

# Faculty Research Profile

Fall 2022 Edition

## Index

### [1.0 Accounting](#)

#### [1.1 Auditing](#)

[1.1.1 Audit Quality and its Effects](#)

[1.1.2 Auditor Contagion](#)

[1.1.3 The impact of PCAOB inspection reports on the audit quality of registered independent audit firms.](#)

[1.1.4 Complex Accounting Estimates](#)

[1.1.5 How bank auditing and banking regulation/supervision works in tandem to impact the financial reporting quality of banks.](#)

[1.1.6 Gaining insight into materiality judgements related to critical audit matters](#)

[1.1.7 The impact of the financial crisis on audit pricing in the banking industry](#)

#### [1.2 Financial Reporting](#)

[1.2.1 Effects of financial reporting, legal, and regulatory institutions on financial disclosure and economic choices](#)

[1.2.2 Management Characteristics](#)

[1.2.3 Effects of accounting standards updates](#)

[1.2.4 Effects of financial reporting changes](#)

#### [1.3 Tax](#)

[1.3.1 Tax law changes](#)

[1.3.2 Accounting for Income Taxes](#)

[1.3.3 Tax Complexity](#)

#### [1.4 Judgment and Decision Making](#)

[1.4.1 Auditing](#)

[1.4.2 Managerial accounting](#)

[1.4.3 Special Purpose Acquisition companies \(SPACs\), de-SPAC transactions, underperformance of de-SPAC transactions and information risk](#)

[1.4.4 Investment management companies and the demand for the “insurance role” of auditors](#)

[1.4.5 ESG](#)

[1.4.6 Setting the tone-at-the-top - CEO and CFO retention and dismissals](#)

#### [1.5 Accounting Education](#)

[1.5.1 Pedagogy and Curriculum](#)

[1.5.2 Use of Technology](#)

## [2.0 Economics](#)

### [2.1 Applied Microeconomics](#)

[2.1.1 Intergenerational Mobility](#)

[2.1.2 Health Economics](#)

[2.1.3 Urban and Regional Economics](#)

[2.1.4 Sports Economics](#)

[2.1.5 Economics of Education](#)

### [2.2 Macroeconomics](#)

[2.2.1 Public Finance](#)

[2.2.2 Labor Economics \(technically both macroeconomics and applied micro\)](#)

[2.2.3 Automation](#)

[2.2.4 Monetary Policy](#)

[2.2.5 Growth, Development, and Trade](#)

[2.2.6 Forecasting](#)

### [2.3 Experimental Economics](#)

[2.3.1 Auctions](#)

[2.3.2 Entrepreneurship](#)

[2.3.3 Planning on hosting the 2023 North American Meetings of the ESA in Charlotte in Fall 2023](#)

## [3.0 Finance](#)

### [3.1 Corporate Finance](#)

[3.1.1 Brand Equity](#)

[3.1.2 Labor Finance](#)

[3.1.3 Contracts and Incentives](#)

[3.1.4 Compensation and Incentives](#)

[3.1.5 Debt Contracting](#)

[3.1.6 Agency Conflicts](#)

[3.1.7 Mergers and Acquisitions](#)

[3.1.8 Corporate Transparency](#)

[3.1.9 Corporate governance](#)

[3.1.10 Capital Structure](#)

[3.1.11 Incentives, Contracts and Compensation](#)

[3.1.12 CEOs/CFOs](#)

[3.1.13 Capital Structure and Payout Policy](#)

[3.1.14 Investment Behavior](#)

[3.1.15 R&D, Patents, and Innovation](#)

[3.1.16 Risk Management](#)

### [3.2 Asset Pricing/Investments](#)

- [3.2.1 Market Risk Factors](#)
- [3.2.2 International Finance](#)
- [3.2.3 Credit Default Swaps](#)
- [3.2.4 Investor Behavior](#)
- [3.2.5 Belief Formation and Market Efficiency](#)
- [3.2.6 Derivatives and Commodities](#)
- [3.2.7 Portfolio Choice and Asset Allocation](#)
- [3.2.8 Credit Risk](#)
- [3.2.9 Market Microstructure](#)
- [3.2.10 Market Microstructure and High Frequency Trading](#)
- [3.2.11 Market Mispricing and Limit to Arbitrage](#)
- [3.2.12 Cross-section of Returns](#)
- [3.2.13 Return Dynamics](#)
- [3.2.14 Other](#)
- [3.2.15 Fixed income](#)
- [3.2.16 Machine learning](#)
- [3.2.17 Derivatives and Commodities](#)
- [3.2.18 ESG and Sustainable Finance](#)
- [3.2.19 Mutual and Hedge Funds Performance](#)
- [3.2.20 Real Estate and Housing Finance](#)
- [3.2.21 Market and Funding Liquidity](#)
- [3.2.22 Belief Formation and Market Efficiency](#)
- [3.2.23 Volatility, Tail Risk](#)

### [3.3 Insurance/Risk Management](#)

- [3.3.1 Adverse selection](#)
- [3.3.2 Reserve Management](#)
- [3.4.1 Asymmetric Information](#)
- [3.4.2 Housing Markets](#)
- [3.4.3 Machine Learning](#)
- [3.4.4 Real Options](#)
- [3.4.5 Development](#)
- [3.4.6. Redevelopment](#)
- [3.4.7 REITs](#)
- [3.4.8 Housing](#)
- [3.4.9 Land values](#)
- [3.4.10 Mortgage Markets](#)

