



**International Conference on Digital Health and Medical Analytics
(DHA 2020)**



**智慧健康与医疗分析国际研讨会
(DHA 2020)**



Effective by July 25
WeChat Group

主办单位
北京理工大学
Beijing Institute of Technology, China

协办单位
新西兰怀卡多大学
University of Waikato, New Zealand
英国谢菲尔德大学
University of Sheffield, United Kingdom
美国北卡罗莱纳大学夏洛特分校
University of North Carolina at Charlotte, USA
英国布里斯托大学
University of Bristol, United Kingdom

2020年7月25日

July 25, 2020

中国·北京

Beijing, China

北京理工大学管理与经济学院简介

北京理工大学管理与经济学院成立于 1980 年，浸润着北京理工大学深邃的延安精神和厚重的学术底蕴，正逐步向国内一流、国际知名的商学院迈进。学院于 2004 年获批“985 工程”二期哲学社会科学创新基地，2015 年获批北京经济社会可持续发展研究基地。同时，2015 年通过 EQUIS 首次认证，成为我国大陆地区第 7 个同时通过 EQUIS 和 AMBA 认证的管理与经济学院。学院于 2016 年通过了 CAMEA 认证，是我国第 13 所获得该认证的单位。2018 年通过 EQUIS 再认证，2019 年顺利通过 AACSB 认证，成为全球不超过 1%同时持有三大国际认证的管理学院。

学院设有管理科学与工程、工商管理、应用经济学三个一级学科博士点；能源与气候经济、国民经济动员两个交叉学科博士点；管理科学与工程、工商管理两个博士后流动站，管理科学与工程学科为工业和信息化部重点学科、北京市重点学科，在教育部第四轮学科评估中，被评为 A-（全国前 5%），且为全国首批获批的管理科学与工程一级博士学位授权单位；信息管理与信息系统专业入选 2019 年国家级一流专业建设点，工商管理学科为北京市重点学科，依托管理科学与工程和应用经济学科建设的“能源与环境政策研究中心”为北京市重点实验室，获批国家自然科学基金创新群体，且为全国首批获批国家自然科学基金《智库研究项目》的国家重要智库单位。

Brief Introduction of School of Management and Economics of Beijing Institute of Technology

As one of the first universities to resume management education after China's reform and opening up, Beijing Institute of Technology set up the Department of Management Engineering in 1980. In order to meet the needs of China's socio-economic and higher education development, in 1992, the Department of Management Engineering was renamed to the School of Management, and in 1998, renamed to the School of Management and Economics. The School currently offers five undergraduate programs: information management and information systems, business administration, marketing, accounting, and international economics and trade.

The School has three level-1 discipline doctoral programs in management science and engineering, business administration and applied economics, two interdisciplinary doctoral programs in energy and climate economics, and national economic mobilization, as well as two postdoctoral research stations in management science and engineering and in business administration. The management science and engineering is listed the key discipline of Beijing City and the Ministry of Industry and Information Technology. The Business Administration (Business Management) is listed the key discipline of Beijing City. The School offers four professional master programs, i.e., MBA, EMBA, master of Engineering Management (MEM), master of accounting (MPAcc). In 2011, our MBA program received the international AMBA accreditation, and was ranked the seventh "China's most influential MBA" by the "World Manager" magazine. In 2014, the MBA program passed the AMBA accreditation. In 2015, the School received the EQUIS accreditation, one of the seven in the mainland China accredited both by EQUIS and AMBA. In 2016, the School became the 13th in China which received the CAMEA certification. In 2018, the School was re-accredited by EQUIS. In 2019, the School received the AACSB accreditation and became one of the Triple Accredited Business Schools.

Conference Organizers

Conference Host

- Beijing Institute of Technology, China

Conference Co-Chairs

- Zhijun Yan, Beijing Institute of Technology, China
- William Wang, University of Waikato, New Zealand
- Yichuan Wang, University of Sheffield, United Kingdom
- Dongsong Zhang, University of North Carolina at Charlotte, USA

Program Co-Chairs

- Shiwei Sun, Beijing Institute of Technology, China
- Minhao Zhang, University of Bristol, United Kingdom
- Lin Jia, Beijing Institute of Technology, China
- Luke Younghoon Chang, Beijing Institute of Technology, China
- Qiuju Yin, Beijing Institute of Technology, China

Contact information

- Web URL: <http://www.dha2020.org>
<http://sme.bit.edu.cn/gbxwzx/xshy/173917.htm>
- E-mail: shiweisun@bit.edu.cn; info@dha2020.org
- Facebook: @dha2020china
- WeChat Official Site: DHA2020

Tech check

The conference arranges one online meeting technical test for all participants. Participants are invited to attend Tech Check for specific information. Before the test, please download the VooV Meeting (<https://www.voovmeeting.com/df/en/download-center.html?from=1001>) (International Version of Tencent Meeting) app and build your own account. The guide will be sent with the programme. If you need any tech assistance, please feel free to contact Junwei Kuang (Email: kuang_junwei@163.com /WeChat: key_kanon) or Fei Peng (749957002@qq.com /WeChat: phi076).

