioners from all over the world to present original research and/or to organize a panel discussion in the field of Accounting Information Systems (AIS). The workshop will focus on a wide range of topics and research methods at the intersection of accounting and information systems. The SIG ASYS Workshop will be held in Dublin, Ireland before the start of ICIS 2016. The specific location will be announced once it is assigned by ICIS. The day-long workshop will be followed by an evening celebration and networking dinner at a local pub/restaurant at no additional cost.

Topics of interest include, but are not limited to:

- AIS integration
- AIS modelling
- AIS and governance
- Big data
- Continuous auditing
- Cultural influences on AIS
- Data mining and business intelligence
- Design and implementation issues of AIS
- Evaluation, assessment and business value of AIS
- Forensic auditing
- Global AIS
- Information security management
- Information technology (IT) governance
- IT auditing
- Internal control and fraud
- Management control and AIS
- Resource-Event-Agent (REA) model
- Risk assessment and enterprise risk management
- Social media
- eXtensible Business Reporting Language

All submissions must represent original work that has not already been published in a journal or conference proceedings (in complete form – abstract publication is permissible). At least one author of the accepted paper must register for the workshop and be prepared to present the paper in person.

Submissions must be in the form of: a completed research paper, a research-in-progress paper or a panel proposal. All completed research papers and research-in-progress papers must be in English and be carefully blinded. Submissions will be blind reviewed by at least two peers. Note that accepted papers will not be published in workshop proceedings.

**Completed research papers**

Completed research papers should conform to the *International Journal of Accounting Information Systems (IJ AIS)* format, which is consistent with American Accounting Association and other Elsevier accounting journals. For more details, please see the *IJAIS* guide for authors at the following URL:

[http://www.elsevier.com/wps/find/journaldescription.cws\\_home/620400/authorinstructions](http://www.elsevier.com/wps/find/journaldescription.cws_home/620400/authorinstructions)

**Research-in-progress papers**

Submission of promising research, in its early stage, should take the form of a research-in-progress paper and be presented as an extended abstract. This abstract should include the following sections: research objectives and questions; theoretical foundations of the study; research methodology being used; current status of the project, and a description of what the authors propose to present at the workshop. Note that complete analysis of results is not required. Research-in-progress papers should be limited to approximately 4000 words.

**Panel proposals**

Panel proposals should be at least one-page in length and include: a general description of the topic; details of all potential panelists (including their name, affiliation, email, and a one paragraph bio); a statement to the effect that if the panel proposal is accepted, all panelists have made a commitment to serve on the panel; and a brief description of each panelists background, expertise and views on the proposed topic.

The workshop will be held as an all-day meeting on Saturday, December 10, 2016, in Dublin, Ireland just before the start of ICIS 2016. Participants should plan on arriving the day before for an early start at the workshop. The customary networking celebration dinner will take place after the workshop on Saturday evening. The workshop will have a single track to maximize interaction and participation. Workshop participants, including presenters and panelists, must pay the registration fee.

**BEST PAPER AWARD 2016**

One best paper award will be announced at the workshop, and this paper, after meeting the required revisions, will be published in the *IJAIS* at the author's prerogative.

**IMPORTANT DATES**

Submission Deadline:	August 15, 2016
Notification to Authors:	September 30, 2016
Final Papers due:	October 28, 2016
Workshop:	December 10, 2016
Networking/Celebration Dinner:	December 10, 2016

**PROGRAM AND WORKSHOP CHAIRS**

The program co-chairs are Tawei (David) Wang (DePaul University) and Brad Trinkle (Mississippi State University), and the workshop chair is Cheryl Dunn (Grand Valley State University).

**SUBMISSION PROCESS**

SIG ASYS Submissions (Pre-ICIS Workshop Only) 2016

Paper enquires, submissions, and panel proposals should be sent to [ICISAIS2016@gmail.com](mailto:ICISAIS2016@gmail.com) and please indicate whether the submission is completed research, research-in-progress, or a panel proposal.

SIG ASYS and IJAIS (Dual Consideration) Submissions 2016

At the authors' prerogative, submitted papers can also be considered for publication in the International Journal of Accounting Information Systems (IJ AIS). 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 SIG ASYS workshop and *IJAIS*, authors should submit their manuscripts using the *IJAIS* online submission system at <http://ees.elsevier.com/accinf/default.asp> and e-mail your complete manuscript to [ICISAIS2016@gmail.com](mailto:ICISAIS2016@gmail.com). Please clearly specify in your cover letters to *IJAIS* and SIG ASYS that your submission is a dual submission and is intended for presentation at SIG ASYS 2016.

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**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: <http://www.tilburguniversity.edu/current/events/item-international-symposium-on-accounting-information-systems/>

**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)  
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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)

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## 7<sup>th</sup> International Conference on Governance Fraud Ethics and Social Responsibility (ICongFESR)

Amherst, Massachusetts (USA)  
August 14-16, 2016

Venue: Isenberg School of Management, University of Massachusetts

### CONFERENCE THEME: BIG DATA ANALYSES, INFORMATION SYSTEMS IN AUDITING & ACCOUNTING

We invite all academic and business professionals interested in presenting their research and ideas to the conference to submit abstracts. With the growing interest in the level of transparency both for firms and for governments the availability of more data makes audit of all activities a real possibility. We invite papers that explore both the possibility of greater transparency and the implications this will have on the audit. All abstracts will be reviewed for their relevancy for the conference theme and for possible publication. Each abstract will have two peer reviews. At least one author for all accepted papers must attend the conference and be prepared to present and discuss their work.

### IMPORTANT DATES:

June 10th, 2016: Deadline for abstract submission  
June 30th, 2016 : Notification of Acceptance  
July 15th, 2016: Registration

Abstracts should not exceed 500 words, including 5 keywords and JEL codes. Abstracts submitted earlier will receive faster review. Submit to your abstracts to:

Prof.Dr. Graham Gal : [gfgal@isenberg.umass.edu](mailto:gfgal@isenberg.umass.edu) (subject:icon2016)  
Prof.Dr.Kiymet Çalıyurt : [kiymetcaliyurt@trakya.edu.tr](mailto:kiymetcaliyurt@trakya.edu.tr)

### REGISTRATION INFORMATION

Link is on conference website <http://7thicongfesrumass.trakya.edu.tr/> .

### POSSIBLE CONFERENCE TOPICS

#### CORPORATE GOVERNANCE

Corporate governance reporting  
Corporate governance in banking sector  
Corporate governance regulation  
Accountants' and auditors' responsibilities on corporate governance  
Corporate governance regulation differences between countries  
Codes of "best practice" and norms of behavior  
Changing role of management and corporate governance  
Internal controls and accountability  
Risk management  
Financial market supervision and control  
Governance and financial market economics  
Corporate governance and governmental institution  
Boards and corporate governance

#### CORPORATE SOCIAL RESPONSIBILITY (CSR)

Determining CSR strategy and role of accountants  
Risk management and CSR  
CSR reporting and related costs  
Auditors' social responsibility  
International auditing standards and CSR  
Social responsibility of accountants  
Environmental and social accounting & audit  
Environmental & social reporting  
Responsible marketing & costing & reporting  
Taxation policy and problems on CSR  
CSR matters & CSR legislations & CSR reporting differences for publicly held companies  
Economic crises and CSR  
Auditing of irresponsible projects

#### FRAUD

Fraud in sectors (health, tourism, education...)  
Fraud prevention, detection, arrogation, reporting  
Fraud in governmental institutions, non-governmental organizations, private companies  
Occupational matters for Certified Fraud Examiners  
Fraud and auditors' responsibility  
National and international legislation on fraud  
International institutions & applications on fraud  
Fraud in banking sector  
Fraud in Social Responsibility Projects  
Organizational Fraud

#### SUSTAINABLE DEVELOPMENT

Accounting for sustainable development performance  
Sustainability assessment models  
Carbon issues in sustainability  
Sustainable development in crises  
Sustainable development in small and medium enterprises  
Reporting sustainable development  
Determining company's sustainable development strategy  
Sustainable development in NGOs  
The importance of women in sustainability

#### ETHICS

Ethics in accounting and auditing occupation  
Occupational ethics codes  
Ethical matters in taxation  
Ethics education in accounting, finance and fiscal studies  
Case studies in ethical matters  
Ethical problems in financial markets

#### CORPORATE ACCOUNTABILITY

Organizational accountability  
Collaborative governance  
Citizen participation  
Accountability in banking sector  
NGOs Accountability  
Corporations of departments in corporate sustainability  
International regulation on corporate sustainability

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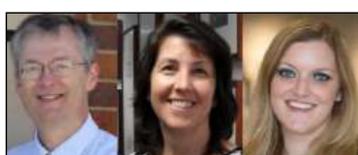


## Congratulations!

**Asharaf Khallaf** received the best teacher award this academic year 2015-2016 at the school of business administration level in the American University of Sharjah, UAE

**Margarita Lenk Smiles** was selected as a Global Scholar on the Semester at Sea ship for Fall Semester. Margarita will be traveling on a ship for the entire semester, teaching onboard and conducting field classes in the ports we visit, which include the following countries: Germany, Greece, Italy, Spain, Morocco, Senegal, Brazil, Trinidad/Tobago, Panama, Peru, Ecuador, Costa Rica, and finally San Diego, USA!

AIS Section member and Murray State Accounting Prof **Murphy Smith** coauthored the second edition of Financial Accounting and Reporting with Dr. Katherine Taken Smith Murray State and Shannon Knight of Texas A&M. The book, published by CCH Wolters Kluwer, incorporates a 'cross-functional approach' that demonstrates the value of accounting information to the various business functional areas, including managements, marketing, finance and production. The book's unique and special features are described online (<https://dl.dropboxusercontent.com/u/49154487/far/far.htm>), including student friendly, teacher friendly, cross-functional approach, ethics topics, practical business applications, connecting to global commerce, and at the end of each chapter a section 'tying it all together.' The book also includes an online homework systems created by WebAssign. Since Smith is a long-time AIS teacher and researcher, the book also includes info on Excel, Web resources, computer security, e-commerce, and other technology issues.



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### “Valuing Personal Data to Foster Privacy: A Thought Experiment and Opportunities for Research” authored by Malcolm Crompton and Juergen Sidgman

What if accounting standards changed to require corporations to determine and present the value of personal data on financial statements?

We argue that in this, the information age, markets would be significantly better informed, valuations of corporations would change radically and that board and management focus would be markedly different.

In a time when data is increasingly becoming the foundation for business success, the race to collect, analyze, and use large amounts of personal data has left largely unattended the privacy considerations of individuals from whom this data is obtained. As a consequence, individuals are left alone to deal with increased risks of identity theft, potential embarrassment and stigma, and potential civil rights violations.

On the surface, organizations seem to lack real incentives to protect personal data. Individuals continuously provide personal data at no cost to governments and to businesses through interactions with social media, Internet searches, and possession of smart devices and other internet connected equipment. In addition, anecdotal evidence shows that when breaches in corporate security lead to data breaches the reputational damages encountered by the affected corporations have no long-term economic consequences.

In this commentary, we make the case that absent formal mechanisms enabling corporations to determine and present the value of personal data on financial statements, privacy considerations will continue to be neglected. We acknowledge the difficulty of the task ahead exposing difficult questions such as: how can we assess and reassess the evolving future economic benefits that collected data has the potential to create? In light of these difficulties and the paucity of research in this area, we present research opportunities that are relevant to different fields in accounting.

We also elaborate on how we expect data valuation to impact privacy through greater understanding of data, improved market efficiency, and more thorough oversight over management's handling of data assets. Finally, we express that through data valuation, the accounting community has a unique opportunity to limit, not only improper data protection mechanisms that weaken privacy, but also the growing market consensus exposing the diminishing usefulness of financial reports.

We acknowledge that before any change such as this could be contemplated in practice, significant advances in accounting theory and practice will be essential. We also argue that the extent to which markets are currently ill-informed means that the time to start is now.

### “Repairing Organizational Legitimacy Following Information Technology (IT) Material Weaknesses: Executive Turnover, IT Expertise, and IT System Upgrades” authored by Jacob Z. Haislip, Adi Masli, Vernon J. Richardson and Juan Manuel Sanchez.

Information technology (IT) is of first-order importance regarding the financial systems' ability to provide access to and security of accounting records, which ultimately affects financial reporting quality. COSO's 2013 framework on internal controls highlights the importance of IT since reliance on evolving and new technologies continues to grow. Specifically, COSO's 2013 framework lists selecting and developing controls over information technology as one of the pivotal internal control principles. Findings from extant research suggest that, relative to non-IT related internal control material weaknesses, IT-related material weaknesses (or IT material weaknesses) have a more negative impact to the effectiveness of internal controls, result in less reliable financial information, and generate consequences that are more adverse. Hence, the existence of IT material weaknesses presents a threat to the legitimacy of an organization. The objective of our research article is to examine how companies repair organizational legitimacy following information technology material weaknesses. We document that firms with IT material weaknesses, compared to firms with non-IT related material weaknesses, are more likely to replace outgoing CEOs, CFOs, and directors with individuals possessing IT expertise. In addition, IT material weakness firms are more likely to upgrade their financial reporting IT system and make other IT initiative changes, such as hiring an executive dedicated to the oversight and management of IT or adding a technology committee to the board. Moreover, we find evidence suggesting that IT material weakness firms that engage in major changes in their IT governance (i.e., those that replace their CFO with executives with IT expertise and/or upgrade the financial reporting system) are more likely to remediate their internal control weaknesses. Overall, firms recognize that IT control breakdowns represent a legitimate threat to the financial reporting environment and firms engage in various steps to restore organizational legitimacy.

### “Blogs as Research and Teaching Resources for Accounting Academics” authored by Glen Gray.

If [William Shakespeare](#) was writing about blogs today, he would say something like "What's in a name? A blog by any other name would still be just as sweet." Blogs are definitely a sweet source of timely information on a wide variety of topics for accounting- and AIS-related research and teaching. However, there is no absolute definition of blogs that can be used to determine whether a website is a blog or not. *Blog* is a label that a web master can give to his/her website or not. As working definition, a blog is a website where an individual (a blogger) or a group of individuals post observations and opinions regarding a specific topic and usually where readers can post comments. There is probably thousands of useful website that meet this definition but are not called blogs by the webmasters. Under this broad definition of blogs, social media (Facebook, Twitter, etc.) are blogs.

Potentially useful blogs (and blog equivalents) are maintained by academics (inside and outside of the accounting domain), practitioners, large and small accounting firms, and accounting and technology vendors. The primary value of blogs is their immediacy because bloggers are very quick to post blogs regarding any events (new regulations, new lawsuits, new technologies, etc.) in the subject matter they are following. Bloggers archive their previous posts; accordingly, besides being very timely, blogs can also provide a rich history of specific subject matters. However, quoting the movie, *How the Grinch Stole Christmas*, "One man's compost is another man's potpourri." Blogs are not vetted or subject to independent review, consequently it's *caveat emptor* when venturing into the blogosphere to collect information.

With that caution stated, different bloggers' opinions—biased or not—on a specific topic or subject matter can be a valuable starting point or input for more rigorous research. These opinions can be transformed into testable hypothesis and subsequently accepted or rejected.

These different bloggers' opinions can also be a valuable teaching resource. Students can be assigned to locate several blogs on a specific topic, summarize differences found, and develop conclusions based on their review of the blogs and a rational for reaching those conclusions.

The challenge is that locating applicable blogs is a messy and arbitrary process. Search of BlogSearchEngine.org (a Google app) on the term "accounting" returns 32 million results! Fortunately, the top listed accounting blogs are frequently lists of blogs (e.g., **50 Accounting Blogs You Should Follow** at [blog.directcapital.com](http://blog.directcapital.com)). In addition to traditional web searches (e.g., google.com), there are specialized blog directories that provide another method to locate blogs. One place to start is **23 Blog Directories to Submit Your Blog To** ([www.searchenginejournal.com/20-essential-blog-directories-to-submit-your-blog-to](http://www.searchenginejournal.com/20-essential-blog-directories-to-submit-your-blog-to)).

To completely realize the value of blogs, you should also search for websites that have all the characteristics of blogs, but are not labeled blogs. For example, in addition to specifically labeled blogs, both large and small accounting firms publish newsletters, alerts, and perspectives that have all of the characteristics of blogs. These blog-equivalents cover a wide variety of topics and be included in any search for blogs for research or teaching.

### “The Effect of Frequency and Automation of Internal Control Testing on External Auditor Reliance on the Internal Audit Function” authored by Maia Farkas and Rina Hirsch

Over the last two decades, audits of publicly traded companies have become increasingly onerous and costly, in large part due to extensive control testing mandated by the Sarbanes-Oxley Act of 2002. For this reason, increasing audit efficiency has become more and more important. One way to improve audit efficiency is for the external auditor to rely on a strong internal audit function (IAF). Furthermore, management benefits from improved audit efficiency by way of lower audit fees, ensuring compliance with regulations, enhancing risk assessments, and ensuring the adequacy and functioning of internal controls.

Using an experiment with experienced external auditors as participants, we examine a setting in which the external auditor identifies poor work performance by the IAF and management implements an internal control testing remediation strategy that varies on two characteristics: automation and frequency. The level of automation can vary from no automation (entirely manual) to complete automation (entirely information technology based). The frequency of internal control testing can vary from periodic testing to continuous testing. We investigate whether the following remediation strategies are effective in improving external auditors' perceptions of IAF competence, work performance, and objectivity as well as subsequent reliance decision: automated controls testing conducted on a real-time basis (akin to continuous controls monitoring or CCM), automated controls testing conducted on a weekly basis (akin to Audit Command Language or ACL), and manual controls testing conducted by internal auditors on a weekly basis.

Our results indicate that the frequency characteristic of the remediation strategies indeed affects external auditors' perceptions of competence, work performance, and objectivity, while the automation characteristic of the internal control testing remediation strategies does not impact these perceptions of the strength of the IAF. Contrary to our expectations, external auditors appear to improve reliance on the IAF when the internal control testing is performed less frequently as opposed to more frequently. We suggest that management may not need to invest in expensive continuous controls monitoring technologies to improve reliance subsequent to a shortcoming in the IAF's work performance if improved reliance (and hence lower audit fees) are its ultimate goal.

Interestingly, all three remediation strategies are effective at improving assessments of the IAF's poor work performance as well as external auditors' reliance on the internal auditors. Thus, some benefit will accrue to management, regardless of the strategy employed. These results provide useful information to management, enabling them to maximize the benefits associated with having a higher quality IAF. Furthermore, our results are informative to standard setters that are interested in how external auditors assimilate information cues.

### “The Effects of Information Disaggregation and Financial Statement Interactivity on Judgments and Decisions of Nonprofessional Investors” authored by Andrea Kelton and Uday Murthy.

Information technologies enable firms to not only report more frequently, but to also enhance the decision-usefulness of financial information through variations in presentation format. We investigate whether the provision of financial statement interactivity via a web-based drilldown mechanism improves investors' use of disaggregated financial statement information and, ultimately, their decisions. We suggest that a drilldown mechanism will mitigate the negative effects of information overload caused by disaggregation by allowing users to control their viewing of the disaggregation, focus their attentions on the relevant details, and avoid tendencies towards earnings fixation. However, we expect this load minimizing effect to depend upon the utility (i.e., relevance) of the disaggregated details to the investment task.

We conduct an experiment with nonprofessional investor participants obtained from Amazon Mechanical Turk to investigate these issues. Participants completed a simple decision case wherein they reviewed either high utility or low utility disaggregated financial statements either with or without the drilldown mechanism. Overall, our results show that participants using the drilldown experienced lower cognitive load and were less susceptible to earnings fixation than those without the drilldown capability. However, when the disaggregated details provided limited new information, the use of the drilldown resulted in higher levels of cognitive load as compared to when the disaggregation provides new information.

Our results should inform standard setters currently considering enhanced financial statement disaggregation. We provide evidence regarding the conditions when disaggregation is helpful versus harmful to investor decision making and the benefits and costs of financial statement interactivity.

### Summer 2016 issue of the JIS is a theme issue on Enterprise Ontologies, edited by Guido Geerts.

In an environment that is characterized by dramatic increases in the volume and variety of data, tools for integration have become progressively more important. The most common way of addressing interoperability issues is by using ontologies: formal specifications of agreed-upon conceptualizations. Ontologies have also proved to be useful as reference models and for reasoning purposes. For more than three decades now, accounting scholars have conducted research in this area, most of it focusing on the REA enterprise ontology. The latter has proved to be useful in a wide variety of applications, including as a reference model during the development of enterprise software, for reasoning purposes, to improve interoperability in economic commerce, and as a framework for teaching core accounting and business process principles.

The objective of the "theme issue on enterprise ontologies" was to extend research on enterprise ontologies in two ways. First, to present the latest developments in the field. This is done by the first two papers. The Scheller and Hruby paper—*Business Processes and Value Delivery Modeling Using Possession, Ownership and Availability (POA) in Enterprises and Business Networks*—presents a refinement to the REA enterprise ontology for defining value creation and transfer as flows of possession, ownership, and availability. The POA notation further aligns traditional accounting and REA accounting through intuitive business process descriptions. On the other hand, the Snow and Reck paper—*Developing a Government Reporting Taxonomy*—uses an empirical approach to create a taxonomy for government reporting. Its main objective is to improve accessibility to and comparison of government data for those who invest in municipal bond markets.

Second, the theme issue also initiates a research stream that aims at a better understanding of the enterprise ontology landscape, similar to efforts being done in other disciplines. While all enterprise ontologies focus on representing "economic phenomena," there are important differences among them in content, scope, and use. The definition of enterprise ontologies in terms of a common framework—the Ontology and Analysis Framework (ODAF)—results in structured discussions of their strengths, weaknesses, and applicability, and also enables comparative analysis among them (i.e., what are the gaps, overlaps, and synergies?). The third and fourth papers in the theme issue discuss specific enterprise ontologies in terms of ODAF. The de Cesare and Partridge paper—*BORO as a Foundation to Enterprise Ontology*—presents the Business Object Reference Ontology (BORO) as both a foundational ontology and a reengineering methodology. One of BORO's characteristics is that it has been used extensively in practice for a wide variety of applications, including the re-engineering of legacy systems, the development of reference architectures for enterprise data exchange, and enterprise systems integration. On the other hand, the paper by Weigand—*The e3value Ontology for Value Networks—Current States and Future Directions*—provides a systematic overview of the e3value ontology and its use for exploring innovative business models from an economic point of view. In addition, it discusses a number of possible extensions, in particular the co-creation of value and value model quality.

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**“Applying Basic Gamification Techniques to IT Compliance Training: Evidence from the Lab and Field” authored by Ryan J. Baxter, D. Kip Holderness, and David A. Wood**

Companies use internal controls to protect and maintain the integrity of their information systems. However, internal controls are only as effective as the employees who operate them. Consequently, companies devote valuable resources to train employees on their responsibilities to safeguard company information. Most employees dislike compliance training and find the experience boring, which can lead to ineffective training.

In an effort to improve the efficacy of training, some companies have begun incorporating basic elements of gaming into their training modules – a practice known as “gamification.” Our study makes use of a laboratory experiment using student participants and a field study using employees at a large multi-national bank to examine whether gamified training results in greater enjoyment and effectiveness than traditional, non-gamified training.

Our participants report that gamified training is more enjoyable and interesting, and less boring than traditional, non-gamified training modalities. In addition, participants who completed the gamified training scored higher on information security knowledge assessments than those who received no training, though they did not score higher than those who received comparable non-gamified training.

We also find that individual gaming preferences influence the effectiveness of gamified training. Specifically, we find that gamified training results in greater knowledge acquisition for “gamers,” those who participate in gaming on their own time, relative to “non-gamers.” This result was somewhat surprising, given that gamers were less impressed with gamified training than non-gamers. Our results suggest that companies need to understand the preferences of their employees when deciding on what types of training to implement.

In summary, though gamification does not appear to be the silver bullet needed to increase both enjoyment and learning outright, it may reduce the apathy with which employees approach training, and our results suggest that it does not hinder learning. We believe that future research in this area will guide practitioners on matching the right gamification mechanics with organizational needs.

**“SECURQUAL: An Instrument for Evaluating the Effectiveness of Enterprise Information Security Programs” authored by Paul John Steinbart, Robyn L. Raschke, Gaham Gal, and William N. Dilla**

Research on information security has been hampered by the scarcity of objective data concerning the effectiveness of organizations’ information security efforts. This study develops a multi-dimensional instrument based on the COBIT v4.1 Maturity Model rubrics. With the cooperation and support of the IMTA section of the AICPA, we collected four security outcome measures from 71 companies: number of noncompliance with security policy issues serious enough to be brought to the attention of the Board of Directors, number of security-related internal control weaknesses reported to the Board, number of attacks capable of causing serious harm that were detected and stopped before causing harm, and the number of attacks that did cause serious harm. We demonstrate that the instrument, SECURQUAL, is a reliable surrogate for measuring the effectiveness of an organization’s information security program.

One desirable feature of SECURQUAL is its parsimony. It contains questions about only 18 of COBIT v4.1 Maturity Model rubrics. Further, the instrument uses only one Likert-type question with a five-point response scale to measure each of those topics. Thus, it should be a useful tool for both researchers and practitioners to assess the overall effectiveness of an organization’s information security.