

# **ICKM 2017**



**13th International Conference on Knowledge Management  
Dallas Fort Worth Marriott Hotel & Golf Club Resort, Texas**

**Organized by**

**Knowledge and Information Professionals Association  
(KIPA) and UNT ASIS&T Student Chapter**

## **PROGRAM**

## **Welcome Message**

The 13<sup>th</sup> Annual International Conference on Knowledge Management is organized and hosted by the Knowledge and Information Professional Association (KIPA). KIPA is an evolving umbrella group of diverse knowledge and information professionals who share a common goal of advancing intelligent sharing of individual and organizational knowledge. KIPA represents a wide variety of professionals including knowledge managers, content managers, IT specialists, information analysts, librarians, archivists, records managers, document managers, web developers, chief learning officers and information architects. The group's vision is to develop a network of individual knowledge specialists who help each other understand how each specialty works jointly to build a total structure of knowledge and information management within an organization. The group holds an annual meeting and symposium on various current topics. This year, the group hosts the 13<sup>th</sup> International Conference on Knowledge Management (ICKM) in conjunction with the KIPA annual Meeting. KIPA annual business meeting will take place on Friday October 26<sup>th</sup> right after the closing session.

The theme of the conference this year is "Big Data in the Big D" focusing on data science, data analytics and information visualization. Other topics covered include health informatics, information organization, digital curation and knowledge discovery. The increased use of Internet for economic and political purposes, in addition to the incredible reach and influence of social media on the population has ignited research interest in big data generated by social media. Top selected papers from the conference are published in a book as part of the Series on Innovation and Knowledge Management produced by World Scientific. The conference proceedings are also published in the University of North Texas Digital Library.

The organizing committee extends warm welcome to you into Dallas/Fort Worth. We are very excited and eagerly looking forward to your participation in the conference.

ICKM 2017  
Organizing Committee

Time	October 24 <sup>th</sup> (Tuesday)	October 25 <sup>th</sup> (Wednesday)			October 26 <sup>th</sup> (Thursday)			
8:00 am		Host Desk / Registration			Host Desk/ Registration			
9:00 am		<b>Session 1:</b> The Synergy Between Knowledge Management and Data Analytics (Jay Liebowitz) <b>Trinity 1</b>			<b>Session 13:</b> Creating Knowledge with Big Data and Analytics (Dursun Delen) <b>Trinity 1</b>			
10:00 am		Coffee Break/Posters			Coffee Break			
10:30 am		<b>Session 2:</b> Panel Big Data and Government Information  <b>Guadalupe</b>	<b>Session 3:</b> KM and Health Care  <b>Brazos</b>	<b>Session 4:</b> KM and Big Data Analytics  <b>Colorado</b>	<b>Posters</b>	<b>Session 14:</b> Information and Organizational Knowledge  <b>Guadalupe</b>	<b>Session 15:</b> Indigenous Knowledge Management  <b>Brazos</b>	<b>Session 16:</b> Information Management and Systems  <b>Colorado</b>
12:00 pm		Lunch/Networking/Posters				Lunch/Networking		
1:00 pm		<b>Session 6:</b> KM and Social Media Analytics  <b>Guadalupe</b>	<b>Session 7:</b> Knowledge Discovery and Management  <b>Brazos</b>	<b>Session 8:</b> Information and Data Management  <b>Colorado</b>		<b>Session 17:</b> Institutional Knowledge and Learning  <b>Guadalupe</b>	<b>Session 18:</b> Knowledge Management and Personal Information  <b>Brazos</b>	<b>Session 19:</b> Knowledge Sharing and Transfer  <b>Colorado</b>
2:30 pm		Coffee Break/Posters				Coffee Break		
3:00 pm		Host Desk / Registration Reception	<b>Session 9:</b> Big Data analytics in Healthcare  <b>Guadalupe</b>	<b>Session 10:</b> Research Data Management and Analytics  <b>Brazos</b>	<b>Session 11:</b> Data Management and Research  <b>Colorado</b>	<b>Session 20:</b> Workshop: Web of Science  <b>Guadalupe</b>	<b>Session 21:</b> Panel on Big Data, Ethics and Public Engagement  <b>Brazos</b>	<b>Session 22:</b> Panel - Knowledge Cities  <b>Colorado</b>
	Informal Reception Hotel Lobby 6:00pm	<b>Session 12:</b> UNT Evening Program & Conference Dinner (6:30pm-9:00pm) Welcoming Remark by Provost Jennifer Cowley Invited Talk: Brant Deranger, Sabre Buses leave 5pm for UNT Campus and UNT Campus Tour			Knowledge Café and Closing Session (5pm-6pm)			
9:00pm		Buses leave UNT Campus 9:00pm for Hotel			Outing with Friends and Colleagues			

## Program Schedule

---

October 25<sup>th</sup>

---

### Session 1 | Opening Keynote (9:00am – 10:00am)

#### The Synergy Between Knowledge Management and Data Analytics

Jay Liebowitz  
Harrisburg University of Science and Technology



Jay Liebowitz is the Distinguished Chair of Applied Business and Finance at Harrisburg University of Science and Technology. He previously was the Orkand Endowed Chair of Management and Technology in the Graduate School at the University of Maryland University College (UMUC). He served as a Professor in the Carey Business School at Johns Hopkins University. He was ranked one of the top 10 knowledge management researchers/practitioners out of 11,000 worldwide, and was ranked #2 in KM Strategy worldwide according to the January 2010 Journal of Knowledge Management. One of his most recent books is Successes and Failures of Knowledge Management (Morgan Kaufmann/Elsevier, 2016).

### Session 2 | Panel on Big Data and Government Information (10:30 am – noon)

#### Panelists

- Daniel G. Alemneh (Moderator) is Digital Curation Coordinator for the Digital Libraries at the University of North Texas.
- Mark E. Phillips is Associate Dean for Digital Libraries at the University of North Texas.
- Lisa Smith is the Executive Director of the Regional Medical Library (RML) for the National Network of Libraries of Medicine, South Central Region.
- Hope Shimabuku is the Director of the Texas Regional United States Patent and Trademark Office (USPTO).

The panel brings together diverse stakeholders, explores the current landscape, examines various issues of big data applications in the government, including CyberCemetery, a web archive of defunct federal websites for agencies, commissions, and initiatives; end-of-Term Presidential Harvest (or EOT); preserving Electronic Government Information (PEGI); open Data, and the "All of Us Research Program", a historic effort by National Institute of Health (NIH).

### Session 3 | KM in Health care (10:30 am – noon) | Chair: Jeff Allen

#### Discovering Different CKD-Related Medical Problems for African American Male and Female Groups using a Machine Learning Technique

Yong-Mi Kim, Pranay Kathuria, University of Oklahoma  
Dursun Delen, Oklahoma State University

African Americans have a higher rate of chronic kidney diseases (CKD) --- four times the rate of Caucasians. The findings show that the medical problems for male and female groups are very different. More specifically, a medical problem derived from one gender group can over-represent the finding of the whole sample in the analysis. For example, at the dialysis stage, the finding of the whole sample for abnormal cocaine metabolite is 1.98%. On the other hand, the subgroup analysis shows that it is 6.22% for the male group, making it the number one medical problem, while this same problem did not make the 1% cut for the female group. Such discernable findings also appear in other medical problems.