Tech check time: **Beijing-CST 9:00am-17:00am, July 24, 2020**

Chicago-CST 19:00pm (July 23)-5:00am

Sydney-EST 11:00am-19:00pm

London 1:00am-9:00am

Any room below is available for testing. Please remember to make an appointment with Junwei Kuang or Fei Peng before testing.

Meeting Room	Tencent Meeting ID
Welcome Remarks and Keynote Speech	ID:719777288 Password: 0725
Seession1: Digital Health Analytics	ID: 545768863 Password: 0725
Session 2: Participating Behavior of Digital Health	ID: 903950179 Password: 0725
Session 3: IT Role in Pandemic Management	ID: 436423481 Password: 0725
Session 4: Emerging Technologies in Healthcare	ID: 982218243 Password: 0725
Session 5: General Track on Digital Health	ID: 729963636 Password: 0725
Best Paper Award & Closing Remarks	ID:167216814 Password: 0725

Opening Ceremony

July 25, 2020, Saturday Beijing, China

Beijing-CST 08:30am-08:45am; Chicago-CST 18:30pm-18:45pm (July 24)

Sydney-EST 10:30am-10:45am; London 0:30am-0:45am

Tencent Meeting ID	719 777 288	Password	0725
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Time	Items	Speaker	Moderator
Beijing-CST 08:30— 08:35	Welcome Remarks	Zhijun Yan , Professor, Co-Chair of DHA 2020, Secretary of the Party Committee of SME, Beijing Institute of Technology	Dongsong Zhang , Professor, Co-Chair of DHA 2020, University of North Carolina at Charlotte, USA
Beijing-CST 08:35— 08:45	Organizing Committee Remarks	William Yuchung Wang , Professor, Co-Chair of DHA 2020, University of Waikato, New Zealand	

Keynote Speech

Beijing-CST 08:45am-12:00pm, July 25, 2020, Saturday Beijing, China

Time	Topic	Keynote Speaker	Moderator
Beijing-CST 08:45—09:45	AI and Healthcare	Guodong (Gordon) Gao The University of Maryland, College Park, USA	Dongsong Zhang Professor, Co-Chair of DHA 2020, University of North Carolina at Charlotte, USA
9:45—10:00 Break			
Beijing-CST 10:00—11:00	AI in Medicine: Opportunities and Challenges	Huigang Liang The University of Memphis, USA	William Yuchung Wang Professor, Co-Chair of DHA 2020, University of Waikato, New Zealand
Beijing-CST 11:00—12:00	Changing the Conversation on Evaluating Digital Transformation in Healthcare	Andrew Burton-Jones The University of Queensland, Australia	
12:00—14:00 Break			
Beijing-CST 14:00—15:00	Big Data in Healthcare Action	Xitong Guo Harbin Institute of Technology, China	Luke Younghoon Chang Associate Professor, Beijing Institute of Technology, China

Paper Sessions

Beijing-CST 15:10pm-17:40pm, July 25, 2020, Saturday Beijing, China

NO.	Time	Session Topics	Session Chairs	Tencent Meeting
01	Beijing-CST 15:10—17:40	Digital Health Analytics	Dongmei Cao Yichuan Wang	ID: 545768863 Password: 0725
02	Beijing-CST 15:10—17:40	Participating Behavior of Digital Health	Luke Younghoon Chang Christy M. K. Cheung	ID: 903950179 Password: 0725
03	Beijing-CST 15:10—17:40	IT Role in Pandemic Management	Wen-Lung Shiau Minhao Zhang	ID: 436423481 Password: 0725
04	Beijing-CST 15:10—17:40	Emerging Technologies in Healthcare	Qiuju Yin Rui Gu	ID: 982218243 Password: 0725
05	Beijing-CST 15:10—17:40	General Track on Digital Health	Tingting Zhang Liuan Wang	ID: 729963636 Password: 0725

