

# ZHE DENG

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## DISSERTATION

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Impact of Information Communication Technology on Education (IICTE): Evidence from Two Field Experiments

## EDUCATION

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March 2022	<b>CARNEGIE MELLON UNIVERSITY</b> <b>Post-Doctoral Research Fellow</b> Heinz College of Information Systems and Public Policy	<b>PITTSBURGH, PENNSYLVANIA</b>
August 2016	<b>TEMPLE UNIVERSITY</b> <b>Ph.D. Student in Management Information Systems</b> Fox School of Business	<b>PHILADELPHIA, PENNSYLVANIA</b> <i>(Presidential Fellowship)</i>
August 2012	<b>UNIVERSITY OF FLORIDA</b> <b>Master of Science in Information Systems &amp; Operations Management</b> Hough Graduate School of Business, Warrington College of Business Administration	<b>GAINESVILLE, FLORIDA</b>
August 2007	<b>NORTHWEST UNIVERSITY</b> <b>Bachelor of Science in Information Management &amp; Information Systems</b> School of Economics and Management	<b>XI'AN, CHINA</b> <i>(Magna Cum Laude)</i>

## REFERENCES

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Paul A. Pavlou, Dean, Cullen Distinguished Chair Professor, University of Houston, 713-743-3562, pavlou@bauer.uh.edu  
Subodha Kumar, Paul R. Anderson Distinguished Chair Professor, Temple University, 215-204-5919, subodha@temple.edu  
Pedro Ferreira, Associate Professor, Carnegie Mellon University, 412-268-5526, pedrof@cmu.edu

## RESEARCH INTERESTS

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*Topics:* Information Systems and Education, Policies for Emerging Technology, Information Systems and Healthcare  
*Methodologies:* Field Experiments, Econometrics, Machine Learning

## WORKING PAPERS

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- Deng, Z.**, Z. Cheng, P. Ferreira, and P. A. Pavlou, From Smartphones to Smart Students: Distraction versus Learning with Mobile Devices in the Classroom and Student Success. Revise and resubmit invited at **Information Systems Research**.
- Deng, Z.**, J. Jung, P. A. Pavlou, and Q. Sun, Would Unlimited Internet lead to Unlimited Learning? A Field Experiment of Internet Policy on Educational Outcomes. Preparing for journal submission.
- Deng, Z.**, S. Ayabakan, S. Kumar, and P. A. Pavlou. 2019, Patient-sharing Network, EHR Adoption, and Patient Outcomes: An Empirical Investigation. Preparing for journal submission.

## WORKING IN PROGRESS

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- “Student Depression Detection: An Attention-based Bi-LSTM Approach Using Online and Offline Behavior Data” (With Guohou Shan, Konstantin Bauman, and Qian Sun)
- “User-Generated Videos in Climate Change Education” (with Pedro Ferreira, Rodrigo Belo, and Yael Inbar)
- “Student Reaction and Tutor Teaching Satisfaction: Evidence from Online Class Video Feeds” (with Pedro Ferreira)
- “AI-Generated Content (AIGC) vs User-Generated Content (UGC) Learning: Online Learning Video Summarization” (with Wen Wang, and Pedro Ferreira)