### [4.0 Information Systems / Business Analytics](#)

- [4.1 Misinformation](#)
- [4.2 Artificial Intelligence](#)
- [4.3 Health Informatics](#)

- [4.3.1 Using IS/IT to improve health outcomes](#)
    - [4.3.2 Cybersecurity in HealthIT](#)
  - [4.4 Online Communities & Crowdsourcing](#)
    - [4.4.1 Understand user motivations to contribute to online communities](#)
  - [4.5 Blockchain Adoption](#)
    - [4.5.1 Blockchain adoption in supply chains](#)
  - [4.6 Online Reviews](#)
    - [4.6.1 What factors motivate users to provide high quality online reviews](#)
  - [4.7 Machine Learning in Business Research](#)
    - [4.7.1 Apply cutting-edge machine learning methods to understand business phenomena](#)
  - [4.8 Knowledge Management](#)
    - [4.8.1 Knowledge-Intensive Service Delivery](#)
  - [4.9 Digital Inclusion](#)
    - [4.9.1 Mobile Payments](#)
  - [4.10 Ethical Issues in Information Technology](#)
- 
- [5.0 Management](#)
    - [5.1 Entrepreneurship](#)
    - [5.2 Family Business](#)
    - [5.3 Leadership and DEI](#)
    - [5.4 Organizational Science/Behavior](#)
    - [5.5 Ethics](#)
    - [5.6 Research Methods and Statistics \(data science, measurement, multilevel modeling, meta-analysis, open science, survey nonresponse, causal inference\)](#)
- 
- [6.0 Marketing](#)
    - [6.1 Digital Marketing](#)
    - [6.2 Marketing Analytics](#)
    - [6.3 Marketing Strategy](#)
    - [6.4 Blockchain](#)
- 
- [7.0 Operations & Supply Chain Management](#)
    - [7.1 Operations-Marketing Interface](#)
      - [7.1.1 Promotions and inventory management](#)
      - [7.1.2 Return policies and inventory interactions](#)
      - [7.1.3 Dynamic pricing](#)
    - [7.2 Sustainable Operations](#)
      - [7.2.1 Management of personnel protective equipment](#)
    - [7.3 Risk Management](#)
      - [7.3.1 Portfolio/Operational risk/Cyber risk](#)
      - [7.3.2 Energy market risk](#)
      - [7.3.3 Supply chain risk](#)
      - [7.3.4 Cyber Risk](#)

[8.0 School of Data Science](#)

[8.1 Area 1: Artificial Intelligence and Machine Learning](#)

[8.2 Area 2: Leadership and Data Science](#)

[8.3 Area 3: Nanoscale Science and Materials](#)

[8.4 Area 4: Online Misinformation Behavior, Impact, Detection, and Mitigation](#)

[8.5 Area 5: Smart and sustainable cities](#)

[8.6 Area 6: Urban health](#)



## 1.0 Accounting

### 1.1 Auditing

#### 1.1.1 Audit Quality and its Effects

- Sample Publications/Research Projects
  - Burnett, B. M., B. M. Cripe, G. W. Martin, and B. P. McAllister, 2012, Audit Quality and the Trade-Off between Accretive Stock Repurchases and Accrual-Based Earnings Management, *The Accounting Review* 87(6), 1861-1884.
  - Burnett, B.M., Hui Chen, and Katherine Gunny, 2018. Auditor-Provided Lobbying Service and Audit Quality, *Journal of Accounting, Auditing, and Finance* 33(3), 402-434.
  - Barton, F. J., B. M. Burnett, K. Gunny, and B. P. Miller, 2022, The Importance of Separating the Probability of Committing and Detecting Misstatements in the Restatement Setting, *forthcoming at Management Science* forthcoming, 104.
  - Martin, Gregory, Dasaratha V. Rama, K. Raghunandan, and Paul Tanyi, 2022, Do Shareholder Ratification Votes Impact Subsequent Audit Outcomes?, *Current Issues in Auditing*.
  - Martin, Gregory, Kannan Raghunandan, Dasaratha Rama, and Paul Tanyi. 2020, Shareholder Dissatisfaction and Subsequent Audit Outcomes, *Accounting Horizons* 34 (4), 181-200.
- Faculty active/interested: [Brian Burnett](#), [Greg Martin](#)

#### 1.1.2 Auditor Contagion

- Sample Publications/Research Projects
  - Diaz, Jamie, Gregory W Martin and Wayne B Thomas, 2017, Does Auditor Locality Matter in Financial Reporting Quality?, *Current Issues in Auditing* 11 (2), 9-14,
  - Diaz, Jamie, Gregory W Martin and Wayne B Thomas, Financial Reporting Quality and Auditor Locality Contagion, 2017, *Auditing: Journal of Practice and Theory* 36 (4), 71-87.

