# Nan Clement

Department of Economics University of Texas at Dallas Placement Officer: Prof. Seth Giertz

seth.giertz@utdallas.edu

+19728836234

nclement@utdallas.edu +1 972 741 4788 nanclement.com twitter: @econnanZ LinkedIn: Nan Clement

Visa Status:

US Permanent Resident

#### EDUCATION

University of Texas at Dallas, Ph.D. Candidate in Economics

2019 - 2024 (expected)

Thesis Title: "Essays on Digital Economics"

Committee: Daniel Arce (Chair), Catherine Tucker, Anne M. Burton, Anton Sobolev

University of Illinois at Urbana-Champaign, Master of Science in Accountancy

2018-2019

(Focus on Data Analytics; Online)

China Academy of Fiscal Sciences (Beijing, China), Master of Business

2013-2016

Administration in Accountancy

University of Science and Technology Beijing (Beijing, China), Bachelor of

2009-2013

Management in Accountancy, Study Abroad: 2011-2012, Lancaster University (Lancashire, UK)

#### FIELD

Microeconomics, Public Economics, Health Economics, Digital Economics, Platform Economics, and Cybersecurity

#### RESEARCH

JOB MARKET PAPER: M&A EFFECT ON DATA BREACHES IN HOSPITALS: 2010-2022 Presentations: WEIS'22, TEAMS'23, CSI'23, ASHEcon, WEIS'23 (Best Paper), INFORMS'23, SEA

Abstract: Data breaches in hospitals disrupt care, potentially leading to fatal consequences, violating privacy rights, and incurring significant costs to remedy. Mergers and acquisitions serve as an essential source of financing but also induce substantial management challenges. Using proprietary hospital merger records and archived data breach reporting from the Department of Health and Human Services from 2010 to 2022, I implement a stacked difference-in-differences estimation strategy to study whether and how hospital mergers increase the probability of a data breach. On average, the probability of a data breach for pre-merger deals is approximately 3%, while the data breach rate reaches 6% for the merging deals. The effect is robust to changes of the two-year window. The effect is robust in alternative control group constructions. The effect is also robust to the changes in sample size due to the data availability of the control variables and in how standard errors are clustered. Increased attention online one year before the merger deal is signed, identified with Google Trends score, causes a large increase in pre-signing hacks, especially in recent years through ransomware attacks. Such an effect does not extend to the post-signing period. The increase in post-signing hacks is due to the incompatibility of merging information systems. Conversely, the complementary effect of organizational capital that improves internal risk control reduces the increase in data breaches. The dynamic analysis shows that the situation is getting worse because of soaring cases of hacks.

### WORKING PAPERS

Dynamics of Shared Security in the Cloud (with Daniel Arce, Information Systems Research, 2<sup>nd</sup> round Revise and Resubmit)

### Works in Progress

Medicare Payment Reforms, Hospital Information Systems, and Merger Outcomes (with Amalia Miller and Catherine Tucker)

Merger Selection and Cyber Risk: Evidence from Panel Data Analysis Can Google Trends Predict Hospital Data Breaches During Mergers?

Public Company Information Revelation and Data Breaches: 2010-2022 (with Adi Rao and Sanghyun Han)

### TEACHING EXPERIENCE

<b>Instructor of Record</b> , ECON3310 Intermediate Microeconomic Theory Average Evaluation: 4.81/5.0; GPA: 3.30/4.0	Fall 2022, Spring 2022 and Fall 2021
Teaching Assistant ECON2302 Principles of Microeconomics	Fall 2023, Fall 2022, Fall 2021
Comets to the Core Assessment Reviewer	Spring 2023, Spring 2022
Teaching Assistant ECON3315 Sports Economics	Spring 2023
Teaching Assistant ECON2303 Principle of Microeconomics	Fall 2022, Fall 2021
Teaching Assistant ECON 6302 Macroeconomic Theory (PhD Core)	Fall 2020
Teaching Assistant ECON4385/ECON5397 Business and Economic Forecasting (R)	Spring 2021 and Spring 2020
Teaching Assistant	Fall 2019

ECON2301 Principles of Macroeconomics, ECON3312 Money and Banking

# FELLOWSHIPS, GRANTS, HONORS, AND AWARDS

Algorithms, Approximation, and Learning in Market and Mechanism Design Workshop, invited attended	ndee 2023
WEIS'23 Best Paper Award, \$1,000 CHF	2023
Georgia Tech School of Cybersecurity and Privacy Travel Grant	2023
The University of Texas at Dallas President's Teaching Excellence Award, \$1,500	2023
Charles C. McKinney Scholarship	2023
DFW Research Data Center Grant, \$10,000	2023
NBER 2023 Workshop of Digital Economics, invited attendee	2023
NBER 2023 Digital Economics Tutorial, invited attendee	2023
Irving J. Hoch Scholarship	2022
Office of Graduate Education Research funding, \$500	2022
NSF graduate student travel grant, \$1,000, CMU	2022
Alfred P Sloan Foundation student travel grant, \$700	2022
Betty Gifford Johnson Travel Award, \$2,000	2022
NBER 2022 Fall Economics of Privacy Tutorial, invited attendee	2022

### PRESENTATIONS AND SEMINARS

November 2023: The  $93^{rd}$  SEA, Competition in Healthcare, speaker, NOLA

October 2023: The  $2^{nd}$  University of North Texas Cybersecurity Symposium, speaker, Denton, TX

October 2023: Informs Annual Meeting, Community-Committee's Choice Session, Speaker, Pheonix, AZ

July 2023: The  $22^{nd}$  Workshop on the Economics of Information Security (WEIS), Speaker, Geneva, Switzerland

June 2023: The  $12^{th}$  American Society of Health Economists (ASHEcon) Annual Conference, Emerging Scholar in Health Care Competition, Presenter, St. Louis, MO

April 2023: The  $1^{st}$  Texas Applied Microeconomics Student Workshop at UT Austin, Speaker, Austin, TX

November 2022: SEA  $92^{nd}$  Annual Meeting, Games and Dynamics Session, Presenter, Fort Lauderdale, FL

October 2022: The  $1^{st}$  University of North Texas Cybersecurity Symposium, speaker, Denton, TX

June 2022: The  $21^{st}$  Annual Workshop on the Economics of Information Security (WEIS), Rump Session, Presenter, Tulsa, OK

April 2022: Economic Brownbag Presentation, School of Economics, Political and Policy Sciences at UT Dallas, Presenter, Richardson, TX

### SERVICE AND PROFESSIONAL ACTIVITIES

MIS Quarterly 2023 Reviewer Development Workshop, invited mentee

November 2023

Referee, Journal of Cybersecurity

2023

Early Career Teachers' Network (ECTN) for OR/MS/Analytics Teachers at INFORMS 2023, invited mentee, Pheonix, AZ

October 2023

AEA-CSWEP Successfully Navigating Your PhD: A Mentoring Workshop for 3rd+ Year Women & Non-Binary PhD Students in Health Economics & Health Policy invited mentee, Zoom September-2023

University of Texas at Dallas, Student Diversity Advisory Council

Fall 2022 - present

ASHEcon Newsletter Author

June 2023

School of Economic, Political Policy Sciences TA Orientation, invited talk

Fall 2023, Fall 2022

School of Economic, Political Policy Sciences Student Advisory Council

Fall 2020 - Spring 2022

AEA-CSWEP PhD workshop for  $3^{rd}$  and  $4^{th}$  year women and non-binary PhD students in Economics and related fields, invited mentee, Fort Lauderdale, FL November 2022

AEA-CSWEP Successfully Navigating Your PhD mentoring workshop for 3rd Year+ Women & Non-Binary PhD Students in Economics & Economics-Adjacent Fields, invited mentee, Zoom September 2022

Undergraduate Mentoring: Hannah Smith (Texas Capital Bank Risk Management), Tucker Strow (Finance PhD Application)

# OTHER EDUCATIONAL ACTIVITIES

Recent Advances in Difference-in-Differences by Jonathan Roth, PDHP Workshop Series University of Michigan, Zoom

July, 2023

The  $2^{nd}$  Annual Cybersecurity Summer Institute

May 15-24, 2023

Georgia Tech's School of Cybersecurity and Privacy, Atlanta, GA

Causal Solutions: Modern Difference-in-Differences Methods, by Pedro Sant'Anna

March 2023

Emory University, Zoom

PhD Class of Management and Economics of Innovation

Copenhagen Business School PhD school, Zoom

AEA Continuing Education January 2022

Modern Sampling Methods: Design and Inference by Keisuke Hirano and Jack Porter, Zoom

Difference-in-Differences and Synthetic Control Workshop

October 2021

by Scott Cunningham, UTD

ECON9104C Topics in Econometrics: Machine Learning in Economics, doctoral course May 2021

University of Oslo, Zoom

ECON9912C Topics in Environmental and Resource Economics, doctoral course

May 2021

University of Oslo, Zoom

AEA Continuing Education, Industrial Organization

January 2021

by Steven Berry and Philip Haile, Zoom

AEA Continuing Education, Markets for Innovation: Market Failures and

Public Policies January 2021

by Kevin Bryan and Heidi Williams, Zoom

### PROFESSIONAL EMPLOYMENT

Business Data Platform Test Engineer, China Construction Bank Supply Chain Finance Co. LTD, Beijing Mar 2019 - Aug 2019

Assistant Researcher, Investment Research Institute, Beijing

Jul 2016 - Mar 2019

September 2022

### **A**FFILIATIONS

American Economic Association

American Society of Health Economists

Institute for Operations Research and the Management Sciences

### **OTHER**

**Data Access**: Texas School Project, Texas Higher Education Coordinating Board, researcher, and PI, approved; Healthcare Information and Management Systems Society, approved

Certificates:

Graduate Teaching Certificate (GTC) 2021 Spring

UTD Center for Teaching and Learning

Advanced GTC 2021 Fall

UTD Center for Teaching and Learning

Grant Writing Certificate undergoing

UTD Office of Research and Innovation Visa Status: US Permanent Resident

#### REFERENCES

# Prof. Dann Arce (Committee Chair)

UT System Regents' Outstanding Teacher Ashbel Smith Professor of Economics Program Head of Economics The School of Economic, Political and Policy Sciences University of Texas at Dallas Richardson, TX 75080 darce@utdallas.edu (972) 883-6857

### Prof. Anne M. Burton

Assistant Professor of Economics
The School of Economic, Political, and Policy
Sciences
University of Texas at Dallas
Richardson, TX 75080
anne.burton@utdallas.edu
(972) 883-4941

### Prof. Catherine Tucker

Sloan Distinguished Professor of Management Science and Marketing Faculty Chair EMBA Program The Sloan School of Management Massachusetts Institute of Technology Cambridge, MA 02139 cetucker@mit.edu Assistant Nikolas Hill: nkh@mit.edu (617) 252-1499

### Prof. Anton Sobolev

Assistant Professor of Political Economy and Cyber Policy
The School of Economic, Political and Policy Sciences
University of Texas at Dallas
Richardson, TX 75080
anton.sobolev@utdallas.edu
(972) 883-4967