Closing Ceremony

Beijing-CST 17:40-17:50, July 25, 2020, Beijing, China

Tencent Meeting ID	167 216 814	Password	0725
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Time	Items	Speaker	Moderator
Beijing-CST 17:40—17:50	Best Paper Award & Closing Remarks	Yichuan Wang , Associate Professor, Co-Chair of DHA 2020, University of Sheffield, UK	Zhijun Yan , Professor, Co- Chair of DHA 2020, Secretary of the Party Committee of SME, Beijing Institute of Technology

Paper Sessions

● Session 1: Beijing-CST 15:10-17:40, July 25, 2020

Topic: Digital Health Analytics		
Session Chairs: Dongmei Cao, Coventry University, UK Yichuan Wang, Guest Editor of <i>Information System Frontier</i> and <i>IMM</i> , University of Sheffield, UK		
Time	Title	Author(s)
15:10—15:40	Influencing factor analysis and prediction of stroke with medical big data	Juhua Wu, Xiaoyun Lu, Fang Ding, Anran Jin and Honglei Li
15:40—16:10	Research on identification of medical service quality factors: based on data-driven method	Huiying Gao, Xiaojin Kou and Shan Lu
16:10—16:40	Research on the demands of the elderly in the community home-based care model	Aobo Lyu, Xian Cheng, Ying Zhao, Liang Zhou and Hongjiao Fu
16:40—17:10	The utilization and its influencing factors of online medical resource	Hui Wei, Tingting Zhang and William Yuchung Wang
17:10—17:40	Leveraging doctor-patient conversations for expert recommendation in medical question-and-answer sites	Junwei Kuang, Zhijun Yan

● Session 2: Beijing-CST 15:10-17:40, July 25, 2020

Topic: Participating Behavior of Digital Health		
Session Chairs: Luke Younghoon Chang, Guest Editor of <i>Internet Research</i> , Beijing Institute of Technology Christy M. K. Cheung, Editor in Chief of <i>Internet Research</i> , Hong Kong Baptist University		
Time	Title	Author(s)
15:10—15:40	Not just for the money? an examination of the motives behind physicians' sharing of paid health information	Ruidi Song, Xuekun Zhu, Yulin Yang and Xiaofei Zhang
15:40—16:10	Spillover effect of monetary incentives on the free knowledge contribution behavior of medical experts	Tuotuo Qi, Jiarui Yan and Tianmei Wang
16:10—16:40	Research on influencing factors of doctors' selection rate in online medical consultation platform based on user reviews	Yan Wan, Yalu Wang, Ziqing Peng, Jinping Gao and Baojun Ma
16:40—17:10	Antecedents of medical crowdfunding information sharing behaviors on social media	Xuejie Yang, Bin Ding, Dongxiao Gu and Jingjing Guo
17:10—17:40	The impact of internet development on the health of Chinese residents: transmission mechanism and empirical test	Haitao Wu, Ning Ba, Siyu Ren, Lu Xu and Yu Hao

● Session 3: Beijing-CST 15:10-17:40, July 25, 2020

Topic: IT Role in Pandemic Management		
Session Chairs: Minhao Zhang, University of Bristol, UK Wen-Lung Shiau, Guest Editor of <i>JOEUC&JDM</i> , Zhejiang University of Technology, China		
Time	Title	Author(s)
15:10—15:40	Digital contact tracing in the covid-19 pandemic control	Hongwei Jiang, William Wang, Tiong-Thye Goh and Jie Zhu
15:40—16:10	Research on the characteristic of health information communication of new coronary pneumonia outbreak in social media	Lina Hu and Aibing Qian
16:10—16:40	Understanding social network services (SNS) user values and appraisals: the case of covid-19 in china	Younghoon Chang, One-Ki Daniel Lee and Ping Lee
16:40—17:10	Analysis of covid-19 pandemic situation over the countries concerning their health facilities	Anuradha Erandathi Madurapperumage, Chung Wang William Yu and Hsieh Chih-Chia
17:10—17:40	Research on public opinions on the internet of public health emergencies based on LDA model and emotional analysis	Ruiqi Zhu, Jin Zhang, Shuhui Chen and Shiwei Sun

● Session 4: Beijing-CST 15:10-17:40, July 25, 2020

Topic: Emerging technologies in healthcare		
Session Chairs: Qiuju Yin, Beijing Institute of Technology, China Rui Gu, University of International Business and Economics, China		
Time	Title	Author(s)
15:10—15:35	Healthcare AI ethics concerns: an extension of the PAPA framework	Yun Wu, Joshua Madden, Wenxiu Nan and Minseok Park
15:35—16:00	A CNN-based method for Depression Detecting form audio	Shuangshuang Zhao, Qingqing Li, Chenbin Li, Yu Li, and Ke Lu
16:00—16:25	Hierarchical staffing problem under high-time varying demand	Shuqing Liu, Ting Zhang, Wenge Chen and Zhantao Li
16:25—16:50	Design of Chinese medicine health management system	Ruixiang Wang
16:50—17:15	A stock price prediction model for healthcare companies	Xuan Ji, Jiachen Wang and Zhijun Yan
17:15—17:40	Online healthcare consultation service diffusion in China: a review	Mingxue Wei and Yichuan Wang