- Faculty active/interested: [Greg Martin](#)

### 1.1.3 *The impact of PCAOB inspection reports on the audit quality of registered independent audit firms.*

- Sample Publications/Research Projects
  - Gosh, Al., and Cunyu Xing, 2021, Goodwill and Audit Effort, *Accounting Horizon* 35 (4), 83-103.
  - Gosh, Al. and Subprasiri J. Siriviriyakul, 2018, Quasi Rents to Audit Firms from Longer Tenure, *Accounting Horizon* 32 (2), 81-102.
  - Gosh, Al., Cunyu Xing, and Elisabeth Peltier, 2017, Audit Quality of Chinese ADRs, *The Accounting Horizons* 31 (2), 25-43.
  - Gosh, Al., Scott N. Bronson, and Chris E. Hogan, 2017, Audit Fee Differential, Audit Effort and Litigation Risk: An Examination of ADR Firms, *Contemporary Accounting Research* 34 (1), 83-117.
  - Hong, K. Philip, David S. Kerr, and Casper E. Wiggins, 2022 PCAOB International Inspections: Updates and Extensions, *International Journal of Auditing*, 1-35.
  - Blankley, A.I., Keejae P. Hong, and David S. Kerr, 2014, A Note on the Effect of PCAOB Inspections on the Audit Quality of Triennial CPA Firms, *Research in Accounting Regulation* 26 (2).
  - Blankley, A.I., David S. Kerr, and Casper E. Wiggins, 2012, A Content Analysis of CPA Firms' Correspondence Following PCAOB Inspections: 2004-2010, *Research in Accounting Regulation* 24 (2).
- Faculty active/interested: [Al Ghosh](#), David Kerr

### 1.1.4 *Complex Accounting Estimates*

- Sample Publications/Research Projects
  - Work-in-progress
- Faculty active/interested: [Al Ghosh](#)

*1.1.5 How bank auditing and banking regulation/supervision works in tandem to impact the financial reporting quality of banks.*

- Sample Publications/Research Projects
  - Work-in-progress
- Faculty active/interested: [Al Ghosh](#)

*1.1.6 Gaining insight into materiality judgements related to critical audit matters*

- Sample Publications/Research Projects
  - CAMs in Bank Audit Reports: An Insight into Materiality Decisions of Auditors. Work in Progress.
- Faculty active/interested: [Jack Cathey](#)

*1.1.7 The impact of the financial crisis on audit pricing in the banking industry*

- Sample Publications/Research Projects
  - Tanyi, P. and J. Cathey. The audits of banks in the U.S.: Has it changed since the Financial Crisis? Working Paper.
- Faculty active/interested: [Jack Cathey](#), [Paul Tanyi](#)

## **1.2 Financial Reporting**

*1.2.1 Effects of financial reporting, legal, and regulatory institutions on financial disclosure and economic choices*

- Sample Publications/Research Projects
  - Burnett, B. M., B. N. Jorgensen and T. J. Pollard, 2017, The Stock Market Reaction to Losing or Gaining Foreign Private Issuer Status, *Journal of Accounting and Public Policy* 36(2), 101-118.
  - Burnett, B. M., D. Hart, B. N. Jorgensen, and G. W. Martin. 2019. Multiple Regulators and Accounting Restatements: Evidence from Canada. *Journal of International Accounting Research* 18(2): 3-29.



- Burnett, B. M. 2020. Do Stock Prices Reflect Undisclosed Financial Statement Information? Evidence from the OTCBB. *Journal of Accounting and Public Policy* 39(5): 1-18.
- Burnett, B. M., B. N. Jorgensen, and T. J. Pollard. 2022. Consequences of a Two-Tiered Regulatory Model: Evidence from Audit Fees and Change in Foreign Private Issuer Status. First Round Submission at *Auditing: A Journal of Practice & Theory*.
- Burnett, B. M., D. Hart, and P. Patrick. 2022. IFRS Adoption and Litigation Risk: Evidence from Canada. Working Paper.
- Martin, Gregory, Wayne Thomas and Matthew Wieland. 2016. "S&P 500 Membership and Managers' Supply of Conservative Financial Reports." *Journal of Business Finance and Accounting* 43 (5/6), 543-571
- Faculty active/interested: [Brian Burnett](#), [Greg Martin](#), [Pat Mynatt](#)

### 1.2.2 Management Characteristics

- Sample Publications/Research Projects
  - Wesley, Curtis, Gregory Martin, Darryl Rice, and Connor Lubojacky. 2021. "Do the Right Thing: The Imprinting of Deonance at the Upper Echelons." *Journal of Business Ethics*.
  - Burnett, Brian, Gregory Martin, and David Reppenhagen. 2021. "Manager Discretion amidst Revenue Recognition Misstatements." *Journal of Business Finance and Accounting* 48 (5-6): 869-894.
  - Lail, Bradley and Gregory Martin. 2017. "Are Entrenched Managers' Accounting Choices More Predictive of Future Cash Flows?" *Journal of Business Finance and Accounting* 44 (5/6), 593-610.
- Interested Faculty: [Greg Martin](#)

### 1.2.3 Effects of accounting standards updates

- Sample Publications/Research Projects
  - Kearney, L. W., Sevin, S. K., & Sofsky, W. A., 2020, How ASU 2018-12 affects the timing of earnings emergence. *The CPA Journal*, 90(4), 40-47.

