2017 12th International Conference on Computer Science and Education (ICCSE 2017)

Houston, Texas, USA
22 – 25 August 2017
# Technical Program

## Invited Session I

**Chair:** Ms. Du Jing  
Tsinghua Univ., China

**13:10 - 13:25**  
*Enhancing English Vocabulary Learning via Computerized Adaptive Testing*, pp. 3-5.  
Yang Fang  
Zhang Huanrui  
Yang Mingrui  
Tsinghua Univ.  
Tsinghua Univ.  
St.stephen's Episcopal School

**13:25 - 13:40**  
*Knowledge System Modeling in MOOC*, pp. 6-8.  
Lingling Wu  
Li Zheng  
Tsinghua Univ.  
Tsinghua Univ.

**13:40 - 13:55**  
ZHONG Xiao-Liu  
LI Hai-Xia  
XU Jun-Hua  
SONG Shu-Qiang  
Tsinghua Univ.  
Tsinghua Univ.  
Tsinghua Univ.  
Tsinghua Univ.

**13:55 - 14:10**  
*Synchronized UML Diagrams for Object-Oriented Program Comprehension*, pp. 12-17.  
Jeong Yang  
Young Lee  
Deep Gandhi  
Sruthi Ganesan Valli  
Texas A&M Univ.-San Antonio  
Texas A&M Univ.-Kingsville  
Texas A&M Univ.-Kingsville  
Texas A&M Univ.-Kingsville

**14:10 - 14:25**  
*A Unified Approach to Automate the Usage of Plagiarism Detection Tools in Programming Courses*, pp. 18-23.  
A. Omar Portillo-Dominguez  
Vanessa Ayala-Rivera  
Evin Murphy  
John Murphy  
Univ.College Dublin  
Univ.College Dublin  
Univ.College Dublin  
Univ.College Dublin

## Invited Session II

**Chair:** Prof. LI Fengxia  
Beijing Inst. of Tech., China  
**Co-Chair:** Dr. Yue Yu  
Beijing Inst. of Tech., China

**13:10 - 13:25**  
*Digital Logic Experiment Teaching Based on Experimental Platform*, pp. 30-34.  
Li Shanshan  
Yang Shiqiang  
Tsinghua Univ.  
Tsinghua Univ.

**13:25 - 13:40**  
*Smart Mobile APP of Museum -Investigations and Design for Local Culture Protection*, pp. 35-38.  
Binyue CUI  
Wei ZHOW  
Guangquan FAN  
Yanbin WU  
Hebei Univ. of Economics & Business  
Beijing Jiaotong Univ.  
Hebei Univ. of Economics & Business  
Hebei Univ. of Economics & Business

**13:40 - 13:55**  
Wangjia Zhang  
Ocean Univ. of China

**13:55 - 14:10**  
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Xiaowei Zhong
Yongsheng Rao
Juan Tang
Yong Huang

InS2.6
Research and Development of Intelligent Online Examination Monitoring System, pp. 54-59.
SHI Jun
LI Hui
GU Hang
ZHOU Li-dong

Invited Session III
Chair: Prof. Hiroki TAKADA
Univ. of Fukui, Japan

InS3.1
Changes in Brain Blood Flow during Stereoscopic Video Clips, pp. 60-63.
Masumi Takada
Fumiya Kinoshita
Kazuhiro Fujikake
Masaru Miyao
Akihiro Sugiuara
Hiroki Takada

InS3.2
Forms Seen in Daily Life are Useful for Mathematical Education -An Introduction of Japan Mathematics Contest, pp. 64-67.
Hiroki Takada

InS3.3
Fumiya Kinoshita
Hiroki Takada

InS3.4
Experimental Study on Control of Visually Evoked Postural Responses by Galvanic Vestibular Stimulation, pp. 72-77.
Akihiro Sugiuara
Kazuya Akachi
Akira Yoshida
Chiharu Ito
Shuya Kondo
Kunihiro Tanaka
Hiroki Takada

