

Conference Abstract

2017 2nd International Conference on Information Systems
Engineering
(ICISE2017)

April 1-3, 2017

College of Charleston, South Carolina, USA



Contents	1
Welcome Page	2
Conference Venue	3
Introduction to Speakers	4
Program at a Glance	7
Registration Guide	9
Morning Sessions	10
Afternoon Sessions	12
One-day Tour	27

Welcome to Charleston, USA

Welcome to attend 2017 2nd International Conference on Information Systems Engineering (ICISE 2017).

The aim of ICISE 2017 is to present the latest research and results of Information System Engineering and Data Mining. The conference will provide opportunities for delegates from different areas to exchange new ideas and application experiences face to face, to establish business or research relations and to find global partners for future collaboration. We hope that the conferences can make significant contribution to these up-to-date scientific fields. And wish all respected participants a nice trip in Charleston, USA.

Warm Tips:

- Get your presentation PPT prepared and print out the notification letter before you leave for Charleston, USA.
- Pick up conference materials at the reception desk in the lobby of Tate Center / Beatty Center, College of Charleston, from 10:00am-12:00pm, 13:30pm-16:00pm on April 1, 2017.
- Please arrive Wells Fargo Auditorium, 1st floor, Tate Center / Beatty Center, College of Charleston before 9:20 am in formal attire on April 2, 2017.
- There will be a group photo and coffee break between 10:05am-10:25am on April 2, 2017; every attendee will be invited to take group photo.
- Copy your PPT to the conference computer before your session begins. One best presentation will be selected from each session, and the best one will be announced and awarded at the end of each session. Session group photo will be taken after the award.
- Participants who registered successfully can attend one-day tour on April 3, 2017
- The conference organizer doesn't provide accommodation or room reservation service. Participants should book rooms by themselves as early as possible

Conference Venue

College of Charleston, South Carolina, USA Tate Center / Beatty Center

Address: 5 Liberty St, Charleston, SC 29401



College of Charleston are struck by the beauty of its historic buildings and shaded walkways, and the occasional glimpses into the future, which are associated with the steel and glass of the Beatty Center at the School of Business.

The campus is located in the heart of the Historic District of the city, with easy access to the businesses in and around the thriving Port of Charleston, the burgeoning tech community (the presence of big companies such as Amazon's CreateSpace, Blackbaud, Boeing, Google and TwitPic have earned the city the nickname, Silicon Harbor) and the healthcare industry (Medical University of South Carolina is a few blocks from campus).

Introduction to Speakers

Keynote Speaker I



Prof. Houssain Kettani

Florida Polytechnic University, USA

Biography: Dr. Houssain Kettani received the Bachelor's degree in electrical and electronic engineering from Eastern Mediterranean University, Famagusta, North Cyprus, in 1998, and Master's and doctorate degrees both in electrical engineering from the University of Wisconsin, Madison, Wisconsin, USA, in 2000 and 2002, respectively. He joined as faculty member the department of electrical and computer engineering at the University of South Alabama, Mobile, Alabama, USA in 2002-2003, then department of computer science at Jackson State University, Jackson, Mississippi, USA in 2003-2007, and department electrical and computer engineering and computer science at Polytechnic University, San Juan, Puerto Rico, USA in 2007-2012 where he also was director of partnership development office. He joined Fort Hays State University, Hays, Kansas, USA in 2012, and is currently professor and director of computer science and information systems engineering. Dr. Kettani has served as Staff Research Assistant at Los Alamos National Laboratory, Los Alamos, New Mexico, USA in summer of 2000, Visiting Research Professor at Oak Ridge National Laboratory, Oak Ridge, Tennessee, USA in summers of 2005 to 2011, Visiting Research Professor at the Arctic Region Supercomputing Center at the University of Alaska, Fairbanks, Alaska, USA in summer of 2008, and Visiting Professor at the Joint Institute for Computational Sciences at the University of Tennessee, Knoxville, Tennessee, USA in summer of 2010. Dr. Kettani's research interests include computational science and engineering, high performance computing algorithms, information retrieval, network traffic characterization, number theory, robust control and optimization, and Muslim population studies. He presented his research in over sixty refereed conference and journal publications and his work received over four hundred citations by researchers all over the world. He chaired over hundred international conferences throughout the world and successfully secured external funding of more than a million dollars for research and education from US federal agencies such as NSF, DOE, DOD and NRC.

Keynote Speaker II



Prof. Chen-Huei Chou

College of Charleston, SC, USA

Biography: Chen-Huei Chou received the B.S. in Information and Computer Engineering from Chung Yuan Christian University, Taiwan, the M.S. in Computer Science and Information Engineering from National Cheng Kung University, Taiwan, the M.B.A. from the University of Illinois at Chicago, Chicago, Illinois, USA, and the Ph.D. in Management Information Systems from the University of Wisconsin-Milwaukee, Wisconsin, USA.

He is an Associate Professor of Information Management and Decision Sciences in the School of Business at the College of Charleston, SC, U.S.A. His research has been published in MIS journals and major conference proceedings, including MIS Quarterly, Journal of Association for Information Systems, Decision Support Systems, IEEE Transactions on Systems, Man, and Cybernetics, Computers in Human Behavior, Internet Research, and Journal of Information Systems and e-Business Management. His areas of interests include web design issues in disaster management, ontology development, Internet abuse in the workplace, text mining, data mining, knowledge management, and behavioral studies related to the use of IT.