- Faculty active/interested: Linwood Kearney, Suzanne Sevin, William Sofsky

#### 1.2.4 *Effects of financial reporting changes*

- Sample Publications/Research Projects
  - Kearney, L., S. Sevin, and W. Sofsky. 2020. How ASU 2018-12 Affects the Timing of Earnings Emergence: The Potential Impact for the Insurance Industry. *The CPA Journal* Vol. 90 (4): 40-47.
- Faculty active/interested: Linwood Kearney, Suzanne Sevin, William Sofsky

### 1.3 Tax

#### 1.3.1 *Tax law changes*

- Sample Publications/Research Projects
  - Burton, H. and N. Brock. 2019. Congress Finally Passes Carried Interest Legislation: But is it Enough? *The ATA Journal of Legal Tax Research*. (October).
  - Burton, H.A. and Skipper, D. (November 2008). “Ramifications of a Flat Tax – Shifting the Burden to the Middle Class”, *International Advances in Economics Research*. 14(4), 460-471.
  - Manlove, A., Schwab, C. M., & Stomberg, B. (2021). The Effect of Statutory Tax Rates on the CEO Performance-Turnover Relation. Working Paper.
  - Manlove, A. and S. Rego. (2021). Corporate Income and Expense Shifting Around the Tax Cuts and Jobs Act of 2017. Working paper.
  - Effects of tax/legislative changes on financial reporting and corporate behavior. Working paper, William Sofsky
- Faculty active/interested: Hughtlene Burton, Adam Manlove, William Sofsky

#### 1.3.2 *Accounting for Income Taxes*

- Sample Publications/Research Projects

- Tanyi, P. and H. Burton. 2020. Tax Related Accounting Restatements and Tax Contingency Reporting. *Advances in Taxation*. Forthcoming (accepted March 2020).
- Tanyi, P. and H. Burton. 2019. Financial Statement Aggressiveness Related to Tax Accounting and Tax-Related Misstatements. *Accounting and the Public Interest*. 19(1) 83-112.
- Manlove, A. (2022). The Effect of Increased Private Tax Disclosure on the Relevance of Reserves for Uncertain Tax Positions. Working paper.
- Faculty active/interested: Hughlene Burton, Adam Manlove, [Paul Tanyi](#)

### 1.3.3 Tax Complexity

- Sample Publications/Research Projects
  - Burton, H. and Karlinsky, S. 2016. Tax Professionals' Perception of Large and Mid-Size Business US Tax Law Complexity. *eJournal of Tax Research*. Vol. 12 pp 61-94.
  - Burton, H and Karlinsky, S. 2016, Complexity of Tax Simplification: USA Perspective. Chapter in *The Complexity of Tax Simplification*, ed. Simon James, Adrian Sawyer and Tamer Budak.
- Faculty active/interested: Hughlene Burton, Adam Manlove, [Paul Tanyi](#)

## 1.4 Judgment and Decision Making

### 1.4.1 Auditing

- Sample Publications/Research Projects
  - Feustel, L., D. B. Schmitt, and S. D. Vandervelde. 2021. Are there unintended consequences of tax professional involvement in audit judgments? *Behavioral Research in Accounting* Vol 33 (1): 81-106.
  - Wolfe, C. J., B. E. Christensen, and S. D. Vandervelde. 2020. Intuitive versus analytical thinking and impairment testing. *Contemporary Accounting Research* Vol. 37 (3): 1598-1621.

- Persellin, J. S., J. J. Schmidt, S. D. Vandervelde, and Michael S. Wilkins. 2019. Auditor Perceptions of Audit Workloads, Audit Quality, and Job Satisfaction. *Accounting Horizons* Vol. 33 (4): 95-117.
- Joe, J. R., S. D. Vandervelde, and Y. Wu. 2017. Use of Third Party Specialists' Reports When Auditing Fair Value Measurements: Do Auditors Stay in their Comfort Zone? *The Accounting Review* Vol. 92 (5): 89-116.
- Messier, W. F. Jr., L. Quick, and S. D. Vandervelde. 2014. The Influence of Process Accountability and Accounting Standard Type on Auditor Usage of a Status Quo Heuristic. *Accounting, Organizations & Society* Vol. 39 (1): 59-74.
- Faculty active/interested: [Scott Vandervelde](#)

#### 1.4.2 Managerial accounting

- Sample Publications/Research Projects
  - Douthit, J, L. Kearney, and D. Stevens. 2012. Can Cheap Talk Mitigate Agency Problems in the Presence of a Noisy Performance Measure? An Experimental Test in a Single- and Multi-Period Setting. *Journal of Management Accounting Research*, Vol 24: 135-158.
  - Brink, A., K. Green, and L. Kearney. 2022. Control Implementation Strategies: Slack Reduction and Manager Trust. Working paper.
- Faculty active/interested: Linwood Kearney

#### 1.4.3 Special Purpose Acquisition companies (SPACs), de-SPAC transactions, underperformance of de-SPAC transactions and information risk

- Sample Publications/Research Projects
  - Work-in-progress
- Faculty active/interested: [Al Ghosh](#), [Brian Burnett](#)