InS3.5
Long Short-Term Memory Model for Predicting Productivity of Drilling Space Units, pp. 78-83.
Jian Zheng
Bin Tong
Yoshiyasu Takahashi
Iwao Tanuma
Anshuman Sahu
Ravigopal Vennelakanti

InS3.6
Comparison of Multiple Recommendation Methods of Similar Onomatopoeia, pp. 84-87.
Dongli Han
Ryo Fukuoka
Genki Wakabayashi
Taro Shimizu
Shinnosuke Masuda

BPA1
Best Paper Award Session I
Chair: Dr. Weng Yang
Sichuan Univ., China
15:00 - 15:15
Thomas Hvid Spangsberg
Aarhus Univ.
Martin Brynskov
Aarhus Univ.

15:15 - 15:30
Tobias Fauser
Embry-Riddle Aeronautical Univ.
Stephen Bruder
Embry-Riddle Aeronautical Univ.
Aly El-Osery
New Mexico Tech

15:30 - 15:45
**Age-Dependence of Work Efficiency Enhancement in Information Seeking by Using See-Through Smart Glasses**, pp. 100-102.
Hiromu Ishio
Fukuyama City Univ.
Ryota Kimura
Nagoya Univ.
Masaru Miyao
Nagoya Univ.

15:45 - 16:00
Jiancheng Zou
North China Univ. of Tech.
Honggen Zhang
North China Univ. of Tech.
Tengfan Weng
North China Univ. of Tech.

16:00 - 16:15
M. A. Rafe Biswas
Univ. of Texas at Tyler
Samuel Garcia
Univ. of Texas at Tyler
Matthew Prado
Univ. of Texas at Tyler
Sadad Hossain
NASA Johnson Space Center
Matthew Souris
NASA Johnson Space Center
Lee Morin
NASA Johnson Space Center

16:15 - 16:30
**Mobile Brand Analysis Based on WiFi Hotspots on Campus**, pp. 114-119.
Xuan Zhang
Beijing Univ. of Posts & Telecommunications
Yaqiong Liu
Beijing Univ. of Posts & Telecommunications
Zhigang Guo
Beijing Univ. of Posts & Telecommunications
Yihong Hu
Beijing Univ. of Posts & Telecommunications
Guochu Shou
Beijing Univ. of Posts & Telecommunications

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**BPA2**

**Best Paper Award Session II**

Chair: Dr. Cui Binyue
Hebei Univ. of Economics & Business, China

15:00 - 15:15

**Blended Learning Supported by the Knowledge Indexed Video Case Base in the Course about History of Science and Technology**, pp. 120-123.
Jing DU
Tsinghua Univ.
Jian YANG
Tsinghua Univ.

15:15 - 15:30

**Towards a Smart Campus: Innovative Applications with WiCloud Platform Based on Mobile Edge Computing**, pp. 124-129.
Yaqiong Liu
Beijing Univ. of Posts & Telecommunications
Guochu Shou
Beijing Univ. of Posts & Telecommunications
Zhigang Guo
Beijing Univ. of Posts & Telecommunications
Hongxing Li
Beijing Univ. of Posts & Telecommunications
Feng Peng
Beijing Univ. of Posts & Telecommunications
Hock Soon Seah
Nanyang Technological Univ.

15:30 - 15:45

LI Hui
Huaihai Inst. of Tech.
SHI Jun
Huaihai Inst. of Tech.
Shu Zhang
Huaihai Inst. of Tech.
Hu Yun
Nanjing Univ. of Chinese Medicine

15:45 - 16:00

**Virtual Experiment Method for MOOCs to Solve Abstract Key Notes and Difficult Points**, pp. 136-139.
Yue Yu
Beijing Inst. of Tech.
The Intelligent Video Management System: A Use Case of Software Defined Class, pp. 140-145.

The Design and Implementation of User-Trust Based Social Review Method and System in Online Learning, pp. 146-151.

Musical Instrument Classification Utilizing a Neural Network, pp. 152-155.

