2019 IEDRC LONDON CONFERENCES ABSTRACT

2019 International Conference on Big Data and Education (ICBDE 2019)

2019 7th International Conference on Management and Education Innovation (ICMEI 2019)

University of Greenwich, London, UK
March 30-April 01, 2019

Organized by

Scolarly Supported by

Northern Illinois University

Published by

http://www.iedrc.org/
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Welcome Remarks

On behalf of IEDRC, we welcome you to University of Greenwich, London, United Kingdom to attend 2019 7th International Conference on Management and Education Innovation (ICMEI 2019) and 2019 International Conference on Big Data and Education (ICBDE 2019). We’re confident that over the four days you’ll get theoretical grounding, practical knowledge, and personal contacts that will help you build long-term, profitable and sustainable communication among researchers and practitioners working in a wide variety of scientific areas with a common interest on Management, Big Data, Education and Education Innovation.

We hope that your work and that of your institution or company will be enhanced both by what you learn and by those with whom you connect over the next 3 days. Our field is enriched by the dialogue among colleagues from around the world which occurs during presentation sessions as well as informal conversations. We hope this is a memorable, valuable, and enjoyable experience!

On behalf of conference chair and all the conference committee, we would like to thank all the authors as well as the Program Committee members and reviewers. Their high competence, their enthusiasm, their time and expertise knowledge, enabled us to prepare the high-quality final program and helped to make the conference a successful event. We hope that all participants and other interested readers benefit scientifically from the proceedings and also find it stimulating in this process. Finally, we would like to wish you success in your technical presentations and social networking.

Once again, thanks for coming to this conference. We are delegate to higher and better international conference experiences. We will sincerely listen to any suggestion and comment. We are looking forward to meeting you next time!
The University of Greenwich is a public and research university located in London, in the United Kingdom. It has three campuses in London and Kent, England. These are located at Greenwich, in the grounds of the Old Royal Naval College, and in Avery Hill and Medway. Previous names include Woolwich Polytechnic and Thames Polytechnic.


Greenwich Campus is located mainly in the Old Royal Naval College, into which it moved in the 1990s when the premises were sold by the Royal Navy. The campus is home to the Business School and the Faculty of Architecture, Computing & Humanities. The campus also includes university's Greenwich Maritime Institute, a specialist maritime management, policy and history teaching and research institute.
The campus has a large library at Stockwell Street which houses an extensive collection of books and journals, language labs and a 300-PC computing facility. Other facilities include specialist computer laboratories including one at Dreadnought centre, a TV studio and editing suites. The Stephen Lawrence Gallery at the Stockwell Street building, showcases the work of contemporary artists and is linked to the Department for Creative.

The Campus Map is as following:

Greenwich Campus is accessible by train (stop- Maze Hill), DLR (stop – Cutty Sark) , Buses from North Greenwich and River Boats from central London. Central London can be accessed by trains and buses from all airports around. Please see this link, which has the information about travel options: https://www.gre.ac.uk/about-us/travel/greenwich

Our conferences will take place in Queen Anne Court which is building number 2.
INFORMATION OF PUBLICATION

2019 International Conference on Big Data and Education (ICBDE 2019)

Accepted papers will be published in the International Conference Proceedings Series by ACM, which will be archived in the ACM Digital Library, and sent to be indexed by EI Compendex and Scopus and submitted to be reviewed by Thomson Reuters Conference Proceedings Citation Index (ISI Web of Science).

ISBN: 978-1-4503-6186-6

2019 7th International Conference on Management and Education Innovation (ICMEI 2019)

Some accepted papers will be published in Journal of Economics, Business and Management (JOEBM, ISSN: 2301-3567, DOI: 10.18178/JOEBM), and will be included in Electronic Journals Library, Ulrich's Periodicals Directory, MESLibrary, Google Scholar, Crossref, and ProQuest.

Some accepted papers will be published in International Journal of Information and Education Technology (IJIEET, ISSN: 2010-3689, DOI: 10.18178/IJIEET) and will be included in EI (INSPEC, IET), Electronic Journals Library, Google Scholar, Crossref and ProQuest.
INSTRUCTIONS FOR PRESENTER

➤ On-Site Registration

1) Your paper ID is required for the registration.
2) Conference Materials Collection.
3) *Certificate of Listener can be collected at the registration counter.
4) *Certificate of Presentation can be collected from the session chair at the end of each session.
5) You can register on March 30 whole day and March 31 morning at the registration counter.
6) The organizer won't provide accommodation, and we suggest you make an early reservation.

➤ Oral Presentations

Devices Provided by the Conference Organizer:
- Laptops (with MS-Office & Adobe Reader)
- Projectors & Screens
- Laser Sticks

Materials Prepared by the Presenter:
- Power Point or PDF Files (Files should be copied to the conference laptop at the beginning of each session)

Duration of each Presentation:
- Keynote Speech: 40 Minutes of Presentation, including Q&A
- Author Presentation: 15 Minutes of Presentation, including Q&A

➤ Poster Presentation

Materials Provided by the Conference Organizer:
- The place to put poster

Materials Provided by the Presenter:
- Home-made Posters
- Maximum poster size is A1
- Load Capacity: Holds up to 0.5 kg

➤ Best Presentation Award

One Best Oral Presentation will be selected from each presentation session, and the Certificate for Best Oral Presentation will be awarded at the end of each session on March 31, 2019.

➤ Dress Code

Please wear formal clothes or national representative clothing.

➤ Important Note

The author is requested to attend the meeting on time and stay at the meeting place throughout the whole conference so as not to miss important matters.
Keynote Speech I

Prof. Luiz Moutinho, University of Suffolk, England

Professor Luiz Moutinho (BA, MA, PhD, FCIM), luizammoutinho@gmail.com, is Visiting Professor of Marketing at Suffolk Business School, Faculty of Arts, Business and Applied Social Science, University of Suffolk, Ipswich, England, and at the Universidade Europeia and the Marketing School, Portugal. He is Adjunct Professor at the Graduate School of Business, University of the South Pacific, Fiji. During 2015 - 2017 he was professor of BioMarketing and Futures Research at the DCU Business School, Dublin City University, Ireland. This was the first Chair in the world on both domains - BioMarketing and Futures Research. Previously, and for 20 years, he had been appointed as the Foundation Chair of Marketing at the Adam Smith Business School, University of Glasgow, Scotland. In 2017 Luiz Moutinho received a degree of Professor Honoris Causa from the University of Tourism and Management Skopje, North Macedonia. His areas of research interest encompass bio-marketing, neuroscience in marketing, algorithmic self, EmoWear - a wearable tech device that detects human emotions, evolutionary algorithms, human-computer interaction, the use of artificial neural networks in marketing, modelling consumer behaviour, futures research, marketing futurecast and tourism and marketing. Professor Moutinho has over 150 articles published in refereed academic journals, 34 books and more than 12,000 academic citations, the h-index of 51 and the i10-index of 178 (February, 2019).

Speech Title: Sensing the Future - The Intertwining of Big Data and the Future of Universities

Abstract: The presentation starts by reflecting on the Big Data Society and the future data tsunami. Data marketplaces, relevance and insights are concepts tackled then. Machine, deep and self-learning are then covered. The new concepts of data lakes, data agility, data craft, body data and data philanthropy are also presented. Going on then to discuss the disruption in academia, many considerations will be made about the university of the future. Scenarios involving the concepts of the satellite university and university brainchip will be dissected as well as the non-linear education paths encountered in the horizon. Alternative credentials and nanodegrees are also introduced. The latter part of the presentation will deal with the impact of technology shaping the university of the future... virtual education, eye tracking, holographic teaching and robotics in the classroom.
KEYNOTE SPEECH II

Prof. Joy Kutaka-Kennedy, National University, USA

Before entering higher education Dr. Joy Kutaka-Kennedy spent over twenty years teaching students from pre-school through high school in regular education, gifted education, at-risk education, and special education. She has taught over fifteen years at the university level emphasizing special education teacher preparation in academic course work and clinical practice supervision. Early in her career she won two competitive federal grants totaling almost $2M for teacher preparation in special education. Having extensive experience with online education, course development and program evaluation, she won Quality Matters recognition for innovative course design and student engagement. She has given numerous national and international presentations on creativity and collaboration in the online venue; individual accountability in online group work; emerging technological trends in higher education; and implications of generational differences and technological innovation in higher education. Currently Dr. Kutaka-Kennedy is examining the use of virtual and augmented reality in education along with the implications of the rapidly evolving future of artificial intelligence, machine learning and deep learning. She participates in a consortium led by the University of Kansas to research differences in perception of online visual elements among culturally diverse groups. Her faculty responsibilities include course design and oversight, field work supervision, and mentoring new faculty in higher education. Dr. Joy Kutaka-Kennedy serves as an officer of the California Association of Professors of Special Education, mentors prospective grant writers, completes program reviews for state and national accreditation, and performs editorial reviews for professional publications. She currently is working on designing new programs and curricula to align with new state credentialing standards.

Speech Title: Riding the Wave of Big Data to Our Future with AI, ML and DL

Abstract: Humans have come a long way from hunter-gatherer societies of 70,000 thousand years ago. We have journeyed through various epochs of technological innovation, each building upon its predecessor to bring us to the brave new data-driven world we now inhabit. In this time of rapid change, we have seen major disruptions to the status quo with machine labor replacing humans while also creating new jobs. In the last 2 years we have produced over 90% of the data ever created. Every day we encounter new emerging technology to make our lives better, simpler, easier, more efficient, and more fun. Many recent innovations have reaped commercial success and social benefits.

Machines have continuously expanded our capabilities, and today many can exceed human capacities in playing games like Go or chess, diagnosing illness, buying stocks, and performing a myriad of other skills. With these impending changes driven by big data and AI, how will we manage to stay on top of our technology, safeguard against being eclipsed or superseded, and address other concerns about our future? Especially in light of self-teaching algorithms achieving exceptional supra-human outcomes as
demonstrated by AlphaGo Zero, how can we address fears of being made obsolete by our inventions? Examining fictional scenarios of a future with robots provides clues to where we might end up. One arena likely to produce innovations is the field of biometrics which offers the promise of improved health, healing and repair of injuries with the possibility of considering expanded lifespans.
Keynote Speech III

Prof. Murali Krishnamurthi, Northern Illinois University, USA

Murali Krishnamurthi received a bachelor’s degree in mechanical engineering in 1978 from University of Madras, a master’s degree in industrial and systems engineering in 1982 from Ohio University, and a doctorate in industrial engineering in 1988 from Texas A&M University.

He is Professor of Industrial and Systems Engineering and Permanent Provost for Faculty Affairs at Northern Illinois University in DeKalb, Illinois, U.S.A. His teaching and research interests include project management, information systems, system simulation, optimization techniques, faculty development, and distance learning.

Dr. Krishnamurthi is a member of the American Association for Engineering Education (ASEE) and the Professional and Organizational Development (POD) Network. In 2011, he received the Presidential Teaching Professor Award and the Deacon Davis Diversity Award at Northern Illinois University.