#### 1.4.4 Investment management companies and the demand for the “insurance role” of auditors

- Sample Publications/Research Projects

- Work-in-progress
- Faculty active/interested: [Al Ghosh](#)

#### 1.4.5 ESG

- Sample Publications/Research Projects
  - The role of ESG in debt contracts
  - The value of asset retirement obligations and environmental cost remediation disclosures to equity holders
- Faculty active/interested: [Al Ghosh](#)

#### 1.4.6 Setting the tone-at-the-top - CEO and CFO retention and dismissals

- Sample Publications/Research Projects
  - “Accounting Losses as a Heuristic for Managerial Failure: Evidence from CEO Turnovers” *Journal of Financial and Quantitative Analysis*, 2019, Vol. 54, No. 2, 877.
- Faculty active/interested: [Al Ghosh](#)

### 1.5 Accounting Education

#### 1.5.1. Pedagogy and Curriculum

- Sample Publications/Research Projects
  - “The State of Accounting Education in Business Schools: An Examination and Analysis of Active Learning Techniques” *Advances in Accounting Education* (Volume 21), 2017, pp. 101-124.
  - *Examination of outcomes from changes to Principles of Accounting course from a preparer approach to a user approach.*
  - *Examination of outcomes from changes to Intermediate Accounting from a two semester to a three semester sequence.*
- Faculty active/interested: Linwood Kearney, David Kerr, Suzanne Sevin, William Sofsky

### 1.5.2 Use of Technology

- Sample Publications/Research Projects
  - “An Examination and Analysis of Technologies Employed by Accounting Educators”, *The Accounting Educators’ Journal*, (Volume XXVIII), 2018, pp. 75-98.
- Faculty active/interested: David Kerr



## 2.0 Economics

### 2.1 Applied Microeconomics

#### 2.1.1 Intergenerational Mobility

- Sample Publications/Research Projects
  - Spillover Bias in Multigenerational Income Regressions ([paper](#), forthcoming *Journal of Human Resources*)
- Faculty active/interested: [Kelly Vosters](#), [Tom Mayock](#), [Lisa Schulkind](#), [Musab Kurnaz](#), [Paul Gaggl](#)

#### 2.1.2 Health Economics

- Sample Publications/Research Projects
  - Disease Outbreaks, Healthcare Utilization, and On-Time Immunization in the First Year of Life ([paper](#), *Journal of Health Economics*)
- Faculty active/interested: [Lisa Schulkind](#), [Jennifer Troyer](#), Alice Tseng

#### 2.1.3 Urban and Regional Economics

- Sample Publications/Research Projects
  - Socioeconomic and Racial Disparities in the Financial Returns to Home Ownership ([paper](#), *Regional Science and Urban Economics*)

- Faculty active/interested: [Tom Mayock](#), [Craig Depken](#), John Connaughton, [Kelly Vosters](#)

#### 2.1.4 Sports Economics

- Sample Publications/Research Projects
  - Market Evidence Against Widespread Point Shaving in College Basketball (paper, *Journal of Economic Behavior and Organization*)
- Faculty active/interested: [Craig Depken](#)

#### 2.1.5 Economics of Education

- Sample Publications/Research Projects
  - Missed Signals: The Effect of ACT College-Readiness Measures on Post-Secondary Decisions ([paper](#), *Economics of Education Review*)
- Faculty active/interested: [Kelly Vosters](#), [Lisa Schulkind](#), Matt Metzgar, [Craig Depken](#)

## 2.2 Macroeconomics

#### 2.2.1 Public Finance

- Sample Publications/Research Projects
  - Optimal Taxation of Families: Mirrlees meets Becker ([paper](#), *Economic Journal*)
- Faculty active/interested: [Musab Kurnaz](#)

#### 2.2.2 Labor Economics (technically both macroeconomics and applied micro)

- Sample Publications/Research Projects
  - The Cyclical Component of Labor Market Polarization and Jobless Recoveries in the U.S. ([paper](#), *Journal of Monetary Economics*)
- Faculty active/interested: [Paul Gaggl](#), [Kelly Vosters](#)

### 2.2.3 Automation

- Sample Publications/Research Projects
  - On the Welfare Implications of Automation ([paper](#), *Review of Economic Dynamics*)
- Faculty active/interested: [Paul Gaggl](#)

### 2.2.4 Monetary Policy

- Sample Publications/Research Projects
  - Stop-Go Monetary Policy ([paper](#), *Economic Inquiry*)
- Faculty active/interested: Rob Roy McGregor

### 2.2.5 Growth, Development, and Trade

- Sample Publications/Research Projects
  - R&D-based Calibrated Growth Models with Finite-Length Patents: A Novel Relaxation Algorithm for Solving an Autonomous FDE System of Mixed Type ([paper](#), *Computational Economics*)
- Faculty active/interested: [Hwan Lin](#), [Theresa Mannah-Blankson](#)

### 2.2.6 Forecasting

- [NC Economic Forecast](#)
- Faculty active/interested: John Connaughton

## 2.3 Experimental Economics

### 2.3.1 Auctions

- Sample Publications/Research Projects
  - Entry by Successful Speculators in Auctions with Resale ([paper](#), *Experimental Economics*)
- Faculty active/interested: [Krista Saral](#), [Artie Zillante](#)