## PRESENTATIONS

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1. G. Shan, **Deng, Z.**, K. Bauman, and Q. Sun. 2022. Student Depression Detection: An Attention-based Bi-LSTM Approach Using Online and Offline Behavior Data. INFORMS Annual Meeting, Oct 16-19, 2022, Indianapolis, IN
2. **G. Shan**, Deng, Z., K. Bauman, and Q. Sun. 2021. Student Depression Detection: An Attention-based Bi-LSTM Approach Using Online and Offline Behavior Data. China Summer Workshop on Information Management (CSWIM), July 4 – 6, 2021, Chongqing, China
3. G. Shan, **Deng, Z.**, K. Bauman, and Q. Sun. 2021. Student Depression Detection: An Attention-based Bi-LSTM Approach Using Online and Offline Behavior Data. Statistical Conference in E-Commerce Research (SCECR), June 17-18, 2021, Online
4. **Deng, Z.** 2021. Social Science Research Utilizing Online Traffic Auditing Data. Workshop on Online Traffic Data Science@Panabit Co. Ltd., March 31st, 2021, Beijing, China
5. G. Shan, **Deng, Z.**, K. Bauman, and Q. Sun. 2020. Student Depression Detection: An Attention-based Bi-LSTM Approach Using Online and Offline Behavior Data. Workshop on Information Technologies and Systems (WITS), December 16-18, 2020, Online
6. **Deng, Z.**, P. Ferreira, R. Belo, and Y. Inbar. 2020. Video Creation and Watching in Formal Learning Environments: A Randomized Field Experiment on Video-Based Peer Tutoring. Statistical Conference in E-Commerce Research (SCECR), June 18-20, 2020, Madrid, Spain
7. **Deng, Z.**, J. Jung, P. A. Pavlou and Q. Sun. 2020. Would Unlimited Internet lead to Unlimited Learning? A Field Experiment of Internet Policy on Educational Outcomes. Statistical Conference in E-Commerce Research (SCECR), June 18-20, 2020, Madrid, Spain
8. Deng, Z., Z. Cheng, **P. Ferreira**, and P. A. Pavlou. 2019. From Smartphones to Smart Students: Distraction versus Learning with Mobile Devices in the Classroom and Student Success. Guest Speaker Seminar at University of California, Berkeley, October 2, 2019, Berkeley, CA
9. **Deng, Z.** 2019. Data Mining and Knowledge Discovery. MBA Seminar Series at Northwest University, June 26, 2019, Xi'an, China
10. **Deng, Z.**, S. Ayabakan, S. Kumar, and P. A. Pavlou. 2019. Patient-sharing Network, EHR Adoption, and Healthcare Outcome: An Empirical Investigation. Statistical Conference in E-Commerce Research (SCECR), June 10-13, 2019, Hong Kong, China
11. Deng, Z., **S. Ayabakan**, S. Kumar, and P. A. Pavlou. 2019. Patient-sharing Network, EHR Adoption, and Patient Outcomes: An Empirical Investigation. Production and Operations Management Society (POMS) Annual Conference, May 2-6, 2019, Washington, D.C.
12. Deng, Z., Z. Cheng, **P. Ferreira**, and P. A. Pavlou. 2019. Mobile Device Policy, Attention Allocation, and Student Performance: Evidence from a Video-Tracking Randomized Experiment. Guest Speaker Seminar at University of Pittsburgh, April 19, 2019, Pittsburgh, PA
13. **Deng, Z.**, Z. Cheng, P. Ferreira, and P. A. Pavlou. 2018. Mobile Device Policy, Attention Allocation, and Student Performance: Evidence from a Video-Tracking Randomized Experiment. Workshop on Information Systems and Economics (WISE), December 17-18, 2018, San Francisco, CA
14. **Deng, Z.**, Z. Cheng, P. Ferreira, and P. A. Pavlou. 2018. Mobile Device Policy, Attention Allocation, and Student Performance: Evidence from a Video-Tracking Randomized Experiment. Conference on Information Systems and Technology (CIST), November 3-4, 2018, Phoenix, Arizona
15. **Deng, Z.**, Z. Cheng, P. Ferreira, and P. A. Pavlou. 2018. Mobile Device Policy, Attention Allocation, and Student Performance: Evidence from a Video-Tracking Randomized Experiment. Conference on Digital Experimentation (CODE@MIT), October 27-28, 2018, Cambridge, MA
16. **Deng, Z.**, S. Ayabakan, S. Kumar, and P. A. Pavlou. 2018. Patient-sharing Network and Patient Outcomes: An Empirical Investigation. Conference on Health IT and Analytics (CHITA), October 19-20, 2018, Washington, D.C.
17. **Deng, Z.**, Z. Cheng, P. Ferreira, and P. A. Pavlou. 2018. Mobile Device Policy, Attention Allocation, and Student Performance: Evidence from a Video-Tracking Randomized Experiment. Statistical Conference in E-Commerce Research (SCECR), June 18-19, 2018, Rotterdam, Netherlands

18. **Deng, Z.**, S. Ayabakan, S. Kumar, and P. A. Pavlou. 2018. Physician Professional Network and Inpatient Outcomes: An Empirical Investigation. Production and Operations Management Society (POMS) Annual Conference, May 4-7, 2018, Houston, TX
19. **Deng, Z.**, Z. Cheng, P. Ferreira, and P. A. Pavlou. 2017. Mobile Distraction in Class: An Empirical Investigation on Smartphone Use Policies. Conference on Digital Experimentation (CODE@MIT), October 27-28, 2017, Cambridge, MA