Speech Title: Promoting Affordable Higher Education Through Open Educational Resources

Abstract: The increasing cost of higher education textbooks and the free and easily accessible educational materials have sparked an interest in open educational resources in higher education institutions across the globe. While such resources may be open and easily accessible, higher education institutions have the responsibility to ensure the resources are truly open, suitable for the curricula, and benefit students’ education. In addition, higher education institutions should also develop strategies to encourage their faculty to innovate new ways to contribute to open educational resources as well as maintain them. This keynote presentation will cover an overview of open educational resources and strategies for planning, managing and contributing to them.
Keynote Speech IV

Dr. Peter Tong, Concordia International School Shanghai, China

Peter pioneered the Big Data Analytics program for K-12 education where neither curriculum nor standards exist. His passion in data analytics is evident in his teachings and research work. He shares his data analytics passion with his students by supervising practical data analytics projects in his Big Data Analytics course. Both his and his students' work have been presented regularly at several international big data analytics conferences. Peter began his career as an aerospace engineer in the preliminary design of a supersonic Mach 2+ Unmanned Aerial Vehicle (UAV) for the Department of National Defence, Canada. He later found his calling to be a teacher. With a background in Electrical Engr. (B.Sc.), Mechanical Engr. (M.Sc.), Aerospace Engr. (Ph.D.) and Dip. Ed. Peter readily integrates practical real life engineering experience into the classroom. He also developed an Aerospace Engineering course for high school. He is a member of the program committee for the International Big Data and Analytics Educational Conference, Watson Analytics Global Academics Network (WAGAN) and is on the Ad-Hoc IBM Academic Advisory Board. He has taught in Australia, Canada, Indonesia, Malaysia, Singapore and is currently teaching in China.

Speech Title: Big Data Analytics - An Essential Entity in K-12 Education

Abstract: Big Data Analytics and Data Science are growing at an exponential rate and in an effort to keep up with the mountains and oceans of data, education institutions are offering a massive selection of analytics courses to meet this ever-rising demand. Over the last 5 years, higher education has increased their course offerings in data analytics, data science and computer science. Massive Open Online Courses (MOOG) have also attempted to fill this void. Recently, K-12 institutions have taken notice of this phenomena.

This presentation will focus on the importance of K-12 Big Data Analytics for both administrators and students, who's understanding will impact the operation of the school and better prepare students for an increasingly data driven job market.

For the administrator, there is a colossal amount of untapped student data available for K-12 administrators that can enhance the quality of education and support improved student outcomes. Major areas of focus include: effective strategies administrators can use to drill deeper into the available data; productive ways administrators can act on the findings; the core knowledge of analytics administrator's need for proper analytics interpretation; and curricular insights into developing a K-12 program. The pioneering of Big Data Analytics at Concordia Shanghai confirms the stimulating and encouraging need for the specific development of Big Data in K-12 programs.

For the K-12 student, awareness of Big Data Analytics has never been more important. The K-12 student
needs to be exposed to a Big Data Analytics program to enable and prepare them to be highly adaptive to the future job market, and to better address the needs of society. While universities have started offering undergraduate courses in Big Data alongside existing graduate courses, there is still a vast shortage of data scientists in comparison to the high demand of the current job market. The inability to meet this demand lies in the lack of a structured K-12 Big Data program that is fully able to prepare students with the proper set of critical thinking, inductive reasoning and analytical skills required to form a conceptual understanding of Big Data and its applications in STEM and liberal arts fields. Students who are astute to Big Data Analytic build these skills, become independent and adaptive learners, and develop a confidence and ability to research and teach themselves through independent data projects. Due to the accessible nature of Big Data in today’s learning environment, where new subject matter and information are constantly evolving, the pedagogical value of Big Data provides an opportunity for a paradigm shift in learning - coined by Alison King - where students are empowered and the teachers’ role is transformed from a “sage on the stage” to “guide on the side.”
## Agenda Overview

### Day 1 (March 30, 2019): On-site Registration Only

<table>
<thead>
<tr>
<th>Venue</th>
<th>Arrangement</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>QA039 Classroom</td>
<td>Conference Materials Collection</td>
<td>13:00 – 17:00</td>
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</table>

### Day 2 (March 31, 2019): Conference Day

<table>
<thead>
<tr>
<th>Venue</th>
<th>Arrangement</th>
<th>Time</th>
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<tbody>
<tr>
<td>QA063 Classroom</td>
<td>Keynote Speeches</td>
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<tr>
<td></td>
<td>Opening Remarks</td>
<td>9:00–9:05</td>
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<tr>
<td></td>
<td>Prof. Luiz Moutinho</td>
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<td></td>
<td>University of Suffolk, England</td>
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<tr>
<td></td>
<td>Keynote Speech 1</td>
<td>9:05–9:45</td>
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<td></td>
<td>Prof. Joy Kutaka-Kennedy</td>
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<td></td>
<td>National University, USA</td>
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<tr>
<td></td>
<td>Coffee Break &amp; Group Photo</td>
<td>9:45–10:05</td>
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<td></td>
<td>Keynote Speech 2</td>
<td>10:05–10:45</td>
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<tr>
<td></td>
<td>Prof. Murali Krishnamurthi</td>
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<td></td>
<td>Northern Illinois University, USA</td>
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<td></td>
<td>Keynote Speech 3</td>
<td>10:45–11:25</td>
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<tr>
<td></td>
<td>Dr. Peter Tong</td>
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<tr>
<td></td>
<td>Concordia International School Shanghai, China</td>
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</tbody>
</table>
Keynote Speech 4

Prof. Luiz Moutinho
University of Suffolk, England

11:25-12:05

12:05-13:30 Lunch Time

University Campus

Author Presentations

<table>
<thead>
<tr>
<th>Venue</th>
<th>Session 1 (QA075 Classroom) Data Mining and Analysis</th>
<th>Session 2 (QA039 Classroom) Subject Education and Educational Statistics</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AM0010-A Samuel Xu, Concordia International School Shanghai, China</td>
<td>AM0025-A Shahinaz Abdullahafiz, University of Hull, UK</td>
<td>13:30-13:45</td>
</tr>
<tr>
<td></td>
<td>AM0039 Muna Mohammed Said Al Fanah, University of Bradford, Bradford West Yorkshire, UK</td>
<td>CM2004 Edwin P. Christmann, Slippery Rock University, USA</td>
<td>13:45-14:00</td>
</tr>
<tr>
<td></td>
<td>AM0015-A Eunchae Seong, Concordia International School Hanoi, Vietnam</td>
<td>AM0049 Kazunori Yamamori, Mie University, Japan</td>
<td>14:00-14:15</td>
</tr>
<tr>
<td></td>
<td>AM0036 Sadaf Azaf, University of Bradford, UK</td>
<td>AM0056 Yu Li, Central China Normal University, China</td>
<td>14:15-14:30</td>
</tr>
<tr>
<td></td>
<td>AM0018-A Zihan (Bill) Yin, Concordia International School Shanghai, China</td>
<td>AM0026-A Craig Gingerich, The American School of Doha, USA</td>
<td>14:30-14:45</td>
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<tr>
<td></td>
<td>AM0023 Harsh Mishra, R.V College of Engineering, India</td>
<td>CM2016 Xi Qin Geng, Nanjing University of Aeronautics and Astronautics, China</td>
<td>14:45-15:00</td>
</tr>
<tr>
<td></td>
<td>AM0024-A Jack Wang, Concordia International School Shanghai, China</td>
<td>AM0033 Yuri Demchenko, University of Amsterdam, Netherlands</td>
<td>15:00-15:15</td>
</tr>
<tr>
<td>AM0062</td>
<td>Hae Rin No, Quynh Anh Kelly Bui Huy and Neil Whitehead, Concordia International School Hanoi, Vietnam</td>
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<tr>
<td>CM3027-A</td>
<td>H. F. Adepoju, Federal College of Education, Nigeria</td>
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<tr>
<td>Time</td>
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<table>
<thead>
<tr>
<th>AM0013-A</th>
<th>Timothy Benjamin Fuller, Concordia International School Shanghai, China</th>
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</thead>
<tbody>
<tr>
<td>AM0011</td>
<td>Feng Tai, Beijing University of Technology, China</td>
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<tr>
<td>Time</td>
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</table>

<table>
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<tr>
<th>AM0017</th>
<th>Vanessa Lynn Whitehead, Concordia International School Hanoi, Vietnam</th>
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</thead>
<tbody>
<tr>
<td>AM0008</td>
<td>Sopana Sudsomboon, Sukhothai Thammathirat Open University, Thailand</td>
</tr>
<tr>
<td>Time</td>
<td>15:45-16:00</td>
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</tbody>
</table>

**15:30-16:00**

Coffee Break

<table>
<thead>
<tr>
<th>Venue</th>
<th>Session 3 (QA075 Classroom) Information Technology and Big Data Applications</th>
<th>Session 4 (QA039 Classroom) E-Commerce and E-Business</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM0020</td>
<td>Thumrongrat Amornraksa, King Mongkut's University of Technology Thonburi (KMUTT), Thailand</td>
<td>CM2009 Jinwei Zhu, Jiangnan University, China</td>
<td>16:00-16:15</td>
</tr>
<tr>
<td>AM0041</td>
<td>Alexander Marinov, GCU and MGCA Ltd, UK</td>
<td>CM3014 Bharti, Guru Gobind Singh Indraprastha University, India</td>
<td>16:15-16:30</td>
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<tr>
<td>AM0048</td>
<td>Jian Li, Sichuan Technology &amp; Business College, China</td>
<td>CM2015 Qing Zhang, Nanjing University of Astronautics and Aeronautics, China</td>
<td>16:30-16:45</td>
</tr>
<tr>
<td>AM0012</td>
<td>Olga Kalimullina, The Bonch-Bruevich Saint-Petersburg State University of Telecommunications, Russian Federation</td>
<td>CM3013 Congying Wang, China Ship Development and Design Center, China</td>
<td>16:45-17:00</td>
</tr>
<tr>
<td>AM0047</td>
<td>Qiang Yang, Sichuan Technology &amp; Business College, China</td>
<td>CM3022 Nicos Antoniades, The City University of New York, USA</td>
<td>17:00-17:15</td>
</tr>
<tr>
<td>AM0063</td>
<td>Noshaba Manarvi, Virtual University of Pakistan, Kingdom of Saudi Arabia</td>
<td>CM2011 Ciocoiu Eugenia, Babes-Bolyai University, Romania</td>
<td>17:15-17:30</td>
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</tbody>
</table>
### Session 5 (QA063 Classroom)
**Information Technology and Big Data Applications**
**13:30-15:00**