### 2.3.2 Entrepreneurship

- Sample Publications/Research Projects
  - The Behavioral Approach to Entrepreneurship ([Handbook chapter](#))
- Faculty active/interested: [Krista Saral](#)

### 2.3.3 Planning on hosting the 2023 North American Meetings of the ESA in Charlotte in Fall 2023

- Organizers: [Artie Zillante](#), [Krista Saral](#)



## 3.0 Finance

### 3.1 Corporate Finance

#### 3.1.1 Brand Equity

- Sample Publications/Research Projects
  - Mauer, David C., Natalia Vilatoro, and Yilei Zhang, 2022, Brand equity and corporate debt structure, Journal of Business Finance and Accounting 49, 1077-1112.
- Faculty active/interested: [David C.Mauer](#).

#### 3.1.2 Labor Finance

- Sample Publications/Research Projects
  - Mauer, David C., Kyeong Hun Lee, and Emma Qianying Xu, 2018, Human capital relatedness and mergers and acquisitions, Journal of Financial Economics 129(1), 111-135.
- Faculty active/interested: [David C. Mauer](#).

### *3.1.3 Contracts and Incentives*

- Sample Publications/Research Projects
  - Mauer, David C., and Dirk Hackbarth, 2012, Optimal priority structure, capital structure, and investment, *Review of Financial Studies* 25 (3), 747-796.
- Faculty active/interested: [David C. Mauer](#)

### *3.1.4 Compensation and Incentives*

- Sample Publications/Research Projects
  - Mauer, David C., and Yixin Liu, 2011, Corporate cash holdings and CEO compensation incentives, *Journal of Financial Economics* 102 (1), 183-198.
- Faculty active/interested: [David C. Mauer](#)

### *3.1.5 Debt Contracting*

- Sample Publications/Research Projects
  - Mauer, David C., Matthew T. Billett, and Tao-Hsies D. King, 2007, Growth opportunities and the choice of leverage, debt maturity, and covenants, *Journal of Finance* 62, 697-730.
- Faculty active/interested: [Dolly King](#) and [David C. Mauer](#)

### *3.1.6 Agency Conflicts*

- Sample Publications/Research Projects
  - Mauer, David C., Paul D. Childs, and Steven H. Ott, 2005, Interactions of corporate financing and investment decisions: The effects of agency conflicts, *Journal of Financial Economics* 76 (3), 667-690.
- Faculty active/interested: [David C. Mauer](#)

### *3.1.7 Mergers and Acquisitions*

- Sample Publications/Research Projects
  - Mauer, David C., Matthew T. Billett, and Tao-Hsien D. King, 2005, Bondholder wealth effects in mergers and acquisitions:

New evidence from the 1980s and 1990s, *Journal of Finance* 59,107-135.

- Faculty active/interested: [Dolly King](#), and [David C. Mauer](#)

### *3.1.8 Corporate Transparency*

- Sample Publications/Research Projects
  - Han, Sangyong, Gene C. Lai, and Chia-Ling Ho, 2018, Corporate Transparency, Reserve Management and Earnings Surprises: Evidence from U.S. Property-Liability Insurance Companies, *Journal of Banking and Finance*, 96, 379-392.
- Faculty active/interested: Gene Lai

### *3.1.9 Corporate governance*

- Sample Publications/Research Projects
  - Hsu, Wen-Yen, Yenyu Huang, and Gene C. Lai, 2015, Corporate Governance and Cash Holdings: Evidence from the U.S. Property-Liability Insurance Industry, *The Journal of Risk Insurance*, 82 (3), 715-748.
- Academic Directors and Corporate Innovation, Working paper.
- Faculty active/interested: Ruiyao Zhu.

### *3.1.10 Capital Structure*

- Sample Publications/Research Projects
  - Hong, Eunpyo, Min C. Park, and Tao-Hsien D. King, 2022, The Effect of Option Listing on Financing Decisions, forthcoming in *Journal of Business Finance and Accounting*.
- Faculty active/interested: [Dolly King](#).
  - Putable Bonds, Risk-Shifting Problems, and Information Asymmetry, *Journal of Fixed Income*.
- Faculty active/interested: [Dolly King](#), Taichun Piao.

### *3.1.11 Incentives, Contracts and Compensation*

- Sample Publications/Research Projects

- Nishikawa, Takeshi, Andrew K. Prevost, and Tao-Hsien D. King, 2022, The impact of Organized Labor on CEO Debt-like Compensation, forthcoming in Journal of Accounting, Auditing and Finance.
- Faculty active/interested: [Dolly King](#).
  - Does Executive Compensation Duration Generate Does Executive Compensation Duration Generate Different Risk Incentives? Evidence on Corporate Hedging, working paper
- Faculty active/interested: [Dolly King](#), and Taichun Piao

### *3.1.12 CEOs/CFOs*

- Sample Publications/Research Projects
  - Xie, Yutong, Jin Xu and Ruiyao Zhu, 2022, Does it pay To Hire A Friend? Working paper.
- Faculty active/interested: Ruiyao Zhu