● Session 5: Beijing-CST 15:10-17:40, July 25, 2020

Topic: General Track on Digital Health		
Session Chairs: Tingting Zhang, University of Science and Technology Beijing, China Luan Wang, Beihang University, China		
Time	Title	Author(s)
15:10—15:35	Predicting patients' AI adoption intention in the context of healthcare	Yiwei Zhu and Shiwei Sun
15:35—16:00	Early warning and response of emerging infectious diseases with hospitals as the main body	Hongchang An
16:00—16:25	The adoption of artificial intelligence in the B2B healthcare industry	Yilin Hou and Shiwei Sun
16:25—16:50	Health crowdfunding: a literature analysis and future directions	Tao Xue and Rui Gu
16:50—17:15	The influence of user perceived value of sports APP on platform commodity purchase	Yidan Liu, Yajun Shen and Shiwei Sun
17:15—17:40	Prospects and challenges of sharing economy for older adults: An exploratory study	Jingshan Yang

Keynotes Overview

Topic

AI and healthcare

Keynote Speaker

Guodong (Gordon) Gao
The University of Maryland, College Park, USA



Keynote Time

Beijing-CST 8:45am-9:45am July 25
Chicago-CST 7:45pm-8:45pm July 24
Sydney-EST 10:45am-11:45am July 25
London 1:45am-2:45am July 25

Abstract

Powered by big data and deep learning, modern artificial intelligence (“AI”) has shown great promise to tackle many grand challenges in healthcare. Despite the hypes and high expectations, many challenges exist to successfully leverage AI. In this talk, I will review several research projects conducted in my group, and offer my thoughts on how to make AI applications in healthcare more successful.

Keynote Speaker Introduction

Guodong (Gordon) Gao, Ph.D., M.B.A., is the director of the Health Insights AI Lab, the co-director of the Center for Health Information and Decision Systems (CHIDS), and professor at the Smith School of Business, University of Maryland, College Park. He received his PhD from the University of Pennsylvania, his MBA from Tsinghua-MIT Sloan joint program, and bachelor’s degrees from Tsinghua University.

His research interests include Big Data and Artificial Intelligence in healthcare, health IT, and quality transparency. His work has been published at leading journals like Management Science, Information Systems Research, MIS Quarterly, Manufacturing and Service Operations Management (M&SOM), and Production and Operations Management. His work is also published or presented in the healthcare outlets, such as JAMA Internal Medicine, Journal of Medical Internet Research, International Health Economics Association Conference, as well as the American Society of Health Economists conference and AcademyHealth Annual Research meeting.

Dr. Gao’s research has been profiled or featured in popular media such as the Washington Post, Wall Street Journal, NPR news, US News and World Report, and Reuters. He currently serves on the editorial board of Management Science, and served as Associate Editor for MIS Quarterly. Dr. Gao initiated and co-organize the annual Conference on Health IT and Analytics (CHITA). He has won several teaching and research awards, including the Teaching Excellence Award at the Smith School and the CAREER Award from the National Science Foundation.

Topic

AI in Medicine: Opportunities and Challenges

Keynote Speaker

Huigang Liang

The University of Memphis, USA

Keynote Time

Beijing-CST 10am-11:00am July 25

Chicago-CST 8:50pm-9:50pm July 24

Sydney-EST 11:50am-0:50pm July 25

London 2:50am-3:50am July 25



Abstract

The rapid development of AI has created many opportunities to improve research and practice in medicine. This presentation provides a high-level overview of the state-of-the-art application of AI in various healthcare related fields, including deep learning, image processing, and natural language processing. Despite the impressive performance of AI in specific task domains, there are a myriad of obstacles impeding the wide diffusion of AI in medicine. This presentation thus covers the challenging issues such as algorithmic bias, transparency, security, and privacy.

Keynote Speaker Introduction

Huigang Liang is Professor and FedEx Chair of Excellence in MIS of Business Information and Technology Department at The University of Memphis. He received his M.S. degree in computer science and his Ph.D. degree in healthcare information systems from Auburn University, in 2002 and 2003, respectively. His research interests include socio-behavioral, managerial, and strategic information technology issues at both individual and organizational levels in a variety of contexts. His work has appeared in MIS Quarterly (MISQ), Information Systems Research (ISR), Journal of MIS, Journal of AIS, MIT Sloan Management Review, Communications of the ACM, Decision Support Systems, Information Systems Journal, and Journal of Strategic Information Systems, among other publications. He has served as associate editor for MISQ and is currently senior editor for JAIS and associate editor for ISR and Information & Management.