<table>
<thead>
<tr>
<th>AM0003 13:30-13:45</th>
<th>CM3020-A 15:00-15:15</th>
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</thead>
<tbody>
<tr>
<td>Xiaohui Zou, Sino-American Searle Research Center, China</td>
<td>A.M. Pérez-Cabello, University of Seville, Spain</td>
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<table>
<thead>
<tr>
<th>AM0009 13:45-14:00</th>
<th>CM3019 15:15-15:30</th>
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<tbody>
<tr>
<td>Aleksandr Z. Koberidze, Peoples’ Friendship University of Russia (RUDN University), Russia</td>
<td>Zhou Jixiang, Guangzhou College of South China University of Technology, China</td>
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<thead>
<tr>
<th>CM3018-A 14:00-14:15</th>
<th>CM3021-A 15:30-15:45</th>
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<tbody>
<tr>
<td>Ying Tian, Donghua University, China</td>
<td>A.M. Pérez-Cabello, University of Seville, Spain</td>
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<table>
<thead>
<tr>
<th>CM2020-A 14:15-14:30</th>
<th>CM2008-A 15:45-16:00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yue Zhang, Donghua University, China</td>
<td>Ana Luisa Rodrigues, University of Lisbon, Portugal</td>
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</table>

<table>
<thead>
<tr>
<th>CM2003-A 14:30-14:45</th>
<th>CM2017 16:00-16:15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manal Aldaihani, The Public Authority for Applied Education and Training, Kuwait</td>
<td>Nia Kurniati Bachtiar, Universitas Muhammadiyah Magelang, Indonesia</td>
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<tr>
<th>AM0058 14:45-15:00</th>
<th>AM0016-A 16:15-16:30</th>
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<tr>
<td>Presenter: Khanista Namee, King Mongkut’s University of Technology North Bangkok, Thailand</td>
<td>Quynh Anh Bui Huy and Hae Rin No, Concordia International School Hanoi, Vietnam</td>
</tr>
</tbody>
</table>

### Session 6 (QA063 Classroom)
**E-Commerce and E-Business**
**15:00-16:30**

<table>
<thead>
<tr>
<th>CM2020-A 14:15-14:30</th>
<th>CM2008-A 15:45-16:00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yue Zhang, Donghua University, China</td>
<td>Ana Luisa Rodrigues, University of Lisbon, Portugal</td>
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</tbody>
</table>

### 18:00-19:30 Dinner Time

**University Campus**

### Listener List

<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
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</thead>
<tbody>
<tr>
<td>Juliana Serwaa Andoh</td>
<td>Kwame Nkrumah University of Science and Technology, Ghana</td>
</tr>
<tr>
<td>Robert Levesque</td>
<td>University of Moncton, Canada</td>
</tr>
<tr>
<td>Oluwole Ladapo</td>
<td>Petermercy &amp; Seandonkay Investments PTY, South Africa</td>
</tr>
<tr>
<td>Ahmet Ecmel Ayral</td>
<td>Istanbul Bilgi University, Turkey</td>
</tr>
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<td>Soluade Muyideeen Oriyomi</td>
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**AUTHOR PRESENTATIONS OVERVIEW (MARCH 31)**

**Session I**

**Theme:** Data Mining and Analysis  
**Time:** 13:30-16:00  
**Venue:** QA075 Classroom  
**Session Chair:** Dr. Peter Tong  
**Affiliation:** Concordia International School Shanghai, China

*Please arrive at conference room 15 minutes earlier so that authors are able to make the presentation on time.*  
**There will be a session group photo part at the end of each session.**  
***The best presentation will be selected by session chair and awarded at the end of each session.***

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<th>AM0010-A</th>
<th>13:30-13:45</th>
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| **Big Data Analytics in the Distributions of Political Bias in Social Media and News Publications**  
Samuel Xu and Peter Tong  
Presenter: Samuel Xu, Concordia International School Shanghai, China |

Abstract: Political bias is definable as the emphasis of a partisan agenda in the message from a politician or news article. This project reveals insights into how often politicians create partisan social media posts, the messages they seek to communicate, and the distribution of political biases demonstrated by news publishers. This is further broken down into favoring the agenda of policies defined from 'left to right'. For example, an article advocating for a more positive societal perception of single working mothers would be farther left, whereas an article opposing more open immigration policies would be farther right. Data was taken from Kaggle, and analyzed with Watson Analytics and a modified Python script. Pre-categorized data (5,000 data points) on social media post by politicians was analyzed for the distribution of partisan to neutral postings, target audiences, and intended message. Data on news articles (143,000 data points) was categorized with a logistic regression model running as a Python script for newspaper clustering (which was the basis for the Medium article, “Predicting Political Bias with Python”). The algorithm was trained with data collected for it, and repurposed to categorize different datasets of news articles on a spectrum from ‘extreme left’ to ‘extreme right’. The data on politicians and social media shows insights on how politicians communicate neutral messages more often than partisan messages, most commonly communicate policy, personal, support, and informational messages, and usually target a national rather than constituent audience. Analyzing the data for news articles has identified the bias of each article, and aggregated this data to generate distributions of viewpoints for different news publications. Though these distributions generally represent consensus from media bias analysts, there are limitations remaining in the model. This research is applicable to improving automated methods of gauging political
Understanding E-learners’ Behaviour Using Data Mining Techniques
Muna Al Fanah and Muhammad Ayub Ansari
Presenter: Muna Mohammed Said Al Fanah, University of Bradford, Bradford West Yorkshire, UK

Abstract: The information from Higher Education Institutions (HEIs) is primarily relevant for decision maker and educators. This study tackles e-learners behaviour using machine learning, particularly association rules and classifiers. Learners are characterized by a set of behaviours and attitudes that determine their learning abilities and skills. Learning from data generated by online learners may have significant impacts, however, few studies cover this resource from machine learning perspectives. We examine different data mining techniques including Random Forests, Logistic Regressions and Bayesian Networks as classifiers used for predicting e-learners’ classes (High, Medium and Low). The novelty of this study is that it explores and compares classifiers performance on the behaviour of online learners on four variables: raise hands, visiting IT resources, view announcement and discussion impact on e-learners. The results of this study indicate an 80% accuracy level obtained by Bayesian Networks; in contrast, the Random Forests have only 63% accuracy level and Logistic Regressions for 58%.

The Pattern of Crime Occurrence in South Korea by Using Watson Analytics
Eunchae Seong, Neil Whitehead and Emanuel Santos
Presenter: Eunchae Seong, Concordia International School Hanoi, Vietnam

Abstract: South Korea is known as one of the safest countries in the world. Among the 38 Organization for Economic Cooperation and Development (OECD) countries, however, South Korea ranked 26 out of 38 in safety (OECD Better Life Index). Identifying patterns can lead to a reduction in crime due to better use of law enforcement, and the government can provide information to help citizens avoid dangerous situations. This paper explores crime patterns in South Korea. About 180,000 data points from 2004 to 2017 were collected from the Supreme Prosecutors’ Office of the Republic of Korea and Statistics Korea (KOSTAT). The data in this study include crime occurrences by month, weather indicators, population density, offender’s background information, and other data. This project focuses on the overall trend and felony crimes. Data was analyzed using IBM’s Watson Analytics, and several insights with criminal activity were found including connections to gender, population density, weather, and other factors. The key findings are: 1) the higher the temperature, the more violent crimes occur including sexual violent crimes; 2) the percentage of male criminals were constantly higher than the percentage of female criminals over the years even though the population size for each gender was approximately equal; 3) the higher the population density, the more crimes occurred per region.
| AM0036 14:15-14:30 | Physical Role Limitation – It’s Classification and Prediction using Machine Learning  
Sadaf Azad, Muna Al Fanah and Ci Lei  
Presenter: Sadaf Azaf, University of Bradford, UK  
Abstract: The focus of this study is to define the classification of physical role limitation in patients and predict patient physical role limitation based on other health factors, using machine learning.  
For this purpose, patients’ records in National Child Development Study Dataset (NCDS), which started in 1958, were used. This study performs classification of patients’ existing records and categorization of new records on the basis of trained model by implementing data mining techniques, including linear discriminant analysis (LDA), support vector machine (SVM), Decision Tree (CART), Random Forest, and k-nearest neighbor (KNN).  
Findings of this research will help medical practitioners to classify patients on the basis of other valuable health related information and observe the physical role limitations in patients at age of 50 and above. For instance, knowing the general health scales of patients can help practitioners to predict the physical activity scale in patients, and thus help practitioners in e.g. risk assessment and drawing up treatment and care plans. The contribution of this study is to utilize a study covering 55 years’ observations of the candidates in order to help practitioners to identify and predict the physical role limitation in people when they turn 50 and over on the basis of other health related information. Of the five classifiers applied in this study, it can be confidently said that Random Forest is the best classifier with 72.48% accuracy to be used in data situations like NCDS. |

| AM0018-A 14:30-14:45 | Analyzing Basketball Performance Data Using Video Analytics and IBM Watson Analytics  
Bill Yin and Dr. Peter Tong  
Presenter: Zihan (Bill) Yin, Concordia International School Shanghai, China  
Abstract: Basketball’s complexity possesses different elements that will determine which team will prevail over the other, but contemporary analyses are insufficient to capture the multitude of this game. With the advent of Big Data Analytics, basketball games can be dissected with relative ease while providing accurate feedback for the players at any level. This study utilizes data collected from Concordia International School Shanghai’s Varsity Boys’ basketball games from 2015 - 2017. Each game’s data was provided by Krossover, an online company that utilizes Video Analysis to analyze scenes inside video recordings. Utilizing advanced technologies such as Convolutional Neural Networks, the Krossover systems are able to incorporate Image Recognition to recognize objects in motion inside individual frames of the video. The Krossover data sets were then analyzed using IBM Watson Analytics, uncovering insights between players’ performance data. IBM Watson Analytics predicts that Field Goals (59% prediction strength) is a more efficient way of scoring in comparison with 3-pointers (less than 33% prediction strength) for Concordia’s Boys’ Basketball Team. In addition, the team scored more points in the third quarter due to a decrease in turnovers |
and an increase free throws attempts, concluding the team’s increased aggression. Furthermore, an increase in 2nd chance points leads to a clear increase in fast breaks, suggesting that players’ increased hustle induce a better chance for the team to score and win. These insights can unveil the strengths and weaknesses of the team, and coaches can focus on specific aspects to improve, making practices more efficient and effective. This project will not only serve as a facilitator for the players’ improvement at Concordia Shanghai, but it can also be applied to other basketball enthusiasts. One application of this project is to assist others who are not as privileged in resources to improve their game. With the proliferation of mobile devices, basketball enthusiasts can record their games readily and conveniently. This analytics project ultimately allows everyone a chance to perfect the game of basketball.