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## HONORS AND AWARDS

**Presidential Fellowship**, the most prestigious five-year university-level award for PhD students at Temple University, 2016  
**First Prize Scholarship (*Magna Cum Laude*)**, the most prestigious university-level award at Northwest University, 2010  
**Outstanding Student Leaders**, the highest student leader honor at university-level award at Northwest University, 2009

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## FUNDING AND GRANTS

1. **2020 21th Young Scholar Forum. Temple Univ. Grant, \$2,500**  
Student Depression Detection: An Attention-based Bi-LSTM Approach Using Online and Offline Behavior Data. (With G. Shan, K. Bauman, and Q. Sun)
2. **2020 Spring 2020 Seed Funding Forum. Temple Univ. Grant, \$7,500**  
Would Unlimited Internet lead to Unlimited Learning? A Field Experiment of Internet Policy on Educational Outcomes. (With J. Jung, P. A. Pavlou, and Q. Sun)
3. **2020 20th Young Scholar Forum. Temple Univ. Grant, \$1,000**  
Student Depression Detection Based on Online-offline Behaviors. (With G. Shan, K. Bauman, and Q. Sun)
4. **2019 19th Young Scholar Forum. Temple Univ. Grant, \$2,000**  
Unlimited Internet Use vs. Limited Performance? A Field Experiment on Education Outcomes. (with J. Jung, P. A. Pavlou, and Q. Sun)
5. **2018 17th Young Scholar Forum. Temple Univ. Grant, \$2,000**  
Patient-sharing Network and Patient Outcomes: An Empirical Investigation. (With S. Ayabakan, S. Kumar, and P. A. Pavlou)
6. **2018 16th Young Scholar Forum. Temple Univ. Grant, \$750**  
Physician Social Network and Patient Outcomes: An Empirical Investigation. (With S. Ayabakan, S. Kumar, and P. A. Pavlou)
7. **2017 14th Young Scholar Forum. Temple Univ. Grant, \$2500**  
Mobile Distraction in Class: A Video-Tracking Field Experiment (With Z. Cheng, P. Ferreira, and P. A. Pavlou)
8. **2016 13th Young Scholar Forum. Temple Univ. Grant, \$500**  
Smartphone: A Pandora's Box for Students in Class (With Z. Cheng, P. Ferreira, and P. A. Pavlou)

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## SERVICE

1. Reviewer – MIS Quarterly 2019, 2020, 2021, 2022
2. Reviewer – Electronic Commerce Research and Applications (ECRA) 2019, 2020
3. Reviewer – International Conference on Information Systems (ICIS) 2018, 2019, 2020, 2021, 2022
4. Reviewer – Conference on Information Systems and Technology (CIST) 2018, 2020
5. Reviewer – Workshop on Information Technologies and Systems (WITS) 2019
6. Reviewer – European Conference on Information Systems (ECIS) 2019
7. Reviewer – New England Association for Information Systems Conference 2022
8. External Researcher – Shaanxi Business College, China 2016, 2017, 2018, 2019, 2020, 2021, 2022
9. External Researcher – Kooledge.com 2018, 2019, 2020, 2021, 2022
10. External Researcher – Contemporary Education Technology Center, Northwest University, China 2019, 2020, 2021, 2022
11. External Researcher – Nroad Net Co. Ltd. 2019, 2020, 2021, 2022
12. External Researcher – Panabit Co. Ltd. 2020, 2021, 2022

## **SELECTED COURSEWORK**

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Micro-Economics; Game Theory; Information Economics

Statistics I, II, Econometrics I, II, III, IV

Management of Information Systems Seminars: Pro-seminar, E-commerce, Digital Innovation, Economics of IT

Operations Management Seminar: Continuous and Nonlinear Optimization Methods

Knowledge Discover and Data Mining

## **SOFTWARE / PROGRAMMING SKILLS**

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**Data Science Software:** Python, STATA, R

**Quantitative Software:** SPSS, Wolfram Mathematica, Quantitative Methods (QM), Excel, Tableau

**Programming Languages and Skills:** C, C#, Java, Visual Basic, SQL, ASP. NET, Java-WS, HTML