Topic

Changing the conversation on evaluating digital transformation in healthcare.

Keynote Speaker

Andrew Burton-Jones
UQ Business School, Australia



Keynote Time

Beijing-CST 11:00am-12:00am July 25

Chicago-CST 10:00pm-11:00pm July 24

Sydney-EST 1:00pm-2:00pm July 25

London 4:00am-5:00am July 25

Abstract

The global health sector is engaged in significant digital transformation. Evaluating these transformations is important given the major investments involved and their major potential consequences. However, studies have critiqued both the quality of evaluations and the quality of evaluation research. The persistent lack of progress has led researchers to ask deeper questions about what is actually occurring when teams evaluate the benefits of digital transformation. This translational research essay explores how institutional theory offers a lens for understanding the complexities of evaluating digital transformations in healthcare and provides insights for improving it. In particular, we show how institutional theory can explain behaviors observed in the literature and in our own case study. We also show how institutional theory can benefit from the insights observed in evaluation work. Motivated by these opportunities, we suggest an agenda through which practitioners and researchers can jointly improve work in this area.

Keynote Speaker Introduction

Professor, UQ Business School, The University of Queensland. He graduated from UQ's Commerce program in 1998 and worked for several years in IT risk management for one of the Big-4 accounting/consulting firms. He worked as a tenured Associate Professor at the University of British Columbia in Vancouver, Canada, for seven years. He returned to UQ in 2012. His research focuses on information systems design and effective use, and healthcare management etc. He has published more than 90 papers or articles in the international academic journals of information systems and served on the editorial boards of the Journal of the Association for Information Systems, Information Systems Research, MIS Quarterly, and other outlets. He recently completed a term as Representative for the Americas for the Association of Information Systems and commenced a term as International Representative for the Academy of Management (OCIS Division).

Topic

Big Data in Healthcare Action

Keynote Speaker

Xitong Guo (郭熙铜)

Harbin Institute of Technology, China (哈尔滨工业大学)



Keynote Time

Beijing-CST 2:00pm-3:00pm July 25

Chicago-CST 1:00am-2:00am July 24

Sydney-EST 4:00pm-5:00pm July 25

London 7:00am-8:00am July 25

Abstract

It will talk about information management, service management and societal impact of big data in healthcare. Some work for emerging theoretical and practical challenges are discussed.

Keynote Speaker Introduction

Xitong Guo is Professor of Information Systems and the executive director of eHealth research institute at the school of Management in Harbin Institute of Technology. His research focuses on eHealth. He has published 100+ research papers and his work has appeared in MIS Quarterly, Information Systems Research, Journal of Management Information Systems, Journal of the Association for Information Systems, European Journal of Information Systems, ACM Transactions on Management Information Systems, Journal of Medical Internet Research, among others. He is PI for a series of research projects with special interest in healthcare data enabled service management for citizen wellness, which are supported by National Natural Science Foundation of China. He attended the 2011 Lindau Economics Nobel Laureates Meeting as a young scientist.

Note

To avoid the unexpected technical issues, we make a backup of meeting platform with DingTalk (Lite) (<https://www.dingtalk.com/static/i18n/download>). Please also make sure to download and install DingTalk (Lite) on your mobile or computer before the conference day. If any emergent technical issue happens, the conference will be moved to DingTalk.

Below are the back-up meeting rooms on DingTalk.

Meeting Room	DingTalk ID
DHA2020@BIT	297 181 05744
Session 1 Digital Health Analytics	299 631 83963
Session 2 Participating Behavior	294 072 96860
Session 3 IT Role in Pandemic MNGT	300 186 12953
Session 4 Emerging Technologies	308 863 13673
Session 5 General Track	292 108 10096
DHA 2020 Closing Ceremony	292 582 2290

The back-up (DingTalk) test is also set on July 24, 2020.

Tech check time: **Beijing-CST 9:00am-17:00am, July 24, 2020**

Chicago-CST 19:00pm (July 23)-5:00am

Sydney-EST 11:00am-19:00pm

London 1:00am-9:00am

Please refer to the guide for installation and use. If you need any technical assistance or make an appointment for testing, please feel free to contact Junwei Kuang (Email: kuang_junwei@163.com / WeChat: key_kanon) or Fei Peng (749957002@qq.com / WeChat: phi076).