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<td><strong>Data Skew Profiling Using HPCC Systems</strong></td>
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<td>Harsh Mishra, Jayanth S, Shobha G, Jyoti Shetty, Dan Camper, and Arjuna Chala</td>
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<td><strong>Presenter:</strong> Harsh Mishra, R.V College of Engineering, India</td>
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<td><strong>Abstract:</strong> Over the last few decades, there has been a tremendous increase in the volume of data available for analysis in various domains. Although processing power has scaled up as well, it is well known that the rate of increase of data far supersedes the higher processing capabilities of modern processors. The natural consequence to the advent of big data was distribution of data across multiple nodes to facilitate not only storage but also parallel processing. The advent of the age of large volumes of data came to be known as the era of big data. The distribution of data among various machines posed a fundamental problem in big data as well as distributed computing: The impact of data skew. We worked on a project to profile data skew on a multi-computing cluster. This paper summarizes our efforts and findings. We use HPCC Systems, a modern big data management and analysis tool. In this project, we analyze the impact of differently skewed data distributions on the most common database operations, namely, <strong>NORMALIZE</strong>, <strong>DENORMALIZE</strong>, <strong>JOIN</strong>, <strong>SORT</strong>, <strong>TABLE</strong>, and <strong>PROJECT</strong> using a set of queries, and analyzing their runtimes.</td>
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<td><strong>Reapproaching the Analysis of Air Quality at Concordia with Watson Analytics</strong></td>
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<td>Jack Wang, Nicholas Ho, Peter Tong, Joel Klammer</td>
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<td><strong>Presenter:</strong> Jack Wang, Concordia International School Shanghai, China</td>
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<td><strong>Abstract:</strong> The work environment in which a student works contributes significantly to their learning. An example of such could be high levels of carbon dioxide in the classrooms, which correlates with students’ attention and drowsiness. One unexpected correlation is, when using in-house built sensors within the Concordia Shanghai campus, the air quality index (AQI) is inversely correlated to the carbon dioxide levels. As Concordia Shanghai aims to improve student learning environment, the need for better air quality monitoring becomes more important. A big data analytics project was developed to monitor air quality and environmental factors within the Concordia Shanghai campus. Sensors were built to record particulate matter...</td>
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(PM) air quality (PM 2.5, PM10, PM100), temperature, humidity, carbon dioxide, light, and volatile organic compounds. The dataset was then analyzed using Watson Analytics. This project is a continuation of work that was carried out by previous students, which has now been expanded to 50 sensor units for greater data collection around the campus, collecting 14,400 data points daily. New trends were realized by analyzing the data that has been amassed over the past years. Particulate matter concentrations were discovered to increase from August to November, before decreasing from December to July, following the pattern of the seasons. Carbon dioxide levels didn’t show any variations to particulate matter, remaining between 400-500 ppm throughout the year. More discoveries were found which include July has by far the lowest concentrations of carbon dioxide and PM, as well as how humidity and PM 2.5 show an inverse correlation. More trends and findings will present themselves as more on going data are being collected. New analytics methods like heat mapping and 3D visualizations are being considered to further investigate the environment for this learning community.

### AM0062
15:15-15:30

Analyzing Air Quality of Urban Cities in Korea and Vietnam
Hae Rin No, Quynh Anh Kelly Bui Huy and Neil Whitehead
Presenter: Hae Rin No, Quynh Anh Kelly Bui Huy and Neil Whitehead, Concordia International School Hanoi, Vietnam

Abstract: In recent years, environmental problems such as climate change and pollution are affecting people’s daily lives all over the globe. Acknowledging this umbrella environmental dilemma, this project aims to (1) identify some factors that influence air quality, (2) find the insights with other social and health-related variables, (3) raise awareness with statistical evidence, and (4) find good replicable preventive solutions for other countries who suffer air pollution. This project investigates the trend of air quality—air quality index (AQI), particulate matter 2.5 (PM2.5), and particulate matter 10 (PM10)—from 2015 to 2018 in Asia, specifically in Vietnam and Korea, using Watson Analytics and data-driven methods. This study uses over 40 million data points (not limited to AQI and particulate matters) coming from various different sources including governmental official data, private NGOs, and the US embassy. One of the key results of this project is a clear relationship between PM2.5 and average humidity in Korea. Another key result includes the discovery of similar pattern in the correlations between AQI and the following time variable: yearly, quarterly, monthly, and daily.

### AM0013-A
15:30-15:45

Flight Delays: Big Data with Watson Analytics on Airports in New York
Timothy Fuller and Peter Tong
Presenter: Timothy Benjamin Fuller, Concordia International School Shanghai, China

Abstract: Flight delays are a common problem that affect thousands of travelers every year. Seemingly random and completely unconnected, travelers have no way of minimizing their chances of encountering a delay. But with the use of Big Data Analytics, one can shine an entirely new light on flight delays, analyzing many flights and factors simultaneously to find connection between
different factors and flight delays, in order to minimize the risk of flight delays. This study investigates multiple different flight factors, from airport of origin, time of day, and airline, to find what factors affect departure delays. Kaggle.com was used to obtain comprehensive domestic flight data from John F. Kennedy, Newark (JFK), and LaGuardia International (LGA) Airports in New York City, US, from January through March of 2014. This data set of 100,000+ unique flights includes information on destinations, delays, origins, dates, distances, and other variables. Average departure delay values were compared to multiple factors, including the date of the flight, the carrier, and the time of day. Watson Analytics was then used to analyze the data in order to find insights on how different factors relate to flight delays. Interestingly enough, Watson Analytics found no one factor that will affect departure delay; however, nearly all factors showed trends between departure delay and certain regions of their domains. For example, it was discovered that average departure delay is the highest between the hours of 01:00 and 04:00, and that US Airways had one of the lowest average delays of any airline. This research could be immensely useful to many fields, from marketing divisions in airlines who can publish their airlines’ low delays to passengers and business travelers who could most efficiently book flights in order to minimize the risk of delay. With more comprehensive data, this information could be used to create an extensive model to predict the likelihood of delay.

Pneumonia and Septicemia Trends with Watson Analytics
Vanessa Whitehead, Angie Cheng, Neil Whitehead, Mattias Larsson, Le Thi Thanh
Presenter: Vanessa Lynn Whitehead, Concordia International School Hanoi, Vietnam

Abstract: Pneumonia and sepsis are two prevalent diseases in Southeast Asia. Pneumonia is a respiratory disease which is often caused by bacteria, viruses, or fungi. The bacteria then inflames air sacs in the lungs, known as alveoli, and blocks the interstitial space with fluid or pus, leading to breathing difficulties. Sepsis is a potentially life-threatening condition caused by the body's response to an infection. This study analyzes over 900 pneumonia entries and over 450 sepsis entries from hospitals in Vietnam, collected by a research team from the Karolinska Institutet, one of the world's leading medical universities. Analysis results exhibited that recovery rates were associated with gender and the month that patients were admitted into the hospital. They also indicated a seasonal trend of pneumonia cases, in which the disease peaked when season changes approached. Finally, this study reveals relationships between the duration in days in which patients stay in the hospital and their health insurance status, age, gender, occupation, and diagnoses. The goal of this paper is to reveal patterns and biases in medical treatment so that doctors and hospitals may improve their overall service. The findings in the data provide an overview of the distribution of pneumonia and sepsis cases in Vietnam. Additionally, these findings may be useful in assisting healthcare organizations to formulate prevention methods and maximize efficiency in staff and material management.
Using First Language (L1) In Learning English (L2)  
Shahinaz Abdulhafiz  
Presenter: Shahinaz Abdulhafiz, University of Hull, UK

Abstract: Research on foreign language teaching has taken into accounts the vital rule of teachers’ beliefs and its powerful impact on their classroom practices. On the other hand, using students’ mother tongue has been a controversial issue for decades among language researchers and educators. Actually, most studies cited in the present literature have been published in identifying the most common situations that are useful and necessary for using students’ first language in learning a foreign language. However, few studies have been interested in exploring teachers’ cognitive sights regarding this language issue. Consequently, mainstream educational research has shed light on the importance of investigating teachers’ beliefs and proven that this cognitive mental construct strongly shape and guide their classroom decisions which ultimately impact their teaching practices. This study aims to investigate teachers’ beliefs and to explore factors that guide teachers’ classroom decisions and practices regarding using students’ first language in the context of Saudi Arabia where English is taught as a foreign language. Understanding teachers’ mental lives in relevant to their classroom practices requires considering several factors that might have a great influence on conceptualising their instructional process; such these factors are teachers’ prior learning and teaching experiences, and contextual aspects including classroom practices (Borg, 2003). Accordingly, the study focuses on the educational principles, learning and teaching background that teachers have been experienced through their professional lives. To achieve that, qualitative method of research has been employed to collect necessary data by using three different instruments; Autobiographies (narrative inquiries), Semi-structured Interviews, and focus-groups.
A Comparative Analysis of Preservice Science Teachers’ College Achievement
John K. Hicks and Edwin P. Christmann
Presenter: Edwin P. Christmann, Slippery Rock University, USA

Abstract: This study employed a multiple regression analysis to examine the relationship between aptitude and achievement factors that predict preservice science teacher’s college achievement. Subsequently, correlations and descriptive statistics for preservice science teachers are computed among 15 undergraduate students enrolled as preservice science teachers. A comparison of SAT - Critical Reading Scores (Verbal), SAT - Quantitative Section (Mathematics), High School Grade Point Average, and College Grade Point Average found significant relationships. Of greatest interest is that the mean high school GPA obtained by the preservice science majors is a 3.55 (SD = .38) and the mean college GPA is 3.08 (SD = .57), which resulted in the highest correlation, r = .528, n = 15, p <.05.

Programming Practice Using Scratch for Each Grade of Elementary School
Kazunori Yamamori
Presenter: Kazunori Yamamori, Mie University, Japan

Abstract: A method of teaching programming at elementary school is required. Scratch can easily practice the programming. This paper presents teaching materials by grade level using Scratch. For first graders, it is a teaching material for exercises of mouse operation. For second graders, it is a teaching material for exercises of keyboard operation. Third graders perform typing operations in Roman or English. Fourth graders create a program that tackles sequential processing. Fifth graders create a program that involves iterative processing. Sixth graders create a program that involves conditional branches and iterations. Each is combined with many subjects of art, music, national language and arithmetic. These materials were used in classroom practice with many teaching assistants. It is designed to be performed in 45 minutes. This paper also presents the results of classroom practice using these materials.

Construction, Visualization and Application of Knowledge Graph of Computer Science Major
Yu Li, Jingjing Zhao, Liping Yang and Yong Zhang
Presenter: Yu Li, Central China Normal University, China

Abstract: To make full use of specialized vocabulary in computer science and discover relationships among these words, a Chinese knowledge graph of computer science major is constructed based on the internet web pages, and then the knowledge graph visualization and application for learning guidance based on it are developed. For the construction of computer science knowledge graph, a small amount of important specialized words in computer science are collected manually, and then these words are extended based on Baidu Baike (baike.baidu.com). Thus we get about 3000 specialized words (called entries). The similarity between two entries is calculated based on the Normalized Google Distance (NGD). Once the similarity is greater than a setting value, a link between the two entries is created. Finally the knowledge graph is constructed by
these words and links between them. Here the relation type of link is ignored for simplicity. Furthermore the graph visualization is implemented by a tool called sigma.js, and an application for learning guidance is developed by J2EE. Through the application, students can get a visualized overview of computer science major and make a learning plan efficiently. Moreover the application and method of knowledge graph construction can be applied for other majors easily.