Keynote Speaker III



Prof. Anu Gokhale

Illinois State University, USA

Biography: Dr. Anu A. Gokhale has completed twenty years of university teaching and is currently a professor and coordinator of the computer systems technology program at Illinois State University. Originally from India, she has a master's degree in physics—electronics from the College of William & Mary, and a doctorate from Iowa State University. Dr. Gokhale presents and publishes her peer-reviewed research, and pursues multi-year projects funded by agencies like the US Department of Education, US Department of State, and National Science Foundation. Dr. Gokhale recently authored a second edition of her book *Introduction to Telecommunications*, which also has an international edition in Chinese. In recognition of her work over several years, she was honored with the 2011 University Outstanding Researcher Award. Dr. Gokhale has been invited to speak at various conferences; more recently, she was keynote speaker at the IC4E 2011 in Mumbai and ICETC 2010 in Shanghai. She consults for businesses and industries and has delivered multiple workshops and training seminars. Dr. Gokhale is an active volunteer in IEEE (Institute of Electrical and Electronics Engineers) having served in various roles like Secretary of Central IL Section, R4 Student Activities Chair, R4 Women in Engineering Coordinator, R4 Educational Activities Chair, Conference Chair of International Electro / Information Technology 2010 Conference, and member of the Educational Activities Board, and was honored with the IEEE Third Millennium Medal.

Plenary Speaker



Prof. Driss Benhaddou

University of Houston, Texas, USA

Biography: Dr. Benhaddou is a Fulbright scholar and an Associate Professor with the University of Houston (UH), where he is actively involved in optical networking, wireless sensor networks, and smart system development. In particular he is developing research in the application of Wireless Sensor Networks (WSN) in distributed solar energy in smart grid and smart cities. Prior to joining UH, he was a senior technical staff member at Lambda Optical Systems Inc., where he played a key role in protocol development and systems integration activities. In particular, he led system test/integration activities for the Advanced Technology Demonstration Network (ATDNet) testbed project and worked closely with the Naval Research Laboratory (NRL) and the Laboratory for Telecommunication Sciences (LTS). During his earlier tenure at Sprint, he also implemented an extensive broadband testbed for vendor equipment certification and research/development activities. He holds two doctoral (Ph.D.) degrees, one in optoelectronics from the University of Montpellier II, France, and the second one from the University of Missouri in computer networks and telecommunications. In addition, he is spearheading the development of new state-of-the-art wireless and optical networking research laboratories within at the University of Houston (<http://www.Tech.Uh.Edu/Won> and <http://www.Tech.Uh.Edu/Attlab>).

Program at a Glance

April 1, 2017 (Saturday)		
Time	Venue	Event
10:00AM-12:00PM 13:30PM-16:00PM	Lobby of Tate Center / Beatty Center, College of Charleston	Participants Registration & Conference Kits Collection
Morning of April 2, 2017 (Sunday)		
9:20AM-9:25AM	Wells Fargo Auditorium (1st floor, Tate Center / Beatty Center, College of Charleston)	Opening Remarks (addressed by Prof. Chen-Huei Chou)
9:25AM-10:05AM		Keynote Speech I: Prof. Houssain Kettani <i>Florida Polytechnic University, USA</i> Title of Speech: Towards Exascale Computing
10:05AM-10:25AM		<i>Coffee Break and Group Photo</i>
10:25AM-11:05AM		Keynote Speech II: Prof. Chen-Huei Chou <i>College of Charleston, SC, USA</i> Title of Speech: Effective and Efficient Internet Abuse Detector
11:05AM-11:45AM		Keynote Speech III: Prof. Anu Gokhale <i>Illinois State University, USA</i> Title of Speech: Engineering Solutions for Managing Enterprise Information Systems
11:45AM-13:30PM	Tate Center / Beatty Center, College of Charleston	<i>Lunch</i>

Program at a Glance

Afternoon of April 2, 2017 (Sunday)		
Time	Venue	Event
13:30PM-14:05PM	Wells Fargo Auditorium (1st floor, Tate Center / Beatty Center, College of Charleston)	Plenary Speech: Prof. Driss Benhaddou <i>University of Houston, Texas, USA</i> Title of Speech: Connected Smart Buildings as Building Block for Smart Cities
14:10PM-15:40PM	Wells Fargo Auditorium (1st floor, Tate Center / Beatty Center, College of Charleston)	Paper Presentation Session I- Computer Science and Software Engineering (6 papers) Session Chair: Prof. Driss Benhaddou
14:10PM-15:40PM	Tate 131 (1st floor, Tate Center / Beatty Center, College of Charleston)	Paper Presentation Session II- Social Networks and Computer Networks (6 papers) Session Chair: Prof. Houssain Kettani
15:55PM-16:20PM	Lobby (1st floor, Tate Center / Beatty Center, College of Charleston)	Coffee Break
16:20PM-17:35PM	Wells Fargo Auditorium (1st floor, Tate Center / Beatty Center, College of Charleston)	Paper Presentation Session III- Knowledge Learning and Control System (5 papers) Session Chair: Prof. Chen-Huei Chou
16:20PM-17:35PM	Tate 131 (1st floor, Tate Center / Beatty Center, College of Charleston)	Paper Presentation Session IV- Management Science and Engineering (5 papers) Session Chair: Prof. Anu Gokhale
18:00PM -19:30PM	Tate Center / Beatty Center, College of Charleston	Dinner
April 3, 2017 (Monday)		
08:50AM-16:00PM	One-day Tour in Charleston	

REGISTRATION GUIDE

April 1, 2017-----Onsite Registration

Venue: Lobby of Tate Center / Beatty Center, College of Charleston

Time: 10:00AM-12:00PM, 13:30PM-16:00PM

Registration Steps

1. Arrive at the lobby of Tate Center / Beatty Center, College of Charleston



2. Inform the conference staff of your paper ID



3. Sign your name on the Participants List



4. Sign your name on Lunch & Dinner requirement list



5. Check your conference kits: (1 conference program, 1 lunch coupon, 1 dinner coupon, 1 receipt, 1 name card, 1 flash disk(papers collection), 1 laptop bag)




6. Finish registration

Schedule of April 2, 2017

Morning Sessions

Venue: Wells Fargo Auditorium, 1st floor, Tate Center / Beatty Center, College of Charleston

Time: 09:20AM-11:45PM

<p>Opening Remarks 9:20-9:25</p>	<p>Addressed by: Prof. Chen-Huei Chou <i>College of Charleston, SC, USA</i></p>
<p>Keynote Speech I 9:25-10:05</p>	<div style="text-align: center;">  <p>Prof. Houssain Kettani <i>Florida Polytechnic University, USA</i></p> <p>Title of Speech: Towards Exascale Computing</p> <p>Abstract: In 1985, the fastest computer in the world reached 1 Gigaflop/s, or one billion (10^9) calculation per second. By 1996, the speed reached 1 TeraFlop/s or one trillion (10^{12}), then 1 PetaFlop/s or one quadrillion (10^{15}) by 2008. In 2016, the fastest computer in the world performs 100 PetaFlop/s and many hand-held devices including smart phones are faster than the fastest supercomputer in the 1980s. The 1 ExaFlop/s mark, or one quintillion (10^{18}) is expected to be reached in 2020. Currently, the fastest supercomputer has close to eleven million cores and consumes over 15 MW (Mega or million Watts). It is like 150,000 light bulbs of 100W on at the same time. It is more than a million times faster than a personal computer. So, one second of computing using the fastest supercomputer is equivalent to almost two weeks using a PC, while one hour is equivalent to over a century on a PC! These fast computers allowed humans to solve problems that were impossible to solve few years before, including weather (earth and space) forecast, gene permutations, Hurricane tracking, asteroids/comets tracking, spying, etc. However, such humongous machines present huge complexity in operation, maintenance, protection, etc. This remains an active area of interdisciplinary research for continuous improvement in speed, efficiency, hardware and software development as well as algorithms design and analysis to advance the state of the art of parallel computing.</p> </div>



Coffee Break and Group Photo

10:05a.m.-10:25a.m.

<p>Keynote Speech II 10:25-11:05</p>	<div data-bbox="868 165 1018 360" data-label="Image"> </div> <p style="text-align: center;">Prof. Chen-Huei Chou <i>College of Charleston, SC, USA</i></p> <p style="text-align: center;">Title of Speech: Effective and Efficient Internet Abuse Detector</p> <p>Abstract: As the use of the Internet in organizations continues to grow, so does Internet abuse in the workplace. Internet abuse activities by employees—such as online chatting, gaming, investing, shopping, illegal downloading, pornography, and cybersex—and online crimes are inflicting severe costs to organizations in terms of productivity losses, resource wasting, security risks, and legal liabilities. Organizations have started to fight back via Internet usage policies, management training, and monitoring. Internet filtering software products are finding an increasing number of adoptions in organizations. These products mainly rely on blacklists, whitelists, and keyword/profile matching. In this talk, I would like to share a text mining approach to Internet abuse detection. I have empirically compared a variety of term weighting, feature selection, and classification techniques for Internet abuse detection in the workplace of software programmers. The experimental results are very promising; they demonstrate that the text mining approach would effectively complement the existing Internet filtering techniques. In this speech, I would like to share my knowledge and experience in conducting text mining approach for detecting Internet abuse in the workplace.</p>
<p>Keynote Speech III 11:05-11:45</p>	<div data-bbox="868 1122 1018 1317" data-label="Image"> </div> <p style="text-align: center;">Prof. Anu Gokhale <i>Illinois State University, USA</i></p> <p style="text-align: center;">Title of Speech: Engineering Solutions for Managing Enterprise Information Systems</p> <p>Abstract: The business sector is expected to increase spending on management of information systems geared to focus on the analysis of the data and extract knowledge. Enterprise data environments include both structured and unstructured information characterized by high volume, high speed and huge variety. There exists tremendous potential to glean key insights for business advantage from the vast data that is available today and new data that is being constantly generated. Algorithms used in analyzing big data vary significantly based on the problem of study and its goals and objectives. The talk will address the issues and processes associated with analyzing big data in business information systems, applicable algorithms to enhance functionality and predictive analytics, and discuss how data-driven decisions support product/service innovation.</p>



Lunch Time: 11:45 a.m.-13:30 p.m.

Venue: Tate Center / Beatty Center, College of Charleston


Afternoon Sessions

April 2, 2017 Afternoon

Venue: Wells Fargo Auditorium & Tate 131, 1st floor, Tate Center / Beatty Center, College of Charleston

**Please check the venue of your session and go to the corresponding room before your session starts

Venue	Time	Event
Wells Fargo Auditorium (1st floor, Tate Center / Beatty Center)	13:30PM-14:05PM	Plenary Speech Prof. Driss Benhaddou <i>University of Houston, Texas, USA</i>
Wells Fargo Auditorium (1st floor, Tate Center / Beatty Center)	14:10PM-15:40PM	Session I Computer Science and Software Engineering (6 papers)
	15:40PM-16:20PM	<i>Coffee Break</i>
	16:20PM-17:35PM	Session III Knowledge Learning and Control System (5 papers)
Tate 131 (1st floor, Tate Center / Beatty Center)	14:10PM-15:40PM	Session II Social Networks and Computer Networks (6 papers)
	15:40PM-16:20PM	<i>Coffee Break</i>
	16:20PM-17:35PM	Session IV Management Science and Engineering (5 papers)

<p>Plenary Speech 13:30-14:05</p>	<div style="text-align: center;">  <p>Prof. Driss Benhaddou <i>University of Houston, Texas, USA</i></p> <p>Title of Speech: Connected Smart Buildings as Building Block for Smart Cities</p> <p>Abstract: More than 50% of the world populations live in urban areas and there is a need to make cities smart and efficient. Recent technical achievements in sensors and controls integrated with active systems can allow for the ability to control our built environment and tailor it to our preferences, while still maintaining optimal operation, energy conservation, sustainability and resiliency. With the use of Wireless Sensor Networks (WSN) our cities can move toward the concept of smart cities. A smart city behaves as a Cyber-Physical System (CPS) that deeply integrates sensing, computation, communication, and control. However, implementations of smart CPSs that are reliable and autonomous are facing many challenges from different perspectives as future CPSs are composed of heterogeneous systems. Developing buildings that have the capabilities to autonomously decide and act what to do with its environment will enable the development of smart cities concept. The presentation will talk about how Cyber-Physical System (CPS) concepts can be used to drive the implementation of autonomous building in smart city environments. This smart city will behave like a living organism in making its own decision for sustainable, healthy, and livable cities.</p> </div>
--	--

Session I- Computer Science and Software Engineering

(6 papers, each paper has 13 minutes for presentation, 2 minutes for Q&A)

Venue: Wells Fargo Auditorium, 1st floor, Tate Center / Beatty Center, College of Charleston


Time: 14:10p.m.-15:40p.m.

Session Chair: Prof. Driss Benhaddou

****Duration of each presentation is just for reference. We suggest presenters to attend the whole session, just in case the actual presentation time may differ from the scheduled time.**

<p>ISE2017-106 14:10-14:25</p>	<div style="text-align: center;">  <p>Presenter: Hani Bani-Salameh</p> </div>
------------------------------------	--

	<p style="text-align: center;">From: The Hashemite University, Jordan</p> <p style="text-align: center;">Title: Using Social Development Environments in Introductory Computer Science Classrooms: a Case Study on SCI</p> <p>Authors: Hani Bani-Salameh, Fatima Abu Hjeela, and Duaa Bani-Salameh</p> <p>Abstract: This paper presents our experience of using a social software development environment called SCI to support teaching programming for software engineering and computer science courses. It describes the benefit from using a Social Development Environment (SDE), particularly the effect of integrating the social side on students for the computer science classroom.</p> <p>This paper presents a study that tests the usability of the SCI social development environment. Also, it contributes to a test of the hypotheses that discuss 1) the effect of using collaborative virtual environments, and 2) the benefits from integrating social networking within the SCI development environment.</p> <p>It presents both qualitative and quantitative evaluations of the SCI's environment effectiveness in a computer science classroom. User observation, informal discussions and feedback via a questionnaire gave promising facts about the system. Students have reported that the tool eases communication between them and their project partners, and that the tool presented them with passive awareness information that prevented them from affecting other's work and conflict changes while working on the project artefacts.</p>
<p>ISE2017-339 14:25-14:40</p>	<div style="text-align: center;">  <p>Presenter: John W. Burris From: Southeastern Louisiana University, USA</p> <p>Title: Test-Driven Development for Parallel Applications</p> <p>Authors: John W. Burris</p> <p>Abstract: This paper describes the use and benefits of the test-driven development paradigm in parallel application development. A brief background on test-driven development for traditional applications, techniques for parallel development, and the xUnit framework is given. This work then gives direction for using the given technologies for the development of parallel applications using the test-driven development process by mapping the functions of a parallel language to the functions of the testing framework as illustrated by a programming assignment given to college sophomores.</p> </div>
<p>ISE2017-346EP 14:40-14:55</p>	<div style="text-align: center;">  <p>Presenter: Heshmaben S. Patel From: Emergent I.T. Training Center Pvt. Ltd, India</p> <p>Title: Managing the Workflow in Software Testing and Prediction of Bug Fix-Time</p> <p>Authors: Heshmaben S. Patel</p> </div>

	<p>Abstract: The designers as well as the developers are generally attributed for the quality of the software, but the testers who play a crucial role in the efficient working of software are generally neglected. In software development work process the testing of the software has always been a pillar and plays a key role in the work flow process. Here we have focused on the management of workflow in testing activities, prediction of the bugs utilizing historical data as well as importance of bug fix-time. The testing task has been subdivided in categories like procurement of demands, prediction of the bug and framing of test methodology, executing the test sets, reporting the bugs, bugs fixing and deploying. The interrelationships among the subgroups are integrated to form a unitary framework leading to development of workflow for software testing procedure.</p>
<p>ISE2017-338 14:55-15:10</p>	<div style="text-align: center;">  <p>Presenter: Wesley Deneke From: Southeastern Louisiana University, USA Title: A Conceptual Model of Human Workflows</p> </div> <p>Authors: Wesley Deneke, Lili Xu, Craig Thompson</p> <p>Abstract: The ability to understand human workflows is crucial for information systems to monitor and support people performing real-life activities, such as preparing a meal to performing a medical procedure. This paper introduces a conceptual model to capture the knowledge necessary for computers to make sense of human workflows. A computational model based on behavior trees is presented to represent human workflows in a hierarchy of abstraction levels, and a 3d simulation platform is developed to validate the model independent of supporting infrastructure.</p>
<p>ISE2017-118 15:10-15:25</p>	<p style="text-align: center;">Presenter: Shaden Al-Marshad From: King Saud University, Saudi Arabia Title: Organizing Multimedia Resources for Mobile Learners</p> <p>Authors: Shaden Al-Marshad, Jawad Berri</p> <p>Abstract: Retrieving web information and tailor it to fit users' needs is a challenge for information retrieval systems. Most of web search engines display information resulting from searches regardless of the user's real needs, interests, or context. This is an important weakness specifically for mobile users who expect that the results are be adapted to the context. In general, web users spend time in dealing with the thousands of results retrieved by web search engines and they need most of the time to resubmit queries to refine the search. This research is intended to fulfill this gap; that is, to develop a mobile system that displays multimedia information retrieved from the web through an intelligent Graphical User Interface (GUI) that senses intelligently the user needs and adapts the content displayed to the user context. These GUIs provide users with the right information, at the right time, in the right location, for the right task.</p>
<p>ISE2017-226P 15:25-15:40</p>	<p style="text-align: center;">Presenter: Caihong Li From: Shandong University of Technology, China Title: An Integrated Complete Coverage Path Planning Algorithm for the Mobile Robot Based on the Cellular Decomposition Approach and Chaotic Theories</p> <p>Authors: Caihong Li, Zhiqiang Wang, Yong Song, Yibin Li</p>

Abstract: How to produce an unpredictable and covering trajectory is a key problem for fulfilling some particular tasks by mobile robot. This paper introduces an integrated algorithm based on the cellular decomposition approach and the chaotic theories to fulfill this task. The proposed method combines the decomposition of the target area, the linkage of the sub-regions and the coverage method in the sub-regions into a whole to design, which covers the following steps: (1) decomposition to the rectangular sub-regions of the whole workplace; (2) construction of the rectangular iterative sub-regions; (3) formation of the optimal coverage connected-path of the iterative sub-regions; (4) construction of the rectangular transition and overlapping sub-regions; (5) formation of the optimal coverage connected-path for the whole covering; (6) automatically connecting of the iterative sub-regions, and implementation of the coverage task. In this study, a nonlinear dynamics system, the Standard map, which can demonstrate the chaotic characteristics of sensitivity to initial condition features and topological transitivity, is used to produce the unpredictable and covering trajectory in each rectangular iterative and transition sub-regions mentioned in the above procedure. Compared with the conventional cellular decomposition algorithm, this method does not need the starting points and ending points in linkage of the sub-regions, and the adjacent sub-regions can be transited from one area to the other area automatically, as well as the chaotic traits can be guaranteed by planned trajectories to satisfy the requirements of the particular tasks. While compared with the commonly used random method, the designed strategy not only has the high covering performance with regard to the covering rate, overlapping rate and distribution uniformity, but also does not need detecting the boundaries of the obstacles and workplace.



Session I Best Presentation Award and Session Group Photo

Session II- Social Networks and Computer Networks

(6 papers, each paper has 13 minutes for presentation, 2 minutes for Q&A)

Venue: Tate 131, 1st floor, Tate Center / Beatty Center, College of Charleston

Time: 14:10p.m.-15:40p.m.


Session Chair: Prof. Houssain Kettani

****Duration of each presentation is just for reference. We suggest presenters to attend the whole session, just in case the actual presentation time may differ from the scheduled time.**

ISE2017-116
14:10-14:25



Presenter: Amjer Amer Al-Thuhli

	<p style="text-align: center;">From: Sultan Qaboos University, Oman</p> <p style="text-align: center;">Title: A Framework to Interface Enterprise Social Network Into Running Business Process</p> <p>Authors: Amjed Al-Thuhli and Mohammed Al-Badawi</p> <p>Abstract: Enterprise Social Network (ESN) gain widespread adoption and popularity by many organizations as it provides a new way of social business interactions. However, there are some limitations found in ESN from integration with running business processes (BP) perspective. BP service designers and developers can't utilize its generated structured and unstructured contents in running BPs. This leads organizations to spend more efforts and time in defining social BP and integrate it with running BPs manually. Building upon previous works on reengineering BP to fuse it with social interaction; this paper proposes a framework to interface ESN BP into organization running BP. The framework fits with the structure data of ESN as input to generate web service in virtual environment. It defines the refactoring process of ESN database before publishing it as a web service into SOA environment based on features of open source and commercial platform services available to researchers and experts.</p>
<p>ISE2017-349 14:25-14:40</p>	<div style="text-align: center;">  <p>Presenter: Mehul Vora From: TCS India Ltd</p> <p>Title: Estimating Effective Web Server Response Time</p> <p>Authors: Mehul Nalin Vora and Dhaval Shah</p> <p>Abstract: The dependency on internet and web applications has drastically increased a load over the servers. Therefore monitoring the server health and evaluation of server performance from time to time is very critical in ascertaining the degree of success for any business. In this paper, we are presenting a novel methodology to analyze live production web-logs, in particular, http access logs, in order to evaluate server performance, in terms of effective server response time. This proposed work is particularly suitable for the class of web-based applications running under budget and/or performance constrained environment, where no monitoring data and minimal amount of logging data is available. In this type of particular scenarios, we can still use the proposed approach to ascertain compliance to the service level agreements (SLAs) by estimating effective server response time solely from the http access log. The methodology presented here has been verified using in house experiments as well as using the data received from the live production setup.</p> </div>
<p>ISE2017-233 14:40-14:55</p>	<p style="text-align: center;">Presenter: Shuwei Huang From: University of Science and Technology Beijing Beijing, China</p> <p style="text-align: center;">Title: The Production Management System of Mining Group Based on Business Intelligence</p> <p>Authors: Shuwei Huang, Nailian Hu, Guoqing Li, Jie Hou, and Tao Pan</p> <p>Abstract: In order to realize the distributed collection, scientific integration and comprehensive analysis of production operation data under the control mode of mining group, it is essential to apply business intelligence to design and develop the production</p>

	<p>management system for mining group. Taking the delicate production management for mine group into consideration, the system framework is built, which core component consists of the filling, process and analysis of production operation data and the front-ends display of BI. Meanwhile, the function system of the submodular is planned. Based on the scientific plan of the production data flow process, the index integrating dimensions are defined to meet the requirements of production management and they lay the foundation for the storage, multidimensional operation and visualized presentation of data. In addition, the system has been constructed and applied to a Chinese mining group, and realizes the distributed acquisition and statistical analysis of production information, which effectively improves the level of production operation management and the ability of scientific decision-making.</p>
<p>ISE2017-233E 14:55-15:10</p>	<p style="text-align: center;">Presenter: Dakui Zhang From: Beijing Institute of Technology, China</p> <p style="text-align: center;">Title: Typing Behaviour Gives Chinese Word Segmentation New Perspective</p> <p>Authors: Dakui Zhang and Yu Mao</p> <p>Abstract: Users provide a lot of undiscovered information when they are working with electronic products, such as computer. Many natural annotations are left when users type Chinese materials with input method. We call them natural typing annotations. These annotations have intimate connection with Chinese word segmentation. In this paper we collect corpus with natural inputting annotations and analyze it in various respects. From the corpus, user's typing patterns are extracted and classification model is built to identify different patterns. Experiments show that natural inputting annotations have promising potential in overcoming the drawbacks of existing word segmentation approaches.</p>
<p>ISE2017-343 15:10-15:25</p>	<p style="text-align: center;">Presenter: Youchen Shen From: MinZu University of China, China</p> <p style="text-align: center;">Title: Automatically Selecting Cluster Centers in Clustering by Fast Search and Find of Density Peaks with Data Field</p> <p>Authors: Youchen Shen and Hong Zhang</p> <p>Abstract: Automatic selection of clustering centers is researched in "Clustering by Fast Search and Find of Density Peaks with Data Field". It is found that the change law of multilevel differences can locate the position of cluster centers and non-cluster centers. By higher-order finite differences operation acting on λ, which is accumulation sum of dot product of local density ρ and distance δ, clustering centers can be automatically extracted, which improves the problem of manual determination of clustering centers only by artificial observation in the paper above. The validity and reliability of the novel approach we proposed are demonstrated by experiments of several test cases.</p>
<p>ISE2017-232 15:25-15:40</p>	<p style="text-align: center;">Presenter: Na Chen From: Wuhan University of Technology, China</p> <p style="text-align: center;">Title: Energy Consumption Monitoring System Design of Workshop Processing Equipment based on MTConnect</p> <p>Authors: Na Chen, Yong Yin, and Zhian Yin</p> <p>Abstract: As the industry's main source of energy consumption, workshop processing equipment has great potential for energy saving. In this paper, we proposed an energy consumption monitoring model based on MTConnect. The system is divided into equipment layer, service layer and application layer. Using the machine tools as the</p>

<p>application scenarios, we have implemented energy consumption monitoring for various devices at the same time. The system includes modules of the data collection, data transmission and data processing. Data collection module uses MTConnect Adapter and Agent to parse the data collected from the device and save in XML format. Data is transmitted via HTTP. Data processing module implemented data processing, real-time display, graph drawing and energy consumption analysis. We added the improved rete algorithm in Adapter and then improved the system efficiency.</p>



Session II Best Presentation Award and Session Group Photo



Coffee Break

15:40p.m.-16:20p.m.

Session III- Knowledge Learning and Control System


(5 papers, each paper has 13 minutes for presentation, 2 minutes for Q&A)

Venue: Wells Fargo Auditorium, 1st floor, Tate Center / Beatty Center, College of Charleston

Time: 16:20p.m.-17:35p.m.

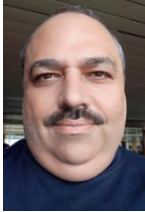
Session Chair: Prof. Chen-Huei Chou

****Duration of each presentation is just for reference. We suggest presenters to attend the whole session, just in case the actual presentation time may differ from the scheduled time.**

<p>ISE2017-345 16:20-16:35</p>	 <p>Presenter: Maqsood Mahmud</p>
------------------------------------	--

	<p>From: Imam Abdulrahman Al Faisal University, Dammam, Kingdom of Saudi Arabia</p> <p>Title: A Novel Feedback Knowledge Management System (FKMS) in Educational Perspective</p> <p>Authors: Amal Al Qahtani, Sara Al Utaibi, Reem Al Ghamdi, Samar Al Ghamdi, Maqsood Mahmud</p> <p>Abstract: The paper introduces a novel knowledge management system; it describes the process of developing a feedback system for schools where we connect students, school administration, and the ministry of education all together in order to facilitate the learning process and make sure that the students get the proper teaching, it is also a chance for them to have a voice and for their requests to be answered. We believe that this system could fill in the gap that schools in Saudi unfortunately have between students and the people in the administration. This paper further illustrate the details about the system it self and how it came. The paper discusses knowledge application systems in general and describes their components and the different types of technologies and mechanisms that are used for each different type to serve a distinct purpose. Different types are explained with supplementary figures and diagrams. The paper describes the proposed system in depth beginning with an overview of the idea itself and presents the initial architecture of the system as well as a complete prototype of its functionality. This section is supplemented with a survey we conducted targeting middle and high school students as well as all the patterns and tables needed for creating the system. It also presents a comparison between our system and an existing one that is similar but applied in another field. Limitations and benefits of the proposed systems are also described comprehensively. The last part summarizes the work we have done as well as list some of the challenges and lessons learned for future growth and improvement.</p>
<p>ISE2017-350 16:35-16:50</p>	<div data-bbox="868 1207 1034 1384" data-label="Image"> </div> <p>Presenter: Wesley Deneke From: Southeastern Louisiana University, USA Title: A Mirror World-based Robot Control System</p> <p>Authors: Justin McLin, Ngu Hoang, Wesley Deneke, and Patrick McDowell</p> <p>Abstract: This paper describes an approach to establish bidirectional interactions between robots in the physical and virtual worlds, enabling changes that occur to a physical robot to be automatically reflected by its virtual counterpart, and vice versa. To explore this mirror world concept, a general approach is developed to trigger events that propagate changes between physical and virtual robot counterparts. The accuracy and usability of this approach are then evaluated by constructing a physical robot, creating a virtual model of this robot in Unity, and gathering results from test scenarios.</p>
<p>ISE2017-103 16:50-17:05</p>	<div data-bbox="871 1890 1027 2067" data-label="Image"> </div>

	<p style="text-align: center;">Presenter: Charles Mborah From: Missouri University of Science and Technology, Rolla, USA</p> <p>Title: Exploring the use of a Time-frequency Domain Technique for the Filtering of Acoustic Emission/Microseismic Data</p> <p>Authors: Charles Mborah, Maochen Ge, and Zhigang Wang</p> <p>Abstract: The performance of acoustic emission/microseismic (AE/MS) monitoring systems in mines is greatly impacted by the background noise interference. Mine trucks/vehicles, fans, blasting and electrical spikes generate noise which negatively affect AE/MS signal quality. Using such datasets without filtering may lead to inaccurate determination of first arrivals and hence wrong source location. Also, data contaminated with noise makes manual identification and picking of the first arrivals impossible or difficult to achieve. This paper explored the use of stationary discrete wavelet transform as a filter to augment noise reduction on mine AE/MS data. The output of a test run on both noisy synthetic and field data showed cleaner AE/MS signal quality and clear emergence of first arrivals. As a result, manual picking of the first arrivals were much easier and faster. The use of the technique in this study presents an opportunity for picking accurately the first arrivals manually or automatically. Reliable first arrival picks lead to accurate computation of event source location and therefore, better safety monitoring and emergency responses in the event of an underground failure.</p>
<p>ISE2017-117 17:05-17:20</p>	<div style="text-align: center;">  <p>Presenter: Asharul Islam Khan From: Sultan Qaboos University, Oman</p> <p>Title: Crowd Sourced Evaluation Process for Mobile Learning Application Quality</p> <p>Authors: Asharul Islam Khan, Zuhoor Al-khanjari, and Mohamed Sarrab</p> <p>Abstract: Crowd sourcing is a novel method for requirements elicitation, development, testing, and evaluation of software in a dynamic environment. Crowd sourced evaluation is a new technique to overcome the traditional methods where usually the co-presence of stakeholders is required during software quality evaluation. Learning using mobile devices takes place in a dynamic and heterogeneous environment where learners have their own learning styles and need. The distinguish characteristics of Mobile Learning (M-Learning) is accessibility at anyplace, anytime, and by anyone. Therefore evaluation of M-Learning application quality using traditional techniques such as interview is tedious, costly, and time consuming. Hence in this article Crowd sourced evaluation process for M-Learning application quality has been proposed. There are four important steps: analysis and classification of M-Learning application, defining customized quality standard based on the M-Learning application category, categorization of Crowd such as users and application development team, and lastly use of Crowd sourcing platforms. The main idea behind the process is the involvement of end users in the assessment of M-Learning application quality rather than merely inviting experts</p> </div>

	<p>to evaluate the application. The proposed approach is theoretical in nature and is based on the finding from the existing literature on Crowd sourcing, M-Learning, evaluation of M-Learning application, and software quality. The proposed approach would be implemented in future to test the feasibility in real situation.</p>
<p>ISE2017-119 17:20-17:35</p>	<div style="text-align: center;">  <p>Presenter: Elcio Abrahão From: Polytechnic School of São Paulo University – POLI - USP, Brazil Title: Task Ontology Modeling for Technical Knowledge Representation in Agriculture Field Operations Domain Authors: Elcio Abrahão and André Riyuiti Hirakawa</p> <p>Abstract: Nowadays, ontologies have been used to describe knowledge in a wide quantity of domains. Knowledge discovery, reuse and share benefits are a common sense among information systems developers and there are many works related to ontology engineering, conceptual modeling, metadata and semantic representation in the computational systems area. Although there are many ontologies to describe the vocabulary related to generic domains such as medicine, law, engineering and biology, there are no specific ontologies to describe generic task vocabularies like agriculture field operations. This paper describes a model to represent the technical knowledge for the agriculture field operations as a task ontology that can be used with a domain ontology to build an application ontology for agriculture domain purposes. The field operations were analyzed to determine who are the task agents, agent roles, the input resources, task and sub-task decomposition, control-flow, task concepts, attributes and relations. As a result, a formal representation of the agriculture field operations is presented and a conceptual model was built using UML class and activity diagrams. The model consistency was verified in a case study of the sugar cane harvest operation. The model presented describes the domain operations knowledge and it could be the base for the development of computational application systems as field operations control, decision support and precision agriculture.</p> </div>



Session III Best Presentation Award and Session Group Photo

Session IV- Management Science and Engineering

(5 papers, each paper has 13 minutes for presentation, 2 minutes for Q&A)

Venue: Tate 131, 1st floor, Tate Center / Beatty Center, College of Charleston

Time: 16:20p.m.-17:35p.m.

Session Chair: Prof. Anu Gokhale

****Duration of each presentation is just for reference. We suggest presenters to attend the whole session, just in case the actual presentation time may differ from the scheduled time.**

<p>ISE2017-229P 16:20-16:35</p>	 <p>Presenter: Trevor Crawford From: The George Washington University, USA</p> <p>Title: A Model-Based Decision Support Tool for Hurricane Impact Risk Assessments</p> <p>Authors: Trevor S. Crawford</p> <p>Abstract: The possibility of long-term electrical outages in engineered systems and critical facilities by weather-related natural hazards is causing more facility and emergency managers to assess their vulnerabilities. Hurricane winds can cause significant damage to electrical distribution networks, but current tools and methodologies for decision support often address outages by spatially coarse statistical models. This approach is inadequate for assessing sector-level and facility-specific risk from potentially long-term power outages. Based on the concepts from decision support systems, this research proposes a decision support tool that models electrical outages and restoration processes down to a distribution circuit-level resolution. The proposed model makes it possible to re-evaluate risks and priorities that support decision makers regarding risk planning, systems analysis, and budget allocation for resilience upgrades. A preliminary implementation of the model and results from a probabilistic risk analysis using this model is presented.</p>
<p>ISE2017-348P 16:35-16:50</p>	 <p>Presenter: Kaijun Yang From: Hohai University, China</p> <p>Title: Time Series Analysis of Tobacco Industry Market Demand based on Integrated Model of Seasonal Decomposition and Exponential Smoothing</p> <p>Authors: Kaijun Yang, Mengxu Zhang and Jianlu Liu</p> <p>Abstract: Tobacco industry is a special industry monopolized by Chinese government, which carries out the distribution and circulation standards of tobacco. The market demand of tobacco is considered as cigarette circulation. How to predict the cigarette sales is more and more important for the strategic</p>

orientation of Tobacco Enterprises in the future. Nantong city, Jiangsu province, as a pilot city, is used as a case study. In this paper, we firstly use cigarette sales data during 2012-2016 in Nantong city for time series analysis. Then, the integrated model of seasonal decomposition and exponential smoothing is applied to forecast market demand of cigarette sales in Nantong city. The results show that tobacco demand tendency in 2017 is consistent with history sales during 2012-2016, which indicates the model has higher fitting degree. It is inferred that the cigarette sale is an important index to control overall market demand of Nantong tobacco industry for government. As such, several countermeasures are put forward to deal with transformation of Nantong tobacco enterprise in future. In particular, tobacco enterprise should strengthen the construction of information platform, such as cloud computing, tobacco database construction. According to our study on market demand of the tobacco industry, we will apply for the two patents: (1) Big data tobacco sales forecast method based on network platform. (2) Tobacco sales forecast method based on the factor score. The innovation points of patents are to use Gramm - Schmidt transformation method to screen for each group of independent variables set based on Internet platform to obtain consumer information and establish database, and use collaborative filtering algorithm to get the corresponding factor scores based on standard normal transformation of cigarettes. These patents are based on the cigarette sales influence factors databases, we will establish it in the future.



Presenter: Kabuye Richar Patrick
From: Muteesa I Royal University, Uganda

Title: Enhancing Inservice Education Training Effectiveness Using a Mobile Based E-Learning Model

Authors: Kabuye Patrick Richard


Abstract: This study focuses on the addressing the enhancement of in-service training programs as a tool of transforming the existing traditional approaches of formal lectures/contact hours. This will be supported with a more versatile, robust, and remotely accessible means of mobile based e learning, as a support tool for the traditional means.

A combination of various factors in education and incorporation of the eLearning strategy proves to be a key factor in effective in-service education. Key factor need to be factored in so as to maintain a credible co-existence of the programs, with the prevailing social, economic and political environments.

Effective in-service education focuses in having immediate transformation of knowledge in to practice for a good time period, active participation of attendees, enable before training planning, in training assessment and post training feedback training analysis which will yield knowledge to the trainers of the applicability of knowledge given out. All the above require a more robust approach to attain success in implementation.

Incorporating mobile technology in eLearning will enable the above to be factored together in a more coherent manner, as it is evident that participants have to take time off their duties and attend to these training programs. Making it mobile, will save a lot of time since participants would be in position to follow

ISE2017-107P
 16:50-17:05

	<p>certain modules while away from Lecture rooms, get continuous program updates after completing the program, send feedback to instructors on knowledge gaps, and a wholly conclusive evaluation of the entire program on a learn as you work platform.</p> <p>This study will follow both qualitative and quantitative approaches in data collection, and this will be compounded incorporating a mobile eLearning application using Android.</p>
<p>SDM2017-113 17:05-17:20</p>	<p style="text-align: center;">Presenter: Adebowale Ojo From: University of KwaZulu-Natal, Durban, South Africa Title: An Empirical Validation of the DeLone and McLean Information System Success Model in Hospitals of a Developing Country</p> <p>Authors: Adebowale Ojo</p> <p>Abstract: The study validates the DeLone and McLean information system success model in the context of hospital information systems in a developing country. A self-administered questionnaire was used as the instrument for data collection from users of the system. Structural equation modeling technique was used in validating the constructs of the model. Findings from the study revealed a significant influence of the model's quality dimensions, that is, system, information, and service quality on system's use and user satisfaction. System use did not significantly influence user satisfaction but influenced perceived net benefits. In addition, computer self-efficacy significantly moderated the relationship between system quality and use. The study concludes that system quality is an important measure of success, as it mostly influenced use, which consequently influenced perceived net benefits.</p>
<p>ISE2017-347 17:20-17:35</p>	<div style="text-align: center;">  </div> <p style="text-align: center;">Presenter: Yamid Fabián Hernández Julio From: Universidad del Sinú Elías Bechara Zainúm, Colombia</p> <p>Title: A Comparative Analysis of Emerging Enterprise Architecture Frameworks</p> <p>Authors: Yamid F. Hernández-Julio, Wilson Nieto Bernal and Maximilian Palm</p> <p>Abstract: With the evolution of the information technologies, numerous enterprise architecture frameworks have appeared trying to respond to the needs and requirements of business. For the reasons above, the main aim of this paper is to compare four emerging enterprise architecture frameworks according to the comparison parameters: Concepts, Modeling, and Process. The research method used to develop this work was a systematic literature review. For the statistical analysis was used the software package ATLAS.ti® version 7.5.4. Summarizing the results, showed that none of these emerging frameworks complies a 100% with all aspects previously mentioned.</p>



Session IV Best Presentation Award and Session Group Photo



Dinner Time: 18:00 p.m.-19:30 p.m

Venue: Tate Center / Beatty Center, College of Charleston

One-day Tour in Charleston, South Carolina, USA

April 3, 2017

Duration: 8:50am-4:00pm



Itinerary
Meet in the lobby of Tate Center, College of Charleston
Heading to pick-up point: 375 Meeting Street, Charleston SC 29403
Magnolia Plantation and Gardens: Petting Zoo, The Conservatory etc...
Historic City Tour: Charleston's Historic Homes, The Battery Sea Wall, Historic Churches, Old Market Area etc...
Drop-off point: 375 Meeting Street, Charleston SC 29403

***Inclusion: Transportation & Guide**

***Exclusion: Personal expenses and items not listed in the "Inclusion" section**

Introduction to Scenic Spots:



Magnolia Plantation and Gardens has been selected as one of "America's Most Beautiful Gardens" (Travel + Leisure Magazine), and is the only garden honored with this distinction in the State of South Carolina!

Founded in 1676 by the Drayton family, Magnolia Plantation has survived the centuries and witnessed the history of our nation unfold before it from the American Revolution through the Civil War and beyond. It is the oldest public tourist site in the Lowcountry, and

in 1870 to view the thousands of beautiful flowers and plants in its famous gardens.

The Charleston Historic District, alternatively known as Charleston Old and Historic District, is a National Historic Landmark District in Charleston, South Carolina. The district, which covers most of the historic peninsular heart of the city, contains an unparalleled collection of 18th and 19th-century architecture, including a large number of distinctive Charleston "single houses". It was declared a National Historic Landmark in 1960.