### *3.1.13 Capital Structure and Payout Policy*

- Sample Publications/Research Projects
  - Chu, Y., 2012. Optimal capital structure, bargaining, and the supplier market structure. Journal of Financial Economics, 106 (2),411-426.
  - Chu, Y., 2018. Shareholder-creditor conflict and payout policy: Evidence from mergers between lenders and shareholders. Review of Financial Studies, 31 (8), 3098-3121.
- Faculty active/Interested: [Yongqiang Chu](#)

### *3.1.14 Investment Behavior*

- Sample Publications/Research Projects
  - Chu, Y., 2019, Debt renegotiation and debt overhang: Evidence from lender mergers, Journal of Financial and Quantitative Analysis, 56 (3), 995-1021
- Faculty active/interested: [Yongqiang Chu](#)

### *3.1.15 R&D, Patents, and Innovation*

- Sample Publications/Research Projects
  - Chu, Y., Xuan Tian, and Wenyu Wang, 2018, Corporate innovation along the supply chain. *Management Science*, 65 (6), 2445-2466.
- Faculty active/interested: [Yongqiang Chu](#)

### *3.1.16 Risk Management*

- Sample Publications/Research Projects
  - Chu, Y., Shareholder-Creditor Conflict and Hedging Policy: Evidence from Mergers between Lenders and Shareholders, working paper.
- Faculty active/interested: [Yongqiang Chu](#), [Dolly King](#), and Taichun Piao.

## **3.2 Asset Pricing/Investments**

### *3.2.1 Market Risk Factors*

- Sample Publications/Research Projects
  - Chiang, Ethan, W. K. Hugen, and Jacob S. Sagi, 2015, Estimating oil risk factors using information from equity and derivatives markets, *Journal of Finance* 70, 769-804
  - Han, Yufeng, Guofu Zhou, and Yingzi Zhu, 2016, A Trend Factor: Using Information over Trading Horizons, *Journal of Financial Economics* 122 (2), 352-275.
- Faculty active/interested: Faculty active/interested: [Ethan Chiang](#); [Yufeng Han](#)

### *3.2.2 International Finance*

- Sample Publications/Research Projects
  - Chiang, Ethan, and Pierluigi Balduzzi, 2019, Real exchange rates and currency risk premiums, *Review of Asset Pricing Studies* 10 (1), 94-121.
- Faculty active/interested: [Ethan Chiang](#)

### 3.2.3 Credit Default Swaps

- Sample Publications/Research Projects
  - Mauer, David C., Eric Arentsen, Brian Rosenlund, Harold H. Zhang, and Feng Zhao, 2015, Subprime mortgage defaults and credit default swaps, *Journal of Finance* 70 (2), 689-731
- Faculty active/interested: [David C. Mauer](#).

### 3.2.4 Investor Behavior

- Sample Publications/Research Projects
  - Tian, Weidong, Julia Jiang, Jun Liu, and Xudong Zeng, 2020, Limited Diversification, Portfolio Inertia, and Ambiguous Correlation. *Journal of Economic Theory*.
- Faculty active/interested: Weidong Tian.

### 3.2.5 Belief Formation and Market Efficiency

- Sample Publications/Research Projects
  - Tian, Weidong, Phelim Boyle, Shui Feng, and Tan Wang, 2008, Robust Stochastic Discount Factors, *Review of Financial Studies* 21 (3), 1077-1122.
- Faculty active/interested: Weidong Tian.

### 3.2.6 Derivatives and Commodities

- Sample Publications/Research Projects
  - Tian, Weidong, 2016, Callable Contingent Capital: Valuation and Default Risk, *Management Science* 64 (1), 1-493.
- Faculty active/interested: Weidong Tian

### 3.2.7 Portfolio Choice and Asset Allocation

- Sample Publications/Research Projects
  - Tian, Weidong, and Phelim Boyle, 2007, Portfolio Management with Constraints, *Mathematical Finance* 17 (3), 319-343.

- Han, Yufeng, 2005, Asset Allocation with a High Dimensional Latent Factor Model, *Review of Financial Studies* 19 (1), 237-271.
- Kirby, Chris, and Barbara Ostdiek, 2009, It's all in the timing: Simple active portfolio strategies that outperform naive diversification, *Journal of Financial and Quantitative Analysis* 47, 437-467.
- Chiang, I.-H. Ethan, 2015, Modern portfolio management with conditioning information, *Journal of Empirical Finance* 33, 114-134.
- Faculty active/interested: Weidong Tian; Yufeng Han; Chris Kirby; Ethan Chiang.

### *3.2.8 Credit Risk*

- Sample Publications/Research Projects
  - Tian, Weidong, Jie Xiong, and J. Detemple, 2012, Optimal Stopping with Reward Constraints, *Finance and Stochastics* 16 (3), 423-448.
- Faculty active/interested: Weidong Tian.