#### Decomposing and Visualizing the Twitter Data Stream with Healthcare hashtags: An information Theoretical Perspective

Yuan Zhang & Hsia-Ching Chang  
University of North Texas

Little research in information system has been carried out on the subject of user's choice of different components when composing a tweet through the analytical lens of information theory. Using the concept of entropy as a measure, this study compares the use of paired medical hashtags on Twitter and analyzes the statistical structure of the components in the hashtag trails. This study uses both radar graph and scatter graph as data visualization aids to get an intuitive demonstration. These graphs visualize the complexity of the structure and reveal the pattern of the characteristics of each individual tweet in the trail.

#### Understanding Health Services Utilization by Individuals with Schizophrenia

Kathryn Masten, Elaine Lantz, Carol Perryman, Marie-Anne Demuyne, Kittipong Boonme, Mikyoung Lee, Mari Tietze, Will Senn, Wen Xu, David Gardner, Claudette Fette, Cynthia Evetts, Michael Etzel, Elaine Cox, Woody Evans, Amanda Zerangue, and Wanyi Wang, Texas Women's University

This work in progress describes interdisciplinary research by a team of informatics researchers representing five academic disciplines at Texas Woman's University: computer science, library and information science, management, nursing, and occupational therapy. Using secondary data analysis, the team intends to produce agent-based and system dynamic models and geographical mapping of healthcare claims of over 12,000 individuals diagnosed with schizophrenia, a serious mental illness. Inpatient and outpatient data from healthcare providers in North Texas (Dallas-Fort Worth Hospital Council Education & Research Foundation, Information & Quality Services Center, Irving, Texas, Regional Data, 2013-2015) will be analyzed to understand patient flow, identify 'frequent flyer' usage of services, and develop an interdisciplinary framework to support efforts to address complex community-based problems. Aspects of the team's work to be highlighted include cyber infrastructure, people, and processes.

## **Session 4 | KM and Big Data Analytics (10:30 – noon) | Chair: Jiangping Chen**

### **Knowledge Management and the Oklahoma Mesonet**

Betsy Martens  
University of Oklahoma

Customer knowledge management is generally understudied within KM as compared to internal knowledge management research, especially in the context of non-profit organizations. Relatedly, non-profit organizations that produce and disseminate massive amounts of scientific data as part of their operations are increasingly pressured by their stakeholders to account for all uses of that data, both internal and external, as part of the justification for their existence. This presentation describes a pilot study of scientific papers utilizing the extensive amounts of environmental sensor data freely available from the statewide Oklahoma Mesonet during its first two decades of operations, demonstrating the challenges involved in identifying global uses of that data as part of the Mesonet's overall knowledge management strategy, and examines several existing customer knowledge management models as potentially applicable and beneficial within this context.

### **Learning Analytics and Learning Technologies**

Kelley McCauley & Lin Lin  
University of North Texas

Emerging technologies continue to influence education in the way that instruction is designed, delivered, and consumed. As online learning has become a common mode of instruction delivery (Martin & Ndoye, 2016), more data has become available, as well as faster, more efficient tools to analyze it. Learning Analytics is one such technology, and is defined by the Society for Learning Analytics Research (SOLAR) as "the measurement, collection, analysis and reporting of data about learners and their contexts, for the purposes of understanding and optimizing, learning and the environment in which it occurs" (SOLAR, 2012). This paper discusses the role of learning analytics in instructional design, the role that Learning Management Systems (LMSs) play in learning analytics, the benefits of learning analytic tools, and the limitations and future implications of this emerging technology.

### **Big Data Project Management Challenges and Specialized Skills**

Ron Steiner & Rose Baker  
University of North Texas

Recently, much attention has been given in organizations in a wide variety of industries to the potential benefits of big data projects. Though these projects often have the potential for high returns, they also come with high risk and often high cost. The research in progress seeks to identify those characteristics of big data projects that present particular challenges to project managers, gather insights from shared experiences of successful project managers in this realm, and, to the extent possible, make recommendations regarding training of project managers without big data experience to increase their chances of managing successful big data implementation projects. In addition to the core project management skills common to all projects and risk management, initial interview results have identified that project managers of big data projects are more successful if they have a heightened awareness of pater.

## **Session 5 | Poster Presentation 10:00 – 3:00pm (Discussions during lunch and coffee breaks)**

- Revealing the Information Flow Process of Online Health Communities Through Large Scale Data Analytics (Wanli Xing , Texas Tech University).
- Investing Teacher's Perceptions of Academic Versus Creative Giftedness Using the Network Text Analysis (Sungyeun Kim, Incheon National University Seon Young Lee and Donggun An, Seoul National University).
- Managing Project Teams with Artificial Intelligence (Schenita Antone Floyd, University of North Texas)
- The challenges of implementing a data driven framework in K-12 education (Cary K Jim and Barbara Schultz-Jones ,University of North Texas.Cynthia Ledbetter, The university of Texas Dallas).
- Are Food Manufacturers Fighting for or Against Your Health? An Analysis of the Arguments Submitted for the Nutrition Facts Label Format Ruling (Hillary Stark, University of North Texas)
- The rise of AI and the Implications for Knowledge Management in Organizations (Anna Sidorova, University of North Texas).
- From User Reviews to Theory Building: an Inductive Approach to Construct Identification Using Text Mining (Quynh Nguyen, Anna Sidorova, University of North Texas).
- Providing Access to Scientific Knowledge: Faculty Views on Open Access Publishing as a New Channel of Scholarly Communication (Ahmet Meti Tmava, University of North Texas).

- Facilitating Knowledge Transfer of Data Sharing Practices (Pamela Andrews, University of North Texas).
- Towards a Dimensional Model for Community Knowledge (Shadi Shakeri and Nicholas Evangelopoulos, University of North Texas).
- Use of Social Networking Sites and Knowledge Sharing Practices by the LIS Professionals in Pakistan (Arslan Sheikh, COMSATS Institute of Information Technology).
- Motivations and Knowledge Sharing in Crowd Sourcing (L.G.Pee, Nanyang Technological University).
- Collaborative innovation and Knowledge Management (Joyce Zhang, CNKI Inc).

## **Session 6 |KM and Social Media Analytics (1:00pm – 2:30pm) | Chair: Hsia-Ching Chang**

### **The Use of Twitter as a Tool to Predict Opinion Leaders that Influence Public Opinion: Case study of the 2016 United States Presidential elections**

Yousef Alfarhoud  
University of North Texas

The availability and ease of access of social media has allowed general people/users to interact in political discussion. Social media is considered to be a highly-used instrument for political engagement. The purpose of this study is to understand twitters users' involvement in politics and in particular political election. The use of Twitter as a tool to predict the opinion leaders that influence the general users in relate to the political election. It will also help understand if the political camping's relay on Twitter as tool to affect the voters' opinions. The scope of this study is to cover the United States 2016 president election. The outcomes of this study indicated the importance of social media specifically Twitter as a tool to reach Twitter users to participate in the elections and influence their opinions. The study revealed that the majority of opinion leaders were individual users rather than campaigns, organizations, and affiliation.