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Research on Activity Recognition of Students in Physical Education Based on IDT method, pp. 161-165.


Real-Time Detection Algorithm of Abnormal Behavior in Crowds Based on Gaussian Mixture Model, pp. 172-176.

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Bingwu Chen
Xiamen Univ.

Student Clustering and Learning Atmosphere Analysis Based on Trajectory Data, pp. 194-199.
Shujiiao Wang
Yihong Hu
Yaqiong Liu
Zhigang Guo
Guochu Shou
Beijing Univ. of Posts & Telecommunications

Yifeng Zhao
Huayu Yang
Kai Liu
Lianfen Huang
Mingjun Shi
Meng Zhang
Xiamben Univ.

Naser S Al Madi
Javed I Khan
Kent State Univ.

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Yong Zhang
Beijing Univ. of Posts & Telecommunications
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A VR Scene Modelling Platform for PTSD Treatment, pp. 239-244.
Nikilesh Urella
                  Louisiana State Univ.
Jennifer Hughes
                  Louisiana State Univ.
Erich Conrad
                  Louisiana State Univ.
Junsong Zhang
                  Xiamen Univ.
Xin Li
                  Louisiana State Univ.

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Celong Liu
                  Louisiana State Univ.
Zhonggui Chen
                  Xiamen Univ.
Xin Li
                  Louisiana State Univ.

14:30 - 14:45
Yang Shuaishuai
                  Beihang Univ.
Yu Zhengwei
                  Beihang Univ.
Liu Bin
                  Beihang Univ.
Lu Yunfeng
                  Beihang Univ.
Gao Zhijie
                  96658 Units

Oral Session
Computer Application II
Chair: Assistant Prof. Zhao Caidan
                  Xiamen Univ., China

13:30 - 13:45
Shuang Zhao
                  Tianjin Univ.
Qing Wang
                  Tianjin Univ.

13:45 - 14:00
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Yue Yu
                  Beijing Inst. of Tech.
Xiangru Chen
                  Beijing Inst. of Tech.
Jiancheng Qiao
                  Beijing Inst. of Tech.
Fengxia Li
                  Beijing Inst. of Tech.

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Caidan Zhao
                  Xiamen Univ.
Mingxian Shi
                  Xiamen Univ.
Zhibiao Cai
                  Xiamen Univ.
Caiyun Chen
                  Xiamen Univ.

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Liu Jinming
                  National Univ. of Defense Tech.
Liu Taikang
                  Jimei Univ.
Zhang Jiemin
                  Jimei Univ.
Li Yongmei
                  Jimei Univ.

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Benbin Chen
                  Xiamen Univ. of Tech.
Lingli Xie
                  Xiamen Univ. of Tech.
Hong Tian
                  Xiamen Univ. of Tech.
Li'an Chen
                  Xiamen Univ. of Tech.

Oral Session
Education Reform and Innovation
Chair: Mr. Roosevelt Stallings III
                  Lincoln Univ., USA
Co-Chair: Jia Yue
                  Dalian Neusoft Univ. of Info., China
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Zhang Lingfeng
Feng Feng
Huang Heng
Zhengzhou Univ.
Zhengzhou Univ.
Zhengzhou Univ.

9:00 - 17:00
ThP1.7
Ting Lei
Naiding Yang
Northwestern Polytechnical Univ.
Northwestern Polytechnical Univ.

9:00 - 17:00
ThP1.8
Zudong Fan
Haijie Wu
Jia Xu
Yuliang Tang
Xiamen Univ.
Xiamen Univ.
Xiamen Univ.
Xiamen Univ.

9:00 - 17:00
ThP1.9
YANG Ling
JIANG Shou-xu
JIA Zong-fu
RENI Xiang-min
ZHANG Fu-sheng
Harbin Univ.
Harbin Inst. of Tech.
Harbin Univ.
Harbin Univ.
Harbin Univ.

9:00 - 17:00
ThP1.10
N.D.U. Gamage
K.W.C. Jayadewa
K.L.A.D. Udeshitha
S.M.N.K.B. Senanayake
S.M.U.P. Samarakoon
T.M. Hennayake
Sri Lanka Inst. of Info. Tech.
Sri Lanka Inst. of Info. Tech.
Sri Lanka Inst. of Info. Tech.
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Sri Lanka Inst. of Info. Tech.

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ZHANG Yi
CEN Gang
SHEN Liqiang
HUA Yifeng
LOU Junyan
CHEN Xuan
Zhejiang Univ. of Sci. & Tech.
Zhejiang Univ. of Sci. & Tech.
Zhejiang Univ. of Sci. & Tech.
Zhejiang Univ. of Sci. & Tech.
Zhejiang Univ. of Sci. & Tech.
Zhejiang Univ. of Sci. & Tech.

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Xuan Zhang
Xiao Lin
Zhe Zheng
Qi Yang
Xiamen Univ.
Xiamen Univ.
Xiamen Univ.
Xiamen Univ.

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Chen Bo
CEN Gang
Feng Tianxiang
Shen Feixin
Zhejiang Univ. of Sci. & Tech.
Zhejiang Univ. of Sci. & Tech.
Zhejiang Univ. of Sci. & Tech.
Zhejiang Univ. of Sci. & Tech.

9:00 - 17:00
ThP1.14
Zengxian Chen
Yuliang Tang
Xiamen Univ.
Xiamen Univ.
9:00 - 17:00

**ThP2.1 Generation of Adaptive Learning Path based on Concept Map and Immune Algorithm**, pp. 381-386.

- Cunling Bian  
  Ocean Univ. of China
- Shijun Dong  
  Ocean Univ. of China
- Chunrong Li  
  Ocean Univ. of China
- Zheng Shi  
  Ocean Univ. of China
- Weigang Lu  
  Ocean Univ. of China

9:00 - 17:00


- Shaohui Li  
  Xiamen Univ.
- Linkai Luo  
  Xiamen Key Laboratory of Big Data Intelligent Analysis & Decision-making
- Hong Peng  
  Xiamen Univ.
- Xiamen Key Laboratory of Big Data Intelligent Analysis & Decision-making

9:00 - 17:00


- Xiaojin Huang  
  Xiamen Univ.
- Linkai Luo  
  Xiamen Key Laboratory of Big Data Intelligent Analysis & Decision-making
- Hong Peng  
  Xiamen Univ.
- Xiamen Key Laboratory of Big Data Intelligent Analysis & Decision-making

9:00 - 17:00


- Yi Wang  
  Northwestern Polytechnical Univ.
- Yang Yang  
  AVIC Xi’an Flight Automatic Control Research Inst.

9:00 - 17:00


- Weidong Liao  
  Beijing Univ. of Posts & Telecommunications
- Yong Zhang  
  Beijing Univ. of Posts & Telecommunications
- Tengteng Ma  
  Beijing Univ. of Posts & Telecommunications
- Da Guo  
  Beijing Univ. of Posts & Telecommunications
- Mei Song  
  Beijing Univ. of Posts & Telecommunications
- Haihao Li  
  Beijing Inst. of Remote Sensing Equipment

9:00 - 17:00


- Youjing Bai  
  Xiamen Univ.
- Lvqing Yang  
  Xiamen Univ.
- Guoxing Zhang  
  Xiamen Univ.
- Yezi Xu  
  Xiamen Univ.

9:00 - 17:00


- Zhengchao Lei  
  Beijing Inst.of Tech.
- Weiyan Chai  
  Beijing Inst.of Tech.
- Sanyuan Zhao  
  Beijing Inst.of Tech.
- Hongmei Song  
  Beijing Inst.of Tech.
- Fengxia Li  
  Beijing Inst.of Tech.

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- Rui Liu  
  Ningxia Univ.
- Yongqi Ge  
  Ningxia Univ.

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**Interactive Smart Home Design Based on Internet of Things**, pp. 421-425.

- Yujun Han  
  Jiangsu Vocational Inst. of Commerce
- Baobin Liu  
  Jiangsu Vocational Inst. of Commerce

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**Research on Text Mining Algorithm Based on Focused Crawler**, pp. 426-429.

- Qiusheng Zhang  
  Hubei Business College
Mingyu Lin
Jianping Jun
Xingyun Zhang
Hubei Business College

9:00 - 17:00
Zhang Liqin
Hubei Business College
Huang Xiao
Jiangxi Sci. & Tech. Normal Univ.

9:00 - 17:00
Jixiong Hu
Hubei Business College
Chunzi Wang
Hubei Business College
Chuan Liu
Hubei Business College
Zhiwei Ye
Hubei Business College

9:00 - 17:00
Xiang Yu
Xiamen Univ.
Dongyun Lin
Xiamen Univ.
Weiyao Lan
Xiamen Univ.
Bingan Zhong
Xiamen Haicang Hospital
Ping Lv
Xiamen Maternal & Children Health Care Hospital

ThP3
Computer Science II

9:00 - 17:00
Lu Geng
Shanghai Univ. of Engineering Sci.

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Wei Jiang
City College of Wuhan Univ. of Sci. & Tech.
Liping Yang
Huazhong Agricultural Univ.

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Liu Chuan
Hubei Univ. of Tech.
Chunzi Wang
Hubei Univ. of Tech.
Hu Jixiong
Hubei Univ. of Tech.
Zhiwei Ye
Hubei Univ. of Tech.

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Dengyou Wang
Xiamen Univ.
Shunxiang Wu
Xiamen Univ.
Weiming Guo
Xiamen Univ.

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Weiming Guo
Xiamen Univ.
Shunxiang Wu
Xiamen Univ.
Dengyou Wang
Xiamen Univ.

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Mingqiang Zhou
Chongqing Univ.
Rongchen Liu
Chongqing Univ.
Xin Zhao
Chongqing Univ.
Qingsheng Zhu
Chongqing Univ.

9:00 - 17:00
Zhou Shijie
Guangzhou Power Supply Co. Ltd
Li Hongguang
Guangzhou Power Supply Co. Ltd
Li Guangfa
Guangzhou Power Supply Co. Ltd
Wen Weihong
Guangzhou Power Supply Co. Ltd
Zhang Shijia
Guangzhou Power Supply Co. Ltd
Cui Jian
Xiamen Univ. of Tech.
Chen Li'an
Xiamen Univ. of Tech.
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<td>Wueman Li, Zheda Ren, Chunfeng Yue, Yanbo Xu</td>
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<td>Wenjuan Li, Zheda Ren, Chunfeng Yue, Yanbo Xu</td>
<td>Weidong Cloud Education Group</td>
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<td>Weidong Cloud Education Group</td>
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<td>Guangzhou Power Supply Co. Ltd, Guangzhou Power Supply Co. Ltd, Guangzhou Power Supply Co. Ltd, Guangzhou Power Supply Co. Ltd, Xiamen Univ. of Tech.</td>
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<td>Ran Juan</td>
<td>Tianjin Univ. Renai College</td>
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<td>Selim Buyrukoglu, Firat Batmaz, Russell Lock</td>
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<td>Ran Juan</td>
<td>Loughborough Univ.</td>
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<td>Chen Juan</td>
<td>Tianjin Univ. Renai College</td>
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<td>Dongdong Zhang, Lisheng Wang, Yuchen Guo</td>
<td>Tongji Univ.</td>
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<td>Chen-zhi Guan</td>
<td>Nanchang Normal Univ.</td>
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<td>Xiaotao Huang, Niannian Qin, Xiaofang Zhang, Fen Wang</td>
<td>Huazhong Univ. of Sci. &amp; Tech.</td>
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<td>Xiaotao Huang, Niannian Qin, Xiaofang Zhang, Fen Wang</td>
<td>Huazhong Univ. of Sci. &amp; Tech.</td>
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<td>Institution</td>
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