The Need for Big Data Analytics in Elementary Education
Peter Tong, Craig Gingerich, Lori Gingerich and Michelle Wee
Presenter: Craig Gingerich, Lori Gingerich and Michelle Wee, The American School of Doha, USA

Abstract: Big data continues to explode and in an effort to keep up with the mountains of data, institutions have increased course offerings to meet this ever-rising demand. Over the last 5 years, higher education has increased their course offerings in data analytics and computer science. Massive Open Online Courses (MOOG) have also attempted to fill this void. Recently, K-12 institutions have taken notice of this phenomena. Education is a pipeline process; how can educators better prepare students for higher data analytics education? Concordia International School Shanghai pioneered the applied learning course Big Data Analytics for high school in 2014. In 2016, a middle school Big Data Analytics course was developed and taught as an elective, while the high school Big Data Analytics was also delivered via e-learning to Concordia International School Hanoi to kickstart their Big Data Analytics program. The vision was to develop a Big Data Analytics program for K-12 education that would span all divisions - Elementary, Middle, and High. Both the high school and middle school big data analytics programs have been successfully developed and taught.

Moving down the education pipeline and to support the data analytics program at Concordia Shanghai and beyond its walls, a pilot program was carried out on how to deliver Big Data Analytics to the Elementary School in 2018 - both at Concordia International School Shanghai and the American School of Doha. It is important for elementary students to become data literate of the data information, analytics, and in the beauty in numbers for them to gain an appreciation of what data information can tell us. This presentation will describe how analytics can be introduced to third and fourth grade students as an after-school co-curricular activity and the challenges encountered in delivering analytics to younger minds. In this presentation, we will discuss the activities used to engage elementary students in how to collect data using electronic devices and sensors, how to perform simple data wrangling and how to present their findings (analytics). This co-curricular activity also incorporates other areas of education such blended learning, information and communications technology in education, and the power of storytelling using a video discussion platform and digital creative tools such as Flipgrid and Seesaw. Join this session to better understand the important need to expose young minds to data analytics as a critical communication skill. It is the presenters’ hope that participants will also walk away with software ideas, technology options, and have a basic understanding of how to replicate a similar program at any schools.
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<td>CM2016</td>
<td>Research on Curriculum Reform of Industrial Training Center Based on PDCA Cycle</td>
<td>Yige Zhu, Xiqin Geng and Qing Zhang</td>
<td>Xiqin Geng, Nanjing University of Aeronautics and Astronautics, China</td>
<td>Because of the rapid development of the modern society, the demand for the high educated students is becoming more and more urgent. At the same time, these graduates are also requested to have higher levels to suit the working conditions. Industrial Training is one of the most important series courses and play an irreplaceable role in cultivating compound talents. This paper use PDCA to discuss the course system of the Industrial Training Center in NUAA. With the use of PDCA, we redesign a new system for the whole center. When designing the new system, SOP and BSC are also used to full the whole system. It will provide a new way to the development of the Industrial Training Center.</td>
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<td>AM0033</td>
<td>Designing Customisable Data Science Curriculum Using Ontology for Data Science Competences and Body of Knowledge</td>
<td>Yuri Demchenko, Luca Commiiniello and Gianluca Reali</td>
<td>Yuri Demchenko, University of Amsterdam, Netherlands</td>
<td>Importance of Data Science education and training is growing with the emergence of data driven technologies and organisational culture that intend to derive actionable value for improving research process or enterprise business using variety of enterprise data and widely available open and social media data. Modern data driven research and industry require new types of specialists that are capable to support all stages of the data lifecycle from data production and input to data processing and actionable results delivery, visualisation and reporting, which can be jointly defined as the Data Science professions family. The education and training of Data Scientists requires multi-disciplinary approach combining wide view of the Data Science and Analytics foundation with deep practical knowledge in domain specific areas. In modern conditions with the fast technology change and strong skills demand, the Data Science education and training should be customizable and delivered in multiple form, also providing sufficient data labs facilities for practical training. This paper discusses approach to building customizable Data Science curriculum for different types of learners based on using the ontology of the EDISON Data Science Framework (EDSF) developed in the EU funded Project EDISON and widely used by universities and professional training organisations.</td>
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| CM3027-A | Effects of Blended Learning and Visual-Based Methods of Teaching on Academic Performance of Distance Learning Students in Osun State, Nigeria | H. F. Adepoju | H. F. Adepoju, Federal College of Education, Nigeria | This study examined the effects of blended learning and visual-based methods of teaching on the academic achievement of distance learning students in Osun State, Nigeria. Moderating effect of gender on academic achievement was also determined. The pretest-posttest control group quasi experimental
design of 3x2x2 factorial matrix was adopted for the study. Three study centers were purposively selected and constituted into groups, two experimental (blended learning, and visual-based) and a control group (conventional lecture method). Twenty-five (25) students from each center were randomly selected making a total of seventy-five (75). Participants were mostly female (59%). The instruments used for data collection included Learning Materials and Academic Achievement Test (LMAAT) while the period of evaluation lasted eight weeks. The reliability co-efficient of the instrument obtained from test-retest method and cronbach alpha value was 0.82. Quantitative data were analysed using descriptive statistics and Analysis of Covariance (ANCOVA) at 0.05 level of significance. The result showed significant main effect in the performance of the two experimental groups (Blended Learning and Visual-based learning) over the control group with the visual-based learning method gaining upper hand whereas there was no significant main interaction effect of treatment and gender on the performance of male and female students. By implication, the academic performance of students was improved when they are taught with blended learning and visual-based learning methods. Therefore, facilitators in study centers should be encouraged to incorporate the two learning methods to teach students undergoing distance learning programmes.

Study on Data Analysis of Assessment in Class Based on Students' Evaluation of Teaching
Feng Tai, Youwei Cui, Wei Liu and Zhenquan Li
Presenter: Feng Tai, Beijing University of Technology, China

Abstract:
Nowadays, students' evaluation of teaching is usually used to assess teaching quality in class based on taking students as center in university. The effect of assessment indicators and setup of system in students' evaluation of teaching on the results of course evaluation is researched continuously in Beijing University of Technology (BJUT). The influence of optimization of the assessment indicators in students' evaluation of teaching on the results of students' evaluation is researched in this paper. The results indicated that the results in students' evaluation of teaching have tendency to be reasonable and follow normal distribution according to optimization of assessment indicators and restriction of excellent rate in students' evaluation of teaching system. Besides, students can rationally analyze and assess teaching effect of courses which they study after considering teaching quality of all courses in whole semester, and present definitely main problem of teaching.

Factors Affecting Achievement Motivation For The Student’s Graduation in Master of Education Program In Educational Administration
Sopana Sudsomboon
Presenter: Sopana Sudsomboon, Sukhothai Thammathirat Open University, Thailand

Abstract: The purposes of this research were (1) to find out the selected factors of the achievement motivation for the students’ graduation in master education program, educational administration, (2) to study factors affecting the
achievement motivation for the students’ graduation in the master education program, educational administration; and (3) to construct the regression equation for the achievement motivation prediction for the students’ graduation in the master education program, educational administration. 72 students in the educational administrative program were selected as the samples by random sampling method. The employed research instrument was the rating-scale questionnaire. The data was analyzed by using frequency, percentage, mean, standard deviation, Pearson’s product - moment correlation coefficient, and stepwise multiple regression analysis. The research findings were as follows: (1) the overall rating means of all factors were rated at a high level; (2) the overall of the achievement motivation for the students’ graduation in the master education program, educational administration was at a high level; and (3) the only two factors significantly affecting the achievement motivation for the students’ graduation were the learner (X1) and the learning environment (X2). Both factors together could explain the variance of the achievement motivation for the students’ graduation by 75.6%.
### Session III

**Theme:** Information Technology and Big Data Applications  

**Time:** 16:00-17:30  

**Venue:** QA075 Classroom  

**Session Chair:** Prof. Joy Kutaka-Kennedy  

**Affiliations:** National University, USA  

*Please arrive at conference room 15 minutes earlier so that authors are able to make the presentation on time.*  

**There will be a session group photo part at the end of each session.**  

**The best presentation will be selected by session chair and awarded at the end of each session.**

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| AM0020 16:00-16:15 | Robust and Invisible Image Watermarking for Presentation Slides in E-Learning | Piyanart Chotikawanid and Thumrongrat Amornraksa  
                  Presenter: Thumrongrat Amornraksa, King Mongkut’s University of Technology Thonburi (KMUTT), Thailand |
| AM0041 16:15-16:30 | Application of a Scaled MNIST Dataset Blended with Natural Scene Background on ResNet | Alexander Marinov, Nhamo Mtetwa, Hadi Larijani  
                   Presenter: Alexander Marinov, GCU and MGCA Ltd, UK |

**Abstract:** Problem of copyright infringement on presentation slides available online continued to increase over the next few years. Digital image watermarking is developed and used to discourage people from violating copyrighted contents in presentation slides. This paper presents a robust and invisible image watermarking method particularly developed for presentation slide in e-learning. By considering the entire area of presentation slide as a color image, the reflectance component from its blue color channel was extracted and used to carry the watermark. The watermark extraction is blindly achieved by predicting the original reflectance component from the guided image filter, and subtracting the result from the watermarked component. The performance of our proposed watermarking method in terms of wPSNR and BCR is evaluated, and compared with the two previous methods. Improved performance in terms of robustness against various attacks was also evaluated and shown.

**Abstract:** Deep learning (DL) has gained a lot of popularity in the science and business community. It has been successful in a range of applications, especially in computer vision. This paper presents results from applying scaled MNIST images dataset to a popular implementation of deep learning called ResNet. This is a valuable contribution because in general convolutional networks are not scale invariant. Our objective is to explore the behavior of a residual neural network when trained and evaluated using three different datasets of scaled MNIST images.
Big Data and Higher Vocational and Technical Education: Green Food and Its Industry Orientation
Jian Li, Qiang Yang and Xiaohui Zou
Presenter: Jian Li, Sichuan Technology & Business College, China

Abstract: This paper aims to focus on a series of issues related to green food and its industry orientation through big data and higher vocational and technical education technologies. The method consists of three steps: the first step is to lock in the research objectives, namely: a series of problems in green food and its industry orientation; the second step is to distinguish three types of problems, namely: the first category is a large probability event, the predictable problem is directly solved by machine learning; the second category is a small probability event, which relies solely on machine automatic processing or batch processing can't solve problems, using a variety of human-computer interaction methods to deal with; the third category is cases and very special exceptions, usually only rely on the corresponding human experts to find the ways, and then, through the knowledge acquisition path to develop a dedicated artificial intelligence system. The third step is to incorporate them into the actual classroom teaching practice, or find the special daily life circle, it can be artificially set, even virtual, and tested in various application environments. The result is: through the teachers and students to continue to explore a series of issues related to green food and its industry forming the characteristics of big data and higher vocational and technical education technology. The significance is that is, a series of results of the research of the smart system can be directly used to study a series of problems focusing on green food and its industrial orientation.

Studying user satisfaction with the MOOC platform interfaces using the example of Coursera and Open Education platforms
Olga Korableva, Thomas Durand, Olga Kalimullina and Irina Stepanova
Presenter: Olga Kalimullina, The Bonch-Bruevich Saint-Petersburg State University of Telecommunications, Russian Federation

Abstract: The advantages of online courses over traditional education lie in the availability of individual training programs, but now the problem of involving and keeping students on the course is urgent for MOOC. Thus, despite the fact that test results on the reasons for unsuccessful completion of online courses by students are different, one of the identified factors was the interface design, while the problem of the influence of the interface on users is not adequately studied. In the present paper, a methodology for studying two different MOOC online platforms was developed, in order to identify factors that are more favorable for user convenience, as well as to identify the best design solutions. A comparative analysis of two MOOC platforms (Coursera and Open Education) made it possible to identify the best behavioral patterns and understand which details of the design of the online platform should be paid attention to and which should not. After carrying out a theoretical analysis and forming the methodology of work, as well as performing an experiment, recommendations were formulated for the development of the user interface of the Open Education platform.
| AM0047 17:00-17:15 | Big Data and Higher Vocational and Technical Education: Green Tourism Curriculum  
Qiang Yang, Jian Li and Xiaohui Zou  
Presenter: Qiang Yang, Sichuan Technology & Business College, China  
Abstract: This paper aims to explore the road to innovation in big data and higher vocational and technical education with the green tourism curriculum as an example. The method is as follows: first, introducing a statistical-based machine learning method to deal with large probability events, secondly, introducing a human-computer interaction interface technology to deal with small probability events, and third, introducing an expert knowledge acquisition technique to deal with special exceptions. It is characterized by a combination of three approaches, focusing on the interdisciplinary, cross-domain and cross-industry smart system construction, and converging to the knowledge module of the green tourism curriculum. The result is: not only highlights the comprehensive innovative concept of the green tourism curriculum, but also forms a smart guide system that combines personalization and standardization, through conceptual maps, knowledge graphs and methodological tools that express scientific principles, combined with typical examples and representative figures and featured scenic spots, and a new paradigm for computer-assisted instruction. The significance lies in: not only is it conducive to the creation of quality courses, but it is also beneficial to the teachers and students to theoretically and practically carry out the characteristics of the green tourism curriculum, namely: a series of problems, difficulties and pain points for international and domestic tourism, forming a reasonable division of labor is necessary to further develop the green tourism curriculum and its supporting smart systems of interpersonal, human-machine, inter-machine, and machine-to-person. |
| AM0063 17:15-17:30 | Design and Development of Tailoring Management System Software Application for SMEs in Pakistan  
Noshaba Manarvi  
Presenter: Noshaba Manarvi, Virtual University of Pakistan, Kingdom of Saudi Arabia  
Abstract: A large number of tailoring shops in Pakistan may be considered as Small and Medium Enterprises (SMEs) due to their number of employees and annual turnover. Although these may have a lot of customers interacting with them on daily basis for different designs of clothing; the tailors need to maintain their records mostly in hard copy registers and note books. It is mostly because they may not have the ability to purchase expensive software for their management systems due to limitations of cost and expenses involved to purchase and maintain such systems. This research was conducted as a part of final year project of undergraduate degree course. In this research, user requirements for customers, tailoring shop employees and administrator for a typical tailoring organization were identified. Then researchers designed a suitable process model, developed case diagram to show functionality, prepared business rule catalogue, made architectural design, team structures, project schedule, sequence diagrams, logical models/class diagram, entity relationship diagram, database and user interfaces using php language for developing the software code. Finally; the |
software application was executed and demonstrated to customers, tailors and admin for suitability. This application is expected to assist the customers for online submission of their orders based on designs shown on the website, as well as tailors to be able to keep complete record of orders including measurements of customers for future use as well. Administrator’s features are were also added to fix any errors or problems as well as generate reports based on weekly, monthly or annual frequency as required by the management.
**Session IV**

**Theme:** Business Management and Educational Innovation

**Time:** 16:00-17:30

**Venue:** QA039 Classroom

**Session Chair:** Prof. Jinwei Zhu

**Affiliations:** Jiangnan University, China

*Please arrive at conference room 15 minutes earlier so that authors are able to make the presentation on time.

**There will be a session group photo part at the end of each session.

***The best presentation will be selected by session chair and awarded at the end of each session.

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<tr>
<th>Session</th>
<th>Title</th>
<th>Presenter</th>
<th>Affiliation</th>
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<tr>
<td>CM2009</td>
<td>Research on the Path of Returnees’ Social Capital on New Venture Performance</td>
<td>Jinwei Zhu and Yejing Wang</td>
<td>Jiangnan University, China</td>
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<tr>
<td>16:00-16:15</td>
<td>Abstract: Building on the resource-based view and integrated perspective, this research examines the relationship between returnees’ social capital and new venture performance, offers rationale and evidences of the role of entrepreneurship and entrepreneurial opportunity in mediating influence of social capital on new venture performance. Data were collected from 226 Chinese returnee entrepreneurs, using structural equation modeling to assess the relationships among the variables. Examination of 120 new ventures in China reveals that returnees’ social capital has no direct effect on the new venture performance, entrepreneurship and entrepreneurial opportunity play a role in mediating the association between social capital and new venture performance. The implications of these relationships for theory and practice are discussed.</td>
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<td>CM3014</td>
<td>Herd Behaviour in India: An Anecdote from the Indian Banking Sector</td>
<td>Bharti and Ashish Kumar</td>
<td>Guru Gobind Singh Indraprastha University, India</td>
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<tr>
<td>16:15-16:30</td>
<td>Abstract: The recent busts and booms in the financial markets reinforce the thought that investors are normal and not always rational in making investment choices. Their behaviour plays a major role in guiding the stock picking pattern. Our study investigates herd behaviour in the banking sector stocks trading in the Indian equity market. Employing the methodology of cross sectional absolute deviation and using quantile regression estimate on daily data for the period April 02, 2012 to March 31, 2017, we find significant evidence of herding in the overall market. The study also concludes that herd behaviour is asymmetric in nature and more pronounced during rising market movements for higher quantiles. Our study does not conclude any significant herding during extreme market movements. The findings of the paper have a noteworthy implications for the portfolio managers, policy makers and regulators.</td>
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<td>CM2015</td>
<td>The Decision Research of Fresh Agricultural Products Supply Chain Based on Contracts of Sharing Fresh-Keeping Cost and Profits</td>
<td>Qiuyu Zhang and Qing Zhang</td>
<td>Qing Zhang, Nanjing University of Astronautics and Aeronautics, China</td>
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<td>CM3013</td>
<td>Factors causing and Countermeasures study of Employee Turnover in A Research Institute</td>
<td>Congying Wang, Xue Gao, and Daqian He</td>
<td>Congying Wang, China Ship Development and Design Center, China</td>
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<tr>
<td>CM3022</td>
<td>Packaging Government Ideas to Achieve Citizen Satisfaction and Loyalty: Creating, Informing, and Supporting</td>
<td>Nicos Antoniades</td>
<td>Nicos Antoniades, The City University of New York, USA</td>
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analysis, the study examines the relationship between specific factors (i.e., creating an idea, informing citizens about the idea, and supporting the idea) and citizen satisfaction and loyalty. Data were collected from one hundred and ten U.S. registered voters. According to the results, "Creating" an idea, "Informing" citizens about the idea, and "Supporting" the idea (CIS Model), have a statistical strong positive effect on citizen satisfaction and loyalty. Several implications can be drawn from this study's findings and interesting directions for future research are provided.

Alternatives for Research Valorization: A Case Study for the ROMIMAG Project
Ciocoiu Eugenia, Madalina Dan, Alin Mihaila and Emil Crisan
Presenter: Ciocoiu Eugenia, Babes-Bolyai University, Romania

Abstract: The valorization of research results is a major challenge for both researchers and organizations, especially in the context of projects that do not create new products, technologies or other tangible results. This can lead to low rates of results usage and even low return on investment for these projects. The intention of this paper is to propose alternatives for research results valorization of the ROMIMAG project. The project main goal is to analyze the Romanian imaginary, so implicitly it is a project that will deliver intangible research results. These proposals are made considering multiple elements: research results nature, its activities peculiarities, its stakeholders’ categories, traditional valorization strategies presented in literature, the Romanian scientific research context, and the current valorization strategy of the project. This case study concludes that the best alternatives for diversifying ROMIMAG valorization strategy are to perform promotion activities that target the general public and to enlarge the current classical promotion strategy by including alternate modern promotion strategies.
**Session V**

**Theme:** Big Data and Education

**Time:** 13:30-15:00

**Venue:** QA063 Classroom

**Session Chair:** Prof. Luiz Moutinho

**Affiliations:** University of Suffolk, England

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<th>AM0003</th>
<th>13:30-13:45</th>
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| New Approach of Big Data and Education: Any Term Must Be in the Characters Chessboard as a Super Matrix  
Xiaohui Zou, Shunpeng Zou and Xiaoqun Wang  
Presenter: Xiaohui Zou, Sino-American Searle Research Center, China |

Abstract: The purpose of this paper is to introduce a new approach that must cover all the terms. Therefore, people's educational process is like making a variety of choices in a super-chessboard of language or a matrix composed of words formally. The method of redemption is: First, construct the chessboard, and then, through human-computer interaction and collaboration, generate massive amounts of big data, including various terms representing knowledge, and finally, through machine learning and man-machine interactive to analyze, compare, and query or reuse any of these terms. The result: an accurate query of terms, which can be automatically queried in multiple ways through bilingual or multi-lingual converters. The significance is that the method and its results can be used not only for machine-assisted instruction in the network environment, but also for machine-assisted intelligent text analysis and knowledge module finishing in the network environment, thus opening up view of big data and education. The new approach, because any term must be in the word matrix, each user and its agents query them very accurately and efficiently.

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<th>AM0009</th>
<th>13:45-14:00</th>
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| Implementation Practice of Big Data technology in a sharing economy  
Aleksandr Z. Koberidze  
Presenter: Aleksandr Z. Koberidze, Peoples’ Friendship University of Russia (RUDN University), Russia |

Abstract: This article attempts to uncover the main reasons for the need to implement and use Big Data for the effective functioning of an enterprise in the conditions of the sharing economy. As a key evidence that Big Data is a necessary element of the sharing economy, a comparative analysis of traditional and large databases are used. As a research task, an attempt was made to assess the scope, level of use and results of the implementation of Big Data in companies belonging to various market areas. In conclusion, all the advantages are revealed with which, in the context of the new economic paradigm, Big Data allows companies to respond quickly to user requests in the virtual space.
### Spillover Effect of Coordinated Development of Intellectual Capital in Technology Incubation Industry on Regional Innovation

**Ying Tian and Zengrui Tian**  
**Presenter:** Ying Tian, Donghua University, China

Technology incubation industry (TII) is vital for the innovation and entrepreneurship of start-up enterprises. Intellectual capital becomes an important source of knowledge in the era of knowledge economy. Regional innovation has become an important impetus to concentrate regional resources, carry out innovation and entrepreneurship activities, and promote regional economy. Consequently, based on the duality theory, we divide the technology incubation innovation system into three parts: intellectual capital resource subsystem, incubator innovation performance subsystem and maker innovation performance subsystem. Then, based on the coordination degree model, we measure the degree of coordination development of TII in 31 provinces in China from 2009 to 2016 and reveal the characteristics of spatial and temporal differentiation. Besides, we establish the dynamic spatial Durbin model to explore the influencing factors of regional innovation and the direct and spatial spillover effects of TII on regional innovation. The results show that: (1) The degree of coordination development of TII and government support have a significant positive effect on regional innovation. Regional innovation is positively affected by its previous performance and negatively affected by the previous performance of neighboring regions. (2) The long-term effect of the coordination degree is less than the short-term effect. (3) The government supports has the negative regulation effect between The degree of coordination development of TII and regional innovation. Based on the above conclusions, we put forward to some industrial policies and development suggestions.

### Research on the Mechanism of Non-R&D Innovation Activities of Creative Enterprises on the Performance of Cooperative Innovation: The Mediating Effect of Industrial Cluster Relational Embeddedness

**Yue Zhang**  
**Presenter:** Yue Zhang, Donghua University, China

Abstract: Creative enterprises focus on Content and Creativity, their innovative development model has become the focus attention of the government and academia. Based on the theory of cooperative innovation and relational embeddedness, this study incorporates the industrial cluster relational embeddedness into the relationship model of creative enterprises’ non-R&D innovation and cooperative innovation performance. Then, we use structural equation model to do confirmatory factors analysis and intermediary effects. As a result, the technology introduction, creative design and creative learning of creative enterprises have a positive impact on the performance of cooperative innovation; the relationship between business and political levels of industrial clusters relationship plays a mediating role; specifically, the intermediary effect of the relationship between business level of industrial clusters on non-R&D innovation activities and cooperative innovation is more significant. The findings of this study provide theoretical reference and practical contribution for guiding creative enterprises to better carry out specific non-R&D innovation activities.
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<tr>
<td>Inclusion of Student with Disabilities within Higher Education in Kuwait: Issues and Challenges</td>
<td>Abstract: There has been a growing international interest in involving the State of Kuwait in supporting the learning of disabled students in higher education, supported by the ratification of the UN Conventions on the Right of Persons with Disabilities. However, an extensive review of the literature indicated that there have been few studies that investigate the current state of inclusion students with disabilities in the Higher Education Sector in Kuwait. Lack of research hinder the development of inclusion policy and practice within the Higher Education sector. Therefore, the main aim of this study was to investigate issues and challenges related to inclusion of student with disabilities in Higher Education. Descriptive and analytical approach was used to analyze data of 52 students from College of Basic Education. The questionnaire was the main method that contained three main sections. The items are distributed among the following six domains: Academic and educational domain - Administrative services domain - Admission policy and labor market access domain - social and recreational domain - psychological domain - physical environmental domain. Based on the findings of the current study, the researcher recommended considering students with disabilities needs in all developmental aspects and policy planning including physical environment adaptation, academic, teaching, learning and assessment accommodations and admissions policy, as well as raising awareness among all institutional staff of the needs of students with disabilities.</td>
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<td>Internet Usage Patterns Mining from Firewall Event Logs</td>
<td>Abstract: Understanding users' behavior of internet usage is essential for the quality of service (QoS) analysis on the internet. If the internet providers can better understand their users, they may be able to provide better service, and also enhance the quality of the service. In general, the information about users' behavior is stored as the internet access log files, called event logs, on the server. To have the patterns of users' behavior from the event logs, this work aims to extract an interesting pattern of inappropriate user behaviors through the method of internet usage patterns mining. The primary mechanism of the proposed method is the Generalized Sequential Pattern (GSP) algorithm, which is an algorithm of sequential pattern mining. This study uses real event logs from an organization in Thailand. The results have identified exciting findings that have made possible to propose some improvements and increasing the QoS of the internet service.</td>
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Session VI

Theme: Business Management and Education

Time: 15:00-16:30

Venue: QA063 Classroom

Session Chair: Prof. Luiz Moutinho

Affiliations: University of Suffolk, England

Session Chair: Asst. Prof. Ana Luísa Rodrigues

Affiliations: University of Lisbon, Portugal

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<th>Session Item</th>
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<tr>
<td>CM3020-A</td>
<td>Modelling Tech Citizens: New Education Model in New Educational Set</td>
<td>A.M. Pérez-Cabello</td>
<td>This work is partially part of a book chapter to be printed. It presents an innovative proposal based on technology and neuroscience. Being conscious of the potential of technology but also being aware of the non-profitable use made of it, a proposal is being set. This model combines the optimal use of digital resources and dynamic relational structures to enhance students’ motivation. This emerges not fully out of the cognitive improvement but mainly out of the metacognitive strategies and social skills considered. The implementation of the proposal has partially been proved in an experimental stage to better refine it. The real innovation would take place with the use of this innovative model in teacher training courses. As a result, not only would education community be beneficiary but the whole society since educational scope would be extended to professional facet through long-term strategies and skills. Subsequently, entrepreneurship would be enhanced. The application and management of digital and personal resources would help, on the one hand, in the detection of liabilities and needs in educational realm and, in the other, in the finding of solutions.</td>
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<td>CM3019</td>
<td>Research on Innovation and Entrepreneurship Talent Training Model for Application-oriented University under Perspective of Collaborative Innovation</td>
<td>Zhou Jixiang and Zhou Yuezhou</td>
<td>Under the new situation of mass entrepreneurship and innovation, actively constructing new model and new mechanism of collaborative innovation and conducting innovation and entrepreneurship education for universities are</td>
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important means and primary mission of model innovation of applied talent training. Synthesizing all the resources from government, enterprises and universities can provide new perspective for innovation and entrepreneurship talent training, and is also an effective way for training innovation and entrepreneurship talents under the new normal. This paper summarizes the dilemma and issues of conducting innovation and entrepreneurship education for application-oriented university, and analyzes the influence factors of undergraduate innovation and entrepreneurship education. Then, it establishes a collaborative education model connecting government, enterprises and education based on triple helix theory, and proposes the implement approaches of innovation and entrepreneurship talent training model for application-oriented university, such as the cultural development of innovation and entrepreneurship, constructing the whole process of education system and building multi-layer practical educational platform. All these approaches can provide intellectual support and talent guarantee for the transformation development of local economy structure.

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<tr>
<th>CM3021-A</th>
<th>Perspective and Prospective Views of E-Learning</th>
<th>15:30-15:45</th>
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<tr>
<td>A.M. Pérez-Cabello</td>
<td>Presenter: A.M. Pérez-Cabello, University of Seville, Spain</td>
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<td>Abstract: This presentation is partially part of an article to be printed. It tracks the history of e-learning and its influence on Education design. On the one hand, open access education is described; on the other, the implications of ubiquitous learning are traced especially regarding Higher Education. In both cases, the effects of technology on these kinds of learning are discussed. Benefits are stated as well as drawbacks. It is important to know these aspects so as to enhance education innovative models that really solve present problems. In this sense, we could really take advantage of technology capability to burst education and not necessarily virtual modality.</td>
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<th>CM2008-A</th>
<th>Active Teacher Training-A Model to Integrate Digital Technologies</th>
<th>15:45-16:00</th>
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<tr>
<td>Ana Luisa Rodrigues</td>
<td>Presenter: Ana Luisa Rodrigues, University of Lisbon, Portugal</td>
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<td>Abstract: The objective of this research was to identify the theoretical and practical bases that contribute to a model that will allow the implementation of an innovative teaching-learning model for the integration of digital technologies into teaching. This model of teacher training, based on identified pedagogical trends, was characterized by a flexible approach to the training process, including active training methods and strategies that encourage the acquisition of skills. This approach can also transfer skills to students which enable them to take responsibility for their own learning and creation of their own knowledge. The research method used was two-fold: i) action research in the development of training workshops in an in-service research training project and ii) a case study in a pre-service teacher training study in Portugal. It was found that the participating teachers were able to develop skills and integrate digital technologies in their own teaching-learning process and could change their teaching practices.</td>
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| CM2017 16:00-16:15 | When Can SMEs Diversify? A Study of Growth Stage Model Analysis  
Nia Kurniati Bachtiar  
Presenter: Nia Kurniati Bachtiar, Universitas Muhammadiyah Magelang, Indonesia | Abstract: Diversification is considered as one effective tool in expanding the business. However, different finding discovered in Small and Medium Enterprises (SMEs) where diversification is not the main priority even though it will help their growth. This qualitative study utilizes growth stage model as a framework to reveal in which stage SMEs can diversify. Hence, this paper aims to reveal the suitable stage where SMEs can diversify where the sample taken from SMEs in Java Island, Indonesia.  
The research discover that the opposite of Large Companies (LOs), diversification is not a powerful growth strategy for SMEs. Even though diversification is still a choice for SMEs, it cannot be done especially in the stage 1 (one) and 2 (two) of their growth. In explaining the diversification decision within SMEs, this article applies Threat, Opportunity, Weakness and Strength (TOWS) analysis to gain better understanding whether to diversify or not.  
Finally, this article provides proposed growth stage model to illustrate the most critical stage a business has to deal. |
| AM0016-A 16:15-16:30 | Air Quality of Urban Cities in Korea and Vietnam  
Quynh Anh Bui Huy and Hae Rin No  
Presenter: Quynh Anh Bui Huy and Hae Rin No, Concordia International School Hanoi, Vietnam | Abstract: In recent years, environmental problems such as climate change and pollution are affecting people’s daily lives all over the globe. Acknowledging this umbrella environmental dilemma, this project aims to (1) identify the factors that influence air quality, (2) find the insights with other social and health-related variables, (3) raise awareness with statistical evidence, and (4) find good replicable preventive solutions for other countries who suffer air pollution. This project investigates the trend of air quality—air quality index (AQI), particulate matter 2.5 (PM2.5), and particulate matter 10 (PM10)—from 2015 to 2018 in Asia, specifically in Vietnam and Korea, using Watson Analytics and data-driven methods.  
This study uses over 40 million data points (not limited to AQI and particulate matters) coming from various different sources including governmental official data, private NGOs, and the US embassy. One of the key results of this project is a clear relationship between PM2.5 and average humidity in Korea. Another key result includes the discovery of similar fluctuation patterns between AQI and yearly, quarterly, monthly, and daily temperatures. |
## POSTER SESSION

**Time: 13:30-17:30, March 31, 2019**

| AM0007 | The Connotation and Strategy of College Students' Behavior Analysis under the Background of Big Data  
Han Geng and Li Guang-yu  
Presenter: Han Geng, Beihang University, China  

Abstract: Big data, as a derivative of Internet technology, is now changing the way people living and knowing things. Using data mining technology to analyze the data of college students' learning and living behavior can get conclusions with rich guiding significance and educational connotation. This paper expounds the connotation and significance of student behavior analysis under the background of big data from three aspects of precise subsidy, academic assistance and mental health supervision, and discusses the strategies of student behavior analysis and student data mining. At last, taking Beihang Shoue College as an example, this paper studies the correlation between students' behavior and academic level, which is helpful to improve the framework of talent training system and promote the development of students' personalized talents. |
| AM0014 | Mining activity log data to predict student’s outcome in a course  
Rahila Umer, Teo Susnjak, Anuradha Mathrani and Suriadi Suriadi  
Presenter: Rahila Umer, Institute of Natural and Mathematical Science Massey University  
Auckland, New Zealand  

Abstract: Use of learning management system (LMS) is very common, which provide support to teaching staff for communication, delivery of resources and in design of learning activities. The wide spread use of technologies like LMS, provide large amount of data. Research shows that higher education institutes can make use of this data to extract data-driven insights to understand the learning process and benefit the students by supporting them in their academics. In this study we used several machine learning algorithms to predict student’s outcome in a course using LMS trace data and assessment scores. Selection of the courses is based on the extent the LMS is used and is divided into two categories; distance and internal. This study confirms the importance of LMS data and assessment scores in the prediction of academic performance. However, frequent use of LMS may increase the trace data but it is not necessary improve the predictive accuracy. Predictive models developed for courses, without considering the context of use of LMS data, may not generalize the effects of LMS trace data on student’s outcome in the course. |
| AM0040 | The Role and Task of Innovation and Entrepreneurship Teachers under the Background of Big Data  
Liu Yawei and Zhu Shiming  
Presenter: Liu Yawei, Tianjin University, China  

Abstract: In the process of promoting innovation and entrepreneurship education reform under the background of big data, the role and task of innovation and entrepreneurship teachers play an important role. However, there are some problems in innovation and entrepreneurship teachers, such as weak professional competence, lack of educational... |
synergy, weak information literacy and innovation ability, and emphasizing knowledge over methods. Innovation and entrepreneurship teachers should play the roles of "big" maker, "small" maker and guide. They should encourage every student to solve practical problems by means of big data and other information technology innovation, and provide targeted guidance for students.

**AM0044**

Data Acquisition and Processing of Breast Cancer Assisted Diagnosis Based on Ultrasound Imaging

Gu Yunchao
Presenter: Gu Yunchao, Beihang University, China

Abstract: Breast disease is a common disease in women, and the analysis and judgment of B-mode ultrasound images by doctors depend heavily on the operation experience and technical level of doctors. Computer image processing technologies such as natural image classification, target detection and semantic segmentation, represented by in-depth learning, have been relatively mature, and have been widely used successfully in automatic driving, security, finance and other fields. In this paper, through consultation and cooperation with medical institutions, a large mammary ultrasound image data set is constructed, which basically meets the needs of deep neural network training and validation testing. It is used to develop and validate algorithms for subsequent sub-tasks of ultrasound image analysis.

**AM0051**

A Probe into the Application of Big Data to Innovating the Education and Management of College Students

Yang Gu
Presenter: Yang Gu, University of Electronic Science and Technology of China, China

Abstract: The Application of Big Data brings considerable benefits to the resource integration of the management of college students, a boost in technical advantages of the education and management of college students and an improvement in time efficiency of the education and management of college students. This paper, based on the analysis of the application of existing big data, discusses the merits of the application of big data to the education and management of college students from fostering a sense of big data, diversifying working methods to innovating education and management mechanism.

**AM1005**

Research on the influence of Festival & special events on Zhuhai City brand

Zhu-Qing Xu, Zhi-Wu Huang, Yi-Qing Huang, Zi-Jun Zhang, Wei-Ling Zhang
Presenter: Zhu-Qing Xu, Beijing Institute of Technology, China

Abstract: In view of the influence of Festival & special events on City brands, this study takes local residents in Zhuhai as the survey object. Through questionnaire survey, 305 valid questionnaires were collected. The results show that the Zhuhai local residents’ cognition, attitude and Matching degree of Festival & special events (FSE) can positively promote their loyalty to City brand. Among them, the attitude of Festival & special events plays an intermediary role in the cognition of Festival & special events, the Matching degree between Festival & special events and city brand and the loyalty relationship of city brand.
| CM3024 | Combining the Cost Drivers Based on the Singular Value Decomposition of Matrix  
Xudanyang Li and Buxi Li  
Presenter: Xudanyang Li, Shanxi University, China  
Abstract: Reducing the complexity of activity-based costing system is one of the key factor when successfully implement the activity-based costing system. Based on dimensionality reduction of the singular value decomposition (SVD) of the matrix, this paper proposes and researches the method of SVD-based combination of cost drivers under activity-based costing. Through singular value’s decomposition for coefficient matrix in the costing model under activity-based costing, this paper classifies the cost drivers based on singular values and eigenvectors in the right singular matrix. On this basis, using integer programming, representative cost drivers are selected for combination to simplify the activity-based costing model. Numerical examples indicate that the method of SVD-based combination of cost drivers reduces the complexity of activity-based costing system and significantly improves the accuracy of the combined product cost. The result shows, whether reducing model complexity or ensuring product cost accuracy, the method of SVD-based combination of cost drivers is superior to the existing other methods, such as integer programming method, clustering method, etc. |
| CM2007-A | How Does the Positive Error Orientation Effect Employees' Proactive Behavior in China?  
Lei Su and Bilin Xu  
Presenter: Lei Su, Tianjin University of Finance and Economy, China  
Abstract: The study on employees’ proactive behavior has been a constant concern in the field of organizational behavior. The study explores the relationship between positive error orientation and proactive behavior and the supportive organization climate’s moderation effect on mediation of psychological capital, through statistical analysis of 362 Chinese employees and supervisors' paired survey data. Through the Hierarchical regression analysis and bootstrap, the result shows that the psychological capital has a partial mediating effect between t positive error orientation and proactive behavior. The supportive organizational climate moderates this mediation effect. With the supportive organizational climate increasing, the effect of the psychological capital on employees’ proactive behavior improved. |
| CM3030 | Research on the Training Model of Application-oriented Undergraduates from the Perspective of "Innovation and Entrepreneurship"  
Zhang Beiping, Yuan Huan and Wang Yong  
Presenter: Zhang Beiping, Hubei Polytechnic University, China  
Abstract: Innovation and entrepreneurship education is the necessary requirement of educational reform and development in the new era, and also an important carrier of cultivating talents with comprehensive quality in application-oriented universities. However, dual creative education is not only about the educational concept, but also needs to be closely integrated with professional education, and to achieve results, we should integrate the cultivation of innovative spirit and entrepreneurial ability into education. Then it requires a complete set of innovative entrepreneurship education system, and in order to cultivate new forces for promoting mass entrepreneurship and innovation and be in line with the strategy of innovation-driven development, We should make efforts from the establishment of to achieve results concepts to the design of dual.
creative education system; from the construction of dual creative education platform to the construction of teachers; from curriculum construction, textbook construction to teaching mode, teaching methods and so on, we need to conduct in-depth research to put innovation and entrepreneurship education into practice.
2019 10th International Conference on E-business, Management and Economics (ICEME 2019) will be held in Beijing University of Technology, Beijing, China during July 15-17, 2019.

Publication

Accepted papers will be published in the International Conference Proceedings and sent to be indexed by EI Compendex and Scopus.

Topics

Topics of interest for submission include, but are not limited to:

- E-Business strategy and value creation
- E-Business impacts across organizations
- Economic models for e-business value management
- IT-enabled entrepreneurship in e-business
- Co-evolution of business and IT strategy in dynamic environment
- Governance/organizational design for e-business
- ERP applications and business process innovation
- Adoption and diffusion of green IT/IS
- Web-based Information Systems and Applications
- Big data for enabling e-business
- Distribution logistics systems for e-business operations
- Leveraging business intelligence systems for knowledge creation
- Business intelligence systems and collaborative business
- Value-generating and transformative roles of IS
- Entrepreneurship in technology innovation strategy
- Green IS for environmental and economic sustainability

Submission Methods

1. Email: iceme@iedrc.org

Important Dates

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<td>June 05, 2019</td>
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www.iceme.org
Welcome to the official website of 2019 The 3rd International Conference on Business and Information Management (ICBIM 2019), which will be held in Paris, France during September 12-14, 2019.

It is our pleasure to invite you to attend 2019 The 3rd International Conference on Business and Information Management (ICBIM 2019). The Conference purpose is to provide participants with an opportunity to present new systems, methods, techniques and tools for information management and their applications in business processes and decision making. The focus will be on new systems, methods, techniques and tools for re-designing decision making processes, business processes and structures.

**Publication**

Accepted papers will be published in the International Conference Proceedings Series by ACM, which will be archived in the ACM Digital Library, and sent to be indexed by EI Compendex and Scopus and submitted to be reviewed by Thomson Reuters Conference Proceedings Citation Index (ISI Web of Science).

**Topics**

Topics of interest for submission include, but are not limited to:

- Business strategy and information systems
- Management Information Systems
- Information systems planning and management
- Adoption of information technology in organizations
- Human factors in information systems
- Knowledge acquisition, expert systems
- Systems analysis and design methods
- Object-oriented enterprise modeling
- Knowledge based systems to support database design
- Automated mediation in group support systems
- Distributed information systems, electronic commerce
- Software copyright infringements
- Accounting and Financial Information System
- Internet Technology
- Auditing and IT Governance
- Information Quality and Strategy
- Decision Support System
- Information Systems Management
- E-Commerce
- Information Technology Management

**Submission Methods**

3. Email: icbim@iedrc.net

**Important Dates**

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[www.icbim.org](http://www.icbim.org)
Welcome to the official website of 2019 the 2nd International Conference on Computing and Big Data (ICCBD 2019), which will be held in Taichung Software Park, Taichung, Taiwan during October 18-20, 2019.

Publication

Accepted papers will be published in the International Conference Proceedings Series by ACM, which will be archived in the ACM Digital Library, and sent to be indexed by EI Compendex and Scopus and submitted to be reviewed by Thomson Reuters Conference Proceedings Citation Index (ISI Web of Science).

Topics

Topics of interest for submission include, but are not limited to:

Data Mining
Data Warehousing
New Computational Models for Big Data
Data and Information Quality for Big Data
New Data Standards
Complex Big Data Applications in Science, Engineering, Medicine, Healthcare, Finance, Business, Law, Education, Transportation, Retailing, Telecommunication
Real-life Case Studies of Value Creation through Big Data Analytics

Brain models, Brain mapping, Cognitive science
Natural language processing
Fuzzy logic and soft computing
Expert systems
Decision support systems
Human Computer Interaction
Automated problem solving
Intelligent information systems
Intelligent data mining and farming
Intelligent web-based business

Submission Methods

5. Email: iccbd@iedrc.net

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www.iccbd.org