### **Aggression in Cyber Sphere: A Qualitative Study to Explore Saudi Arabian Social Media**

Ali A. Albar  
Yanbu University College

Cyber aggression came about as a result of advances in information communication technology and the aggressive usage of the technology in real life. Nowadays, cyber aggression can take on many forms and faces. However, the main focus of this research is on violent online acts such as bullying and stalking. This qualitative research carried out to explore the concept of cyber aggression and its existence in Saudi Arabia. In-depth interviews were conducted with Saudi social media users to collect understanding and meanings of cyber aggression. A proposed model was generated to describe cyber aggression in Saudi Arabian social media sphere. The results showed that there is a level of acceptance to some cyber aggression acts due to a number of factors including lack of understanding, lack of help and support, societal and traditional influences, and other related aspects that would affect the level of cyber security in social media. This research is a valuable source for educators and researchers who focus on cyber security, cyber psychology, and cyber aggression in social media.

### **Social Media Analytics: Processes, Tools, and Techniques**

Miyoung Chong  
University of North Texas

Social media have dramatically changed information creation and sharing. What was once the exclusive domain of news media, television, radio, public institutions, and private entities willing to purchase media space, information dissemination on a mass scale now flows from the fingertips of a coffee sipping Starbucks customer directly to the Internet and onwards to any persons with internet access and a web browser. Social media analytics (SMA) has become one of the core areas within the extensive field of analytics. A primary reason of growing interests in social media analytics is the intensity and accessibility in terms of size and diffusion speed of the user-generated content of social media. Thus, this study examines the status quo of social media analytics especially focusing on processes, tools, and techniques.

### **Social Networking in Organizational Cultures**

Michele A. L. Villagran  
University of North Texas

What are the societal impacts on organizational culture, leadership effectiveness, and communication quality for both internal and external audiences? This program will challenge participants to analyze best practices in organizational culture communication strategies focusing not only on the tools used, but also the trickle-down impact that the communication has on leadership, employees, clientele, and public perception. What is the role of social networking in the knowledge management process? We'll examine both sides of the coin to understand the benefits and the challenges that come with utilizing social networking within the library and information science profession.

## **Session 7 | Knowledge Discovery and Management (1:00pm – 2:30pm) | Chair: June Abbas**

### **Knowledge Discovery through text mining in the United States Data Science**

Hammad Khan  
University of North Texas

This research uses association rules approach to text mining in big data. Through the process of knowledge discovery, the researcher identifies patterns and trends in the data science discipline core courses using text mining techniques in the Rapid miner software. Rapid miner's text mining comprises of components of text selection, grammatical analysis, string matching, statistical techniques, and relationship extraction. This project uses the association rules algorithm. The goal of the research is to find the association rules within the core course titles of the Data Science curriculum being offered in the United States. Institutions that are interested in implementing or modifying their data science curriculum will benefit from reviewing this research as they will be able to see what majority of other Universities in the United States are offering in their Data Science programs.

### **Data Analytics Applied in CNKI Databases Search Log: Using data analytics techniques to understand Chinese content users' interest and interaction patterns**

Xin Wang, Hsia-Ching Chang, Jiangping Chen, University of North Texas  
Jie Yang, Tsinghua University

Chinese immigrants are the third largest foreign-born minority group in U.S. Also, there is a rapid growing trend of educational exchange between U.S. and China. However, few studies have been carried out to examine North America users' interests and information behavior in terms of using Chinese content. This study collected and analyzed approximately one million transaction log data records to identify the most frequently used content types and the most popular reading topics from 2014 to 2016. The preliminary analysis indicated that Chinese content users in North America were not only interested in accessing textual information but also visual information. In terms of the most popular topics, Chinese content readers mainly focus on topics related to social science and humanities, but their reading interests were also expanded to technology-related topics in recent years.

### **Mining Disease Association Relationship in Electronic Health Records: A Link Prediction Algorithm Based on Node Embedding**

Lixin Xia, Huangyingzi Yu, QingXing Dong and Gaohui Cao  
Central China Normal University

In the past two decades, enormous amount of health data has been generated and stored with the wide use of electronic health records in healthcare system. How to extract the relationships between diseases from these data for the accurate diagnosis and prediction of diseases has become a hot issue in both academic and industry. However, many studies only considered several specific diseases instead of revealing relationships among various diseases. Thus, in order to model associations between various diseases, in this paper, a link prediction algorithm based on Node Embedding was put forward to map the disease nodes to a n-dimension space and use neural network to learn node and network features and obtain the vector representation of the nodes used as computing connection probability so as to explore the knowledge of disease relationships.

### **Identity Management Analysis: An Empirical Investigation into the State of Library Community Authority Data Conformance to the New Standard**

Oksana L. Zavalina & Vyacheslav Zavalin  
University of North Texas

Identity management in the library community focuses on creation, conversion, sharing and maintenance of authority data – the massive databases of the standardized machine-readable records that describe persons, institutions, places, events, and works and relations between them. This paper presents some results of the content analysis study that explores the state of implementation of Resource Description and Access (RDA) standard in authority records for personal, corporate, geographic names and uniform (preferred) titles. The study that focuses on a snapshot of identity data from 2016 reveals that a large proportion of authority records are created according to or revised to be brought in conformance with RDA requirements in terms of including one or more new data elements that increase functionality of these records and enhance access to resources.

## **Session 8 | Information and Data Management (1:00pm – 2:30pm) | Chair: Joyline Makani**

### **Automatic Identification of Research Articles Containing Data Usage Statements**

Qiuzi Zhang, Wei Lu, Yunhan Yang and Haihua Chen  
School of Information Management  
Jiangping Chen  
University of North Texas

Modern scientific research is characterized with sharing datasets and reusing data for developing new models and theories. This paper describes a study to identify research articles with data use and reuse information. Applying a bootstrapping-based unsupervised training strategy, we were able to develop text patterns automatically out of a large training collection of research articles. These patterns were then used to distinguish articles with data use and reuse from those without data usage. Our

experiments using Computer Science literature showed that the identification could achieve more than 85% pattern extensibility. We also demonstrate how the results of the identification could be utilized to gain insights on data sharing and reuse in a scientific field.

#### **Predicators of Data Sharing and Reuse Behavior in Academic Communities.**

Jeonghyun Kim Anna Pechenina  
University of North Texas

Research data sharing is one of the most interesting and challenging issues for researchers in the academic community. To investigate the effect of individual characteristics and organizational contexts on data sharing and reuse behaviors, this study employed a second analysis of the survey data. This study found that older researchers and those who allocate a lower percentage of their worktime to research are likely to share data and show a positive attitude toward data sharing. The study also found that academic researchers are likely to share data if their funding agency requires them to provide a data management plan and if their organization or project provides the necessary funds and processes to support data management.

#### **Journal of Information and Knowledge Management: A Bibliometric Analysis**

Bibi Alajmi & Talal Alhajji  
Kuwait University

This study aims to provide a bibliometric analysis of the Journal of Information and Knowledge Management (JIKM) since its establishment 2002 until 2016. The analysis covers two main aspects. The first aspect focused mainly on the articles published within the Journal including the growth rate since 2002, authorship patterns, geographical distribution of authors, affiliations. The other aspect focuses on the external view of JIKM through analyzing research citing JIKM published articles. A total of 475 articles were published in a time span from 2002-2016. Forty-six authors published only one article in JIKM with 29% of the total authors, while eighty-three published two articles with more than 53% of the total authors published in JIKM. The United States produced 21% of the articles published in JIKM, followed by authors from India with almost 10%, Australia 8%, and UK 7.5%. It is worth mentioning here the diversity of JIKM community from the USA and Europe, as well as a good representation of Asia countries and the Middle East. It is also worth noticing that scientific papers published in JIKM are referenced in top Journals from fields such as computer science, business, library science, and others.

#### **Law Student information Seeking, and Understanding of Citation, Common Knowledge, and Plagiarism**

Kris Helge  
Texas Woman's University

This study examines how previous information literacy training before and during law school, law student gender, law student age, where one attends law school, year in law school, and previously obtained education affects law students' selection of information sources, their understanding of common knowledge, and their decision of whether or not to give attribution to these sources. The problem addressed in this study is that plagiarism is frequently discovered in student's writings. This study seeks to discover why. Is it due to source selection, lack of knowledge of citation and common knowledge, or something else? The data collected from these research endeavors suggests the outcomes of this study are that law students do exhibit some differences in understanding of citation and citation behavior based on age and their year in law school.

### **Session 9 | Big Data Analytics in Healthcare (3:00pm – 4:30pm) | Chair: Chuck Tryon**

#### **Visualizing Complex Healthcare Data to Support Provider-Level Quality Improvement Processes**

Daniel Duffy  
University of Oklahoma

In an effort to reduce cost, improve outcomes and establish a more enjoyable patient experience, individual healthcare providers and healthcare systems are utilizing quality improvement methods that have been proven in many other industries. Applying DMAIC strategies, using PDSA cycles and learning to lean out workflows is becoming as common in primary care clinics as treating a patient for the common cold. F. Daniel Duffy, M.D. is the principle investigator and director for a three-year study funded by the Agency for Healthcare Research and Quality (AHRQ) to demonstrate the value of utilizing on-site facilitators to guide clinical staff and practitioners to implement evidence-based guidelines and use formal quality improvement processes. Many of the target practices are located in rural Oklahoma.

#### **Assessing Misclassification Error on Estimated Cardiovascular Care Performance**

Juell Homco  
University of Oklahoma

As healthcare providers and payers transition from traditional fee-for-service payment structures to value-based payment models, there has been an increased focus on ensuring valid performance measures that will demonstrate the quality of care provided, not just the quantity. As a result of these changing payment structures in healthcare, primary care offices are being encouraged to implement quality improvement activities, rigorous data collection, and formal data analysis. Despite these activities, payers and providers often question the validity of common performance metrics. University of Oklahoma epidemiologist, Juell Homco, is



leading a project that aims to estimate the validity of electronic health data sources in measuring a provider's cardiovascular care performance and to estimate bias-adjusted performance when no gold standard exists.

### **Managing the Health of Populations in a Major Health System using the IBM Watson Data Analytics Tool**

Verda Weston and Jerry Green  
Utica Park Clinics

Few industries are facing pressure to change more than healthcare. Increasing costs and unhappy patients has opened the door to applying formal, proven quality improvement process to achieve the triple aims of lower cost, better outcomes and an improved patient experience. At the heart of this transformation is using formal measures at both the system and individual physician levels to demonstrate they are meeting established quality goals. These people attended many years of advanced education to heal the sick ... not to study and utilize data analysis and read run charts. Utica Park Clinics, comprised of 200+ physicians at over 55 practice locations across Northeast Oklahoma, is a national leader in changing the way physicians think and work. Over the past half-decade, they have wrapped the concepts of continuous process improvement around the patient-centered medical home model. During this workshop, Verda Weston, director of the UPC Population Health Department, will demonstrate how her group is working with individual providers, clinic staff and organizational executives, using Phytel with Lean principles, to improve patient outcomes.

## **Session 10| Research Data Management and Analytics (3:00pm – 4:30pm) | Chair: Yunfei Du**

### **Natural Language Analytics in Security and the Law**

David Lewis  
Brainspace

Natural language communications provide some of the biggest challenges and opportunities in big data. This is particularly true in legal and security applications, where understanding human activity and intention is inevitably the focus. I will give a tour of technologies for analyzing and taking action on text and speech data. Applications in electronic discovery for litigation, corporate investigations, law enforcement, and the intelligence community will be emphasized.

### **Bootstrapping Text Analytics Using Open Source Platforms**

Brandon Moore  
University of North Texas

Text analytics is important to both researchers and practitioners. Commercial software packages make the effort a bit easier but tend to have rather expensive license fees. Open source software, while usually free or low cost, can require software development skills. For instance, both Python and R offer text analytics packages and both require some amount of programming. Lack of programming skill is a barrier to researcher and practitioner alike. This project is an attempt to democratize access to text analytics by abstracting the complexities necessary to consume the open source Gensim text analytics Python module from the end user. It provides an intuitive web based user experience that only requires the end user to provide a corpus and interpret the results. Features include an API integration with Facebook (systematically build a corpus of Facebook documents), distributional semantic modelling using Gensim, and model result visualization.

## **Session 11| Data Management and Research (3:00pm– 4:30pm) |Chair: Oksana Zavalina**

### **PubMed Commons: A Case Study of Information Behavior and Scientific Discussion in an Electronic Network of Practice**

Michelle C. Farabough  
University of North Texas

Research rigor and reproducibility is a hot topic. Peer-review is part of this process. More than a formality in the publishing process, peer-review is an opportunity to assess research findings and hold them to a higher standard. However, peer-review is not an infallible process. In an age of open science, there is a need for open review and information exchange opportunities that extend beyond the traditional published formats. Providing a channel and an audience for open post-publication communication is one way to achieve this ideal. In October 2013, the National Library of Medicine (NLM) introduced PubMed Commons, a social media pilot program promoting post-publication scientific discussion. The program became an official feature of the NLM's PubMed search engine in December 2015. Authors whose publications are indexed in PubMed are invited to comment on other authors' work and participate in open information exchange. Even in its early state, PubMed Commons is impacting the scientific community by providing useful information that aids in identifying quality, credible biomedical research. This presentation will detail the types of scientific discussions hosted on PubMed Commons and the patterns of social networks developing among its participants.

### **Answering Queries Pertaining to Rapidly changing Scholarly Communications Landscape**

Laura Mc Kinnon & Kris Helge  
Texas Women's University

The services and expectations of scholarly communications departments in libraries continues to evolve. For example, library scholarly communications departments now include managing Vireo, data repositories, hosting e-journal systems, preserving digital items, and a host of other digital responsibilities. Scholarly communications departments are also often expected to offer copyright, trademark, and other intellectual property advice to stakeholders in the library, and often to other patrons throughout an

entire academic campus. This presentation will address such expansion of scholarly communications departments and questions pertaining to such growth.

**The Role of Organizational Support for Knowledge Management and the Big Data: an Examination.**

Tereza Raquel Merlo  
University of North Texas

In this paper, the study and practice on Design Knowledge Management and knowledge transfer across design of a new-built NPP in China is introduced. A collaborative design management platform of Nuclear Power Plant is built by redevelopment in SYSWARE. On the basis of the given overall framework of platform, the realization methods and means of business layers of the platform are discussed in detail. The application example of Nuclear Power Plant design is shown, which verifies the basic function of the platform and the feasibility of the knowledge accumulation and reusability. The research result has some reference value for the construction of collaborative design management platform.

**Research Data Management Practices of Academic Researchers in Turkey**

Yurdagül Ünal & Serap Kurbanoglu  
Hacettepe University

Because scientific research is more data intensive and collaborative than in the past (Tenopir, et al., 2011), organization, documentation, preservation, and sharing of data are necessary for the continued advancement of scientific inquiry. The UK Data Archive (2017) proposes a research data lifecycle which comprises six major sets of activities: creating, processing, analyzing, and preserving data, giving access to data, and re-using data. Research Data Management (RDM) is about “the organization of data, from its entry to the research cycle through to the dissemination and archiving of valuable results”.

**Session 12| University of North Texas Evening Event (Conference Dinner) 6:30pm-9:00pm**



**Invited Talk**

Brant Deranger, Vice President, Enterprise Partnership Development, Sabre

Brant Deranger leads the customer-focused and ever-evolving global Service Delivery team for Sabre Hospitality Solutions. Brant leads a global team of extraordinary professionals and eight industry-leading functions, including Global Customer Care Level 1-2, Implementation Project Management Office, Acquisition Integrations, Data Services, Training, Integrations, and Global Call Center.

*The dinner is sponsored by the Department of Information Science, University of North Texas*



# 13th International Conference On Knowledge Management - ICKM 2017

October 26<sup>th</sup>

## Session 13| Opening Session (9:00am – 10:00am)

### Creating Knowledge with Big Data and Analytics

Dursun Delen



Dursun Delen is the holder of William S. Spears Endowed Chair in Business Administration and Patterson Foundation Endowed Chair in Health Analytics, Director of Research for the Center for Health Systems Innovation, and Professor of Management Science and Information Systems in the Spears School of Business at Oklahoma State University (OSU). He received his Ph.D. in Industrial Engineering and Management from OSU in 1997. He authored/co-authored seven books/textbooks in the area of Business Analytics, Decision Support Systems, Business Intelligence, Data Mining and Text mining and his research and teaching interests are in business analytics, data and text mining, decision support systems, knowledge management, business intelligence and enterprise modeling.

## Session 14| Information & Organizational Knowledge (10:30 am– noon)| Chair:

### Nick Evangelopoulos

#### Theory informed Learning Analytics: The Power of Data in Digital Age

Wanli Xing

Texas Tech University

More and more people turn to online health communities for social support to satisfy their health-related needs. Little is known about how social support facilitate the knowledge curation process in an online health community. Moreover, the presence of misinformation in online health communities also calls for research into the knowledge curation process in order to reduce the risk of misinformation. This study uses data mining technologies to analyze around one million posts across 23 online health communities. It aims to reveal how information, through social support, flows between the community users working as a whole to dynamically curate knowledge and further interacts with information accuracy.

#### Hidden Microphones, Open Collections: The Classification of Unofficial Concert Recordings

Jeremy Berg

University of North Texas

Unofficial concert recordings have been made since the dawn of portable recording devices. The collection and trading of those recordings constitutes a bustling subculture and, for some artists, a key element of their enduring legacy. Though they represent a legal grey area, these recordings are important pieces of history and art. This paper will examine the ways in which unofficial live recordings have been cataloged and classified over the years, culminating in a sea change with the switch from analogue tape to digital files and etree's remarkably effective folksonomy and database. Bands like the Grateful Dead with huge fan bases have benefitted from a variety of folksonomies and reference works in the past, while smaller artists' information was much more decentralized. The internet acted as a great democratizer, allowing all concert recordings a worldwide platform, with etree's naming standard, or some variation thereof, as its lingua franca. What's more, etree's naming standard works so well that it was adopted wholesale by the Internet Archive's Live Music Archive. In addition to being interesting on a purely intellectual level, an understanding of live music recordings and their classification will be vital to anyone who wishes to add this resource to their collection.

#### Knowledge Creation and Information Sharing through OER

Yunfei Du

University of North Texas

Libraries have a long tradition of promoting knowledge creation and information sharing. In order to reduce cost of education, libraries are playing active roles in building open education resources in recent years. Based on literature, this paper proposes a taxonomy model of three layers of Open Education Resources: open textbooks, open learning content, and open courseware. Open textbooks are being adopted by many faculty and students in the U.S., but they are not evenly distributed in all disciplines. It seems humanities, math, and business are more keen on contributing to open text creation, but fewer on medicine and engineering. Open Educational Resources also include ancillary resources related to course content delivery, such as syllabus, homework, instructional videos, and additional reading in modular format. A higher layer is the open courseware, such as MIT Open Courseware and MOOCs, where teaching materials are available to learners and instructors free of charge. Assessment criteria of Open Education Resources are also discussed in this paper.

## **Building Organizational Knowledge with Text Analytics Keywords: organizational knowledge, data warehouse, IT support services, text analytics.**

Nassos Galiopoulos & Nick Evangelopoulos  
University of North Texas

Traditional business intelligence uses a data warehouse to generate reports that increase organizational knowledge. The so-called star schema is a database design where business transactions, such as sales records, or customer support tickets, get recorded in a fact table, and related entities, such as customers, products, or resources, get recorded as dimensions. In the current big data environment, organizational data include large collections of unstructured documents, especially in the domain of customer support. However, a formal process of expanding the traditional dimensional model to include elements that are derived from such collections is often missing. In this presentation, we provide a case study from UNT's ServiceNow initiative, where we examine a large collection of IT support service tickets. Going beyond traditional reporting elements, such as service requests by time, or request category by department, we show how text analytics help uncover hidden dimensions, such as service topic, and facts, such as a certain service ticket addressing a certain topic. These uncovered elements represent a part of organizational knowledge that would otherwise remain undetected. With our approach, they can become an explicit part of the organizational knowledge base.

## **Session 15| Indigenous Knowledge Management (10:30am – noon) | Chair: Daniel Alemneh**

### **Knowledge Management Theories: An Alternative Perspective to Organizing Africans' Indigenous Knowledge**

John Jackson Iwata & Ruth G. M. Hoskins  
University of Kwa Zulu Natal

Indigenous knowledge (IK) existed among the diverse African societies since the beginning of life in such societies. However, it is said that during the colonial era in Africa such knowledge was ignored by colonialists, and later by the African leaders after independence. Thus, most African IK and in particular the Tanzanian IK was ignored by existing knowledge management (KM) theories. Studies have proposed the implementation of various models to manage such knowledge. However, many of these theories have not focus on the management of African IK. This calls for a need to charter new theoretical frameworks to fill that gap.

### **Long Term Access in the Mexican Historical Records**

Erick Cardoso  
National Archives of Mexico

National Archives of Mexico (AGN) is the main institution in charge of politics, guides and instructions about how to take care of information with historic values, in this sense actually, has the challenge about electronic born information ("record keeping") and all the historic digitized information that now only exist in this formats because original supports are gone and were digitized for preservation reasons. National Archives are trying to implement a digital preservation model, based on the OAIS model, and other best practices taken from others archives all around the world, find a nonmagnetic support for digital and visual storage, that use a polyester film, giving to national archives the possibility not only to storage an electronic record without the risk of magnetic storage, gave the capability to store any kind of documents with their descriptive metadata. In this strategy, AGN are very interested in the sustainability of information stored for their preservation, because National Archives understand that they cannot keep all information in electronic environments, this could be so expensive. With this background, AGN find a second storage facility (one backup more) at North Pole at Svalbard Island this paper tells the experience from the paper to the North Pole.

### **Cross-Sectional Studies of the Impacts of Background Sounds on Math and Language Performance**

Lin Lin, Deborah Cockerham, Mike Schellen and Zhengsi Chang  
University of North Texas, University of Texas in Dallas

This presentation reports a series of 7 studies examining the extent of which background sounds on individuals' math and language task performance. The 7 studies have collected data from over a thousand participants with ages from 5 years old to over 70 years old. The background sounds include silence, white noise/rain drop sound, fast dance music, and slow classical music. Four of the studies include language tasks of different difficulty levels and three included math tasks of different difficulty levels. The presentation will discuss results and implications.

### **Information Overload in a Post-Twitter, Fake news, Big Data World**

William Senn  
Texas Women's University  
Susan Smith  
University of North Texas

Information overload, as a cognitive phenomenon, affects all practices in knowledge management, including those of knowledge workers who are working in the knowledge economy. Other researchers have discussed this cognitive phenomenon over an extended period of time This preliminary research study seeks to explore the problem of information overload in terms of how knowledge managers perceive, react, and respond to information overload events.

## **Session 16| Information Management and Systems (10:30 – noon) | Chair: Guillermo Oyarce**

### **Mapping Collective Memory in Knowledge Management: A Work in Progress**

Ana Roeschley  
University of North Texas

In knowledge management, understanding collective memory could allow us to gain a deeper understanding of knowledge transfer. However, there seems to be little research on how collective memory impacts knowledge management. To identify collective memory themes in knowledge management literature, this study will employ text mining and visualization; scholarly articles on the topics will be retrieved. The abstract segments will be imported to determine frequently occurring words and phrases. The co-occurrences of words and phrases will be exported into a visualization tool to display major topics and themes in collective memory. Additionally, a correspondence analysis will be conducted to create a map highlighting the overlap among themes in succeeding time periods.

### **An integration-Based Conceptual Framework for Scientific Information Analysis**

Wei Chen, Rui Yang, Tao He, Shuo Wang, Jiangping Chen  
Chinese Academy of Sciences, University of North Texas

The era of big data brings both opportunities and challenges to scientific information analysis (SIA) and intelligent information services performed at the National Science Library, Chinese Academy of Sciences (NSLC). We are in urgent need of developing a new SIA framework to expedite big data acquisition and processing, and to improve the quality of information services. This paper describes the traditional SIA workflow currently applied at NSLC with a case study. It also reviews progresses on massive heterogeneous data integration, data management and analytics methods, and their applications. We then propose an integration-based conceptual framework for SIA through an examination of the limitations of current workflow. The new framework is characterized with the development of a Knowledge Resources Integration System (KRIS) that can store, organize, process, and visualize heterogeneous data. We explain the functions and characteristics of the proposed framework and strategies to implement a web-based data warehouse system based on it. The paper concludes with a discussion of future research to implement KRIS for SIA

### **Complex Adaptive Team Systems (CATS)**

John Turner, Kerry Romine and Rose Baker  
University of North Texas

This article introduces a new theoretical model utilizing Turner and Baker's (2017) Team Emergence Leadership Development and Evaluation (TELDE) model as a tool to facilitate interactions imbedded in complex adaptive systems. This theoretical model is currently being developed and is identified as the Complex Adaptive Team System (CATS) that utilizes complexity theory and the self-organizing characteristics of teams to drive organizational initiatives.

### **Practice on Design Knowledge Management and Transfer Across Design of a New-built Nuclear Power Plant in China**

Xiaoyan Li, Yuanlei He, Danying Gu, Minglu Wang and Jun Shen  
Shanghai Nuclear Engineering research & Design Institute

In this paper, the study and practice on Design Knowledge Management and knowledge transfer across design of a new-built NPP in China is introduced. A collaborative design management platform of Nuclear Power Plant is built by redevelopment in SYSWAR. On the basis of the given overall framework of platform, the realization methods and means of business layers of the platform are discussed in detail. The application example of Nuclear Power Plant design is shown, which verifies the basic function of the platform and the feasibility of the knowledge accumulation and reusability. The research result has some reference value for the construction of collaborative design management platform.

## **Session 17 | Institutional Knowledge and Learning (1:00pm – 2:30pm) | Chair: Sian Brannon**

### **Knowledge Ecosystems and Business Innovation: an Exploratory Study of the Channels of Collaborations and Key Success Factors Between Universities and Canadian Small Businesses**

Joyline Makani & Angelo Dossouyovo  
Dalhousie University, York University

To date, it is not clear what knowledge ecosystems factors drive success in innovation. Also not clear are the elements modelling effective business and university relationships. Not surprising, specific to business innovation collaboration channels, scholars are calling into question the networks and modes of engagement between universities and businesses, i.e., they are asking what and how contextual factors within university-firm collaboration relationships contribute to success in business innovation? Hence, in this study, through a meta-synthesis of the literature, by focusing on the characteristics underlining successful knowledge ecosystems, we explore and identify the vehicles of university-firm collaboration and contextual relationships within the knowledge ecosystem which impacts upon success innovations among small and mediums sized enterprises (SMEs) in Canada.

## **Connecting the Silos: Systematic data collection for library and collections assessment**

Karen Harker  
University of North Texas Libraries

Assessment is formally defined as "the action or instance of making a judgment about something" (Merriam-Webster, emphasis added). Library assessment, the evaluation of library services towards meeting the needs of the community it serves, grew from the late 1990's focusing on evaluating service quality. Collection assessment, tangentially related to library assessment, has a focus on meeting the community's needs through its collections. However, this actually had a longer history than the more service-oriented library assessment, going back to the attempts in the 1970's and 1980's, to compare the collections of selected libraries.

## **Documenting Institutional Knowledge Through TRAC Self Audit: Case Study**

Ana Krahmer, Pamela Andrews, Hannah Tarver, Mark Phillips and Daniel Alemneh  
University of North Texas

The University of North Texas Libraries' Digital Collections preserve and host more than 27 million files that have accumulated over more than ten years through the activities of the Digital Libraries Division. In 2014, the Division decided to undertake a self-audit according to the TRAC: Criteria and Checklist as a way to codify practices and document the stability of the program as it continues to grow. This paper explores the self-audit process within the knowledge management framework of contextual dimensions outlined by Bout hillier and Shearer, providing background and examples for each of the dimensions: discover of existing knowledge; acquisition of existing knowledge; creation of new institutional knowledge; storage of existing knowledge; organization of knowledge, new and old; and sharing, use, and application of knowledge.

## **Advanced Human-Computer Interactions with a Patient Simulator: Moving towards a Smart Campus and a Learning Health System**

Deborah E. Swain  
NC Central University

Research suggests that tacit knowledge can include feeling or affect, which may impact human thought, actions, and socio-cultural connections. The concepts of action learning and tacit knowledge development were studied and shown to have potential in knowledge management systems for healthcare. A small pre-test of cardiopulmonary resuscitation (CPR) learning at a Clinical Learning Resource Center was conducted to investigate if greater confidence and stronger collaboration or community building are possible from human-computer interactions with a human patient simulator (HPS). The recommendation is for more research into providing modern, advanced interfaces to simulate interacting with patients and to improve knowledge management of training and education. In an emergency department, in a patient's room, or in a public setting, awareness of someone suffering from a pulmonary embolism and providing a fast response could be critical. Using high fidelity HPS robots may help transfer deeper tacit knowledge through experience and provide more effective training than explicit procedural learning and use of simple mannequins.

## **Session 18| Knowledge Management and Personal Information (1:00pm – 2:30pm) | Chair: Kris Helge**

### **Literature Overlaps and Gaps Between the Fields of Knowledge Management and Humans Resource Development**

Robin Mayes, Robin Tamez, and Jeff Allen  
University of North Texas

The purpose of this integrated literature review is to identify the multidisciplinary processes, models, and theories common to both Knowledge Management (KM) and Human Resource Development (HRD). Moreover, we looked for gaps in these research areas. By identifying these overlaps and gaps, better approaches to the development of both knowledge and human resource assets can be developed, thus contributing to the fields of KM and HDR. The scholarly literature affirms that while the fields of KM and HRD have unique characteristics, there exist overlaps and gaps. There is some evidence that the field overlaps between the two fields are of mutual benefit. Most important are that KM and HRD both identify organizational knowledge as a valuable asset. Both KM and HRD have best practices that focus on the accumulation, maintenance, and transfer of knowledge and skills throughout an organization, at management, employee, and contractor levels. Moreover, through prudent intelligence development and effective knowledge distribution, an organization can achieve success and entertainment.

### **Security and Privacy Issues with Smart Thermostats – A First Look**

Biodun Awojobi and Hsia-Ching Chang  
University of North Texas

The five basic human senses – sight, hearing, taste, smell, and touch have all been reproduced to a certain capacity using technology. There has been a massive adoption rate of IoT devices since its applicability in our daily lives are endless, however like most technological advancements security and privacy are afterthoughts for device manufacturers. IoT manufacturers in a move to lure more users focus on a seamless user experience of the devices, which comes at a detriment of security. The consumers of the IoT devices also favor convenience above security and privacy. The IoT focus for this paper is smart thermostats. Four key security and privacy guidelines were analyzed. The paper will align the core focus of smart IoT devices using the People, Technology, and Information model. We use Brenda Dervin sense making model to explain human behavior and way of reasoning with making purchasing decisions of smart thermostats. Recommendations will be provided to highlight the importance of security and privacy by using OWASP

## **Personal Knowledge Management for Empowerment (PKM4E) Framework to tackle the Abundance of Big Data and Intelligence**

Ulrich Schmitt  
University of Stellenbosch Business School

Although many powerful applications are able to locate vast amounts of digital information, effective tools for selecting, structuring, personalizing, and making sense of the digital resources available to us are lacking. As a result, the opportunities to connect and empower knowledge workers are severely limited. Thus, recent suggestions urge advancing Personal Knowledge Management (PKM) to provide the overdue support tools for individuals in the envisaged Knowledge Societies. After proposing a PKM for Development (PKM4D) framework in a previous ICKM article, this paper follows up by focusing on the empowerment of the individual in light of PKM learning cycles and by extending the ignorance matrix in the context of 'Big Data and Intelligence'. The resulting PKM for Empowerment (PKM4E) framework is a further spin-off of a design science research project aiming to introduce a novel PKM concept and system.

## **The One-Voice Model of a Corporate Sports Account: Knowledge Management at Work**

Tiffany Norris  
University of Texas - Dallas

While journalists were once viewed as gatekeepers, dispensing news and information via one-way communication channels, their role as information provider has evolved. Nowhere is this more apparent than on the social networking site Twitter, where information seekers have unprecedented access to information providers. The two-way communication that these information seekers have come to expect can be challenging for organizations such as ESPN who have multiple Twitter accounts and millions of followers. By designating one team of people as responsible for the organization's largest Twitter account, Sports Center, ESPN sought to establish manageable methods of interacting with this account's followers. This study provides a better understanding of the group responsible for ESPN's Sports Center Twitter account: the motivation and strategies behind the group's Twitter use as well as the social dynamics of this network, such as knowledge management, information flow, and collaboration. The research study employed social network analysis and exploratory, descriptive mixed methods.

## **Session 19 | Knowledge Sharing and transfer (1:00pm – 2:30pm) |Chair: Nick Evangelopoulos**

### **Managing Valuable Knowledge as a Tangible Asset: Creating Inventories of Organizational Knowledge**

Chuck Tryon  
University of Oklahoma

When you attend a retirement party or someone leaves your group, do you worry how you will replace the knowledge they possess? Do you even know what special "know how" just walked out the door? How can you replicate this lost knowledge that you didn't even know existed until it is gone? You may have a few checklists and procedure documents, but you know there is much more that hasn't been captured. The acquisition of knowledge is often expensive and time intensive. Like physical assets, knowledge demands regular maintenance and refinement. In this presentation, Chuck Tryon described processes and templates for creating knowledge inventories in his book, "Managing Organizational Knowledge: Third Generation Knowledge Management ... and, Beyond."

### **Motivating Academic Librarians: Implications of Maslow's Hierarchy of Needs Theory**

Hessah Alasousi and Bibi Alajmi  
Kuwait University

This study examines the motivators of academic librarians that helped them achieve their tasks efficiently. It also investigates the implications of Maslow's theory of needs in managing an academic environment. The study followed a qualitative method using a survey. Therefore, the population of this research consisted of the academic librarians in 9 college libraries at Kuwait University. The data was collected and analyzed. Findings showed noticeably that employees in Kuwait University libraries perceived a fair level of satisfaction and motivation within their libraries in all the five levels of Maslow's hierarchy of needs. Results of the study might be useful to those in the library field interested in motivation, academic librarians, and managers in the academic environment. Besides, the study adds to the literature in the management of information organization field, as no previous studies on this topic were located.

### **Gamification in Corporate Trainings on Business Analytics Tools for Agricultural Industry: A Case of Agroprosperis**

Konstantyn Savchenko, Alexander Eine and Viktoriia Savchenko

This paper discusses specifics of designing and implementing the corporate trainings for the workers of agricultural sector in Ukraine. A new generation of trainings uses the latest digital technologies, making the process interactive, involving, memorable and productive. The case study of the Agroprosperis project is presented. The case includes details on the innovative corporate training designed and delivered jointly by the Training Force and Fast

## **Knowledge Transfer Model to Measure the Impact of Formal Training on Sales Performance**

Amy Rosellini  
University of North Texas

The purpose of this study is to test the relationship between formal training and knowledge transfer. A model is proposed to test the relationship between formal training and knowledge transfer and identify variables that might impact the effectiveness of training. This study uses empirical research that utilizes new methods to measure employee behaviors that impact sales and customer results. The case study uses a car dealership to test the variables. The objective of the study is to identify a practical tool or method to understand how behavior analysis can be utilized to determine knowledge transfer

## **Session 20| Workshop (3:00pm – 4:30pm)**

### **Web of Science: Big Data for Scientometric Research Projects**

Joey Figueroa  
Clarivate Analytics

Libraries play an important role when it comes to collecting and managing “big data”. Large amounts of digital content are often needed by researchers within data science programs at universities to conduct research projects or data analytics. As many of the data science centers around the world expand, the Web of Science Core Collection raw data proves to be a vital research dataset. The Web of Science Core Collection is a vast citation network representing the global landscape of science for the past century and beyond. For decades, researchers have explored this rich dataset to answer key questions about the nature of scientific discovery and innovation, and to empower big data analytics. With over 9,000 institutions globally using the database, many researchers are familiar with this data source and seek it out for scientometric, bibliometric, science policy, and other types of research. Libraries are beginning to acquire the raw data behind the Web of Science Core Collection as a campus-wide resource to enable many types of multidisciplinary research across departments. This makes their university more attractive to prospective faculty who are interested in using this dataset, and also makes it easier for current faculty to obtain grants that require the use of such data. We will discuss examples of how the Web of Science Core Collection is being used for a variety of network analyses and visualizations, and how data science center’s set up the infrastructure for utilizing this “big data.” In this session we will highlight the variety of data delivery options that we offer, such as our API’s and other formats. Additionally, we will feature implementations of the Web of Science Core Collection by means of case studies.

## **Session 21| Panel On Big Data, Ethics, and Public Engagement (3:00pm – 4:30pm)| UNT ASIS&T Students Chapter**

### **Panelists**

Stephen Bajjal, Wayne State University  
Ana Roeschley (Moderator), University of North Texas  
Deborah Caldwell, University of North Texas

Participant driven crowd-sourcing efforts to preserve big data have gained renewed attention since the 2016 U.S. presidential election. Throughout the country, Data Rescues and similar events have been organized by citizen archivists, many of whom had little experience with any aspects of data preservation. This panel will investigate the crowdsourcing component of Data Rescues and similarly aligned movements wherein “citizens” who are not necessarily the paid professionals are the ones applying metadata and assisting with data collection. Through an exploration of theory surrounding public engagement and through the case of the Denton Data Rescue, the panelists will explore the ethical considerations, practical factors, and long-term potential of participant driven data preservation movements.

## **Session 22| Panel On Knowledge Cities (3:00pm – 4:30pm)**

### **Panelists**

Waltraut Ritter, Research Director, Knowledge Dialogues, Hong Kong.  
Melissa Kraft, IT Director, City of Denton  
Abdulrahman Habib (Moderator), Smart Cities Researcher, University of North Texas

In recent years cities around the world developed new approaches to manage urban data; “urban informatics” and “smart city” are concepts where information, open and big data, and technology become the basis for new models of managing processes in a city. How is the urban information space governed? How can we address questions about usage, ownership and access to human and machine-generated data?



## Organizing Committee

### General Chair:

Suliman Hawamdeh, University of North Texas

### Conference Co-Chairs:

Daniel Alemneh, University of North Texas

Jeff Allen, University of North Texas

### Local Organizing Committee:

Cathy Koloff, Direct Energy

Hillary Stark, University of North Texas

Nancy Herod, University of North Texas

Mary Chandler, University of North Texas

Oksana Zavalina, University of North Texas

Rose Baker, University of North Texas

### Promotion and Website Support:

Javali Enugala, University of North Texas

Michele Villagran, University of North Texas

Pranathy Enamela, University of North Texas

### Sponsorship Committee:

Abdulrahman Habib, University of North Texas

Jiangping Chen, University of North Texas

Michael Monticino, University of North Texas

Xin Wang, University of North Texas

### Program Committee:

Guillermo Oyarce, University of North Texas

Hsia-Ching Chang, University of North Texas

June Abbas, University of Oklahoma

Kinshuk, University of North Texas

kris Helge, Texas Women's University

Nick Evangelopoulos, University of North Texas

Sian Brannon, University of North Texas

Oksana Zavalina, University of North Texas

### International Advisory Board:

Abdus Sattar Chaudhry, Kuwait University, Kuwait

Abebe Rorissa, University of Albany

Andrew Dillon, School of Information, UT, United States

Atreyi Kankanhalli, National University of Singapore, Singapore

Bonnie Cheuk, Euroclear Global Head of Digital, Knowledge & Collaboration, UK

Chris Stary, Johannes Kepler University Linz

Claire Mcinerney, Rutgers

Dalkir, Kimiz (Professor), McGill University

Deborah Swain, North Carolina Central University, United States

Dinesh Rathi, University of Alberta, Canada

Dursen Delen, Oklahoma State University

Eric Tsui, The Hong Kong Polytechnic University, Hong Kong

Franz Barachini, Vienna International School of Thought, Austria

Heather D. Pfeiffer, Akamai Physics, Inc, United States

Joyline Makani, Dalhousie University

John Gathegi, University of South Florida

John Martin, University of North Texas

Karsten Boehm, University of Applied Sciences, Austria

Kimiz Dalkir, McGill University, Canada

Meliha Handzic, Department of Information Systems, Bosnia

Michael Sutton, Westminster College, United States

Moufida Sadok, Higher Institute of Technological Studies in Communications in Tunisia, Tunisia

Nabeel Al-Qirim, United Arab Emirates University, United Arab Emirates

Naresh Agarwal, Simmons College

Nguyen-Thinh Le, Humboldt University Berlin, Germany

Roslina Othman, International Islamic University Malaysia, Malaysia

Sanjiv Varma, Nokia, India

Sam Chu, The University of Hong Kong, Hong Kong

Samuel K. W. Chu, The University of Hong Kong

Shimelis Assefa, University of Denver

Toyohide Watanabe, Nagoya Industrial Science Research Institute, Japan

Tereza Raquel Merlo, University of North Texas

Taghreed Alqudsi, Kuwait University, Kuwait

Waltraut Ritter, Hong Kong Knowledge Management Society, Hong Kong

Wei Qin Chen, Bergen University, Norway

Will Senn, Texas Woman's University, USA

Yaşar Tonta, Hacettepe University, Turkey

## Sponsors and Supporting Organizations



UNT Student Chapter of the Association for  
Information Science and Technology