### *3.2.9 Market Microstructure*

- Sample Publications/Research Projects
  - Tian, Weidong, 2014, Spanning with indexes, *Journal of Mathematical Economics* 53, 111-118.
- Faculty active/interested: Weidong Tian

### *3.2.10 Market Microstructure and High Frequency Trading*

- Sample Publications/Research Projects
  - Han, Yufeng, Lei Gao, Sophia Z. Li, and Guofu Zhou, 2017, Intraday Momentum: The First half-hour Return Predicts the last Half hour Return.
- Faculty active/interested: [Yufeng Han](#)

### 3.2.11 Market Mispricing and Limit to Arbitrage

- Sample Publications/Research Projects
  - Long-Run Law and Applications to Asset Pricing (working paper)
  - Han, Yufeng, Yueliang Lu, Weike Xu, and Guofu Zhou, Mispricing and Anomalies: An Exogenous Shock to Short Selling from the Dividend Tax Law Change
- Faculty active/interested: Weidong Tian; Yufeng Han

### 3.2.12 Cross-section of Returns

- Sample Publications/Research Projects
  - Han, Yufeng, Weidong Tian, Zhaodan Huang, and Guofu Zhou, Firm Fundamental Cycle and Cross-Section of Stock Return (working paper)
  - Kirby, Chris, 2022, Firm characteristics, cross-sectional regression estimates, and asset pricing tests, Review of Asset Pricing Studies 10 (2), 290-334.
  - Han, Yufeng, Dashan Huang, Dayong Huang, and Guofu Zhou, 2022, Expected Return, Volume and Mispricing, Journal of Financial Economics 143 (3), 1295-1315.
  - Chiang, I.-H. Ethan, Liao Yin, and Qing Zhou, 2021, Modeling the Cross-section of Stock Returns Using Sensible Models in a Model Pool, Journal of Empirical Finance 60, 56-73.
- Faculty active/interested: [Yufeng Han](#); Weidong Tian; Chris Kirby; Ethan Chiang.

### 3.2.13 Return Dynamics

- Sample Publications/Research Projects
  - Clark, Steven P., Yueliang Lu, and Weidong Tian, Equity Forward Return from Derivatives (working paper)
  - Han, Yufeng, 2006, Asset Allocation with a High Dimensional Latent Factor Model, Review of Financial Studies 19 (1), 237-271.



- Chiang, I.-H. Ethan, and W. Keener Hughen, 2017, Do oil futures prices predict stock returns?, *Journal of Banking and Finance* 79, 129-141.
- Chiang, I.H. Ethan, Chris Kirby, and Ziyue Zhe Nie, 2021, Short-term reversals, short-term momentum, and news-driven trading activity, *Journal of Banking and Finance* 125, 106068
- Faculty active/interested: Weidong Tian; Steven Clark; Yufeng Han; Ethan Chiang; Chris Kirby.

#### *3.2.14 Other*

- Sample Publications/Research Projects
  - Tian, Weidong, and Julia Jiang, 2018, Semi-Nonparametric Approximation and index options, *Annals of Finance* 15.
  - Faculty active/interested: Weidong Tian

#### *3.2.15 Fixed income*

- Sample Publications/Research Projects
  - Chiang, Ethan, and Pierluigi Balduzzi, 2012, A simple test of the affine class of term structure models, *Review of Asset Pricing Studies* 2 (2), 2898-2936.
  - Lyon, Jeffrey Michael, The Determinants of Yankee Debt pricing (working paper).
- Faculty active/interested: Ethan Chiang; [Dolly King](#).

#### *3.2.16 Machine learning*

- Sample Publications/Research Projects
  - Han, Yufeng, Ai He, David Rapach, and Guofu Zhou, 2022, Expected Stock Returns and Firms Characteristics: E-ENet, Assessment, and Implications.
- Faculty active/interested: [Yufeng Han](#)

#### *3.2.17 Derivatives and Commodities*

- Sample Publications/Research Projects

- Han, Yufeng, Xuan Mo, Zhi Su, and Yifeng Zhu, 2020, Is Idiosyncratic Asymmetry Priced in Commodity Futures?
- Faculty active/interested: [Yufeng Han](#)

### *3.2.18 ESG and Sustainable Finance*

- Sample Publications/Research Projects
  - Brown, William O., Xiaoli Gao, Yufeng Han, Dayong Huang, and Fang Wang, 2022, Environmental Standards and Stock Returns.
- Faculty active/interested: [Yufeng Han](#)

### *3.2.19 Mutual and Hedge Funds Performance*

- Sample Publications/Research Projects
  - Han, Yufeng, Tom Noe, and Michael Rebell, 2017, Horses for Courses: Fund Managers and Organizational Structures, The Journal of Financial and Quantitative Analysis 52 (6), 2779-2807.
- Faculty active/interested: [Yufeng Han](#)

### *3.2.20 Real Estate and Housing Finance*

- Sample Publications/Research Projects
  - Han, Yufeng, Pisun Xu, and Jian Yang, 2012, U.S. Monetary Policy surprised and Mortgage Rates, Real Estate Economics 40 (3), 461-507.
- Faculty active/interested: [Yufeng Han](#), [Craig Depken](#), [Tom Mayock](#)

### *3.2.21 Market and Funding Liquidity*

- Sample Publications/Research Projects
  - Han, Yufeng, and David Lesmond, 2011, Liquidity Biases and the Pricing of Cross-Sectional Idiosyncratic Volatility, Review of Financial Studies 24 (5), 1590-1629.
- Faculty active/interested: [Yufeng Han](#)

### *3.2.22 Belief Formation and Market Efficiency*

- Sample Publications/Research Projects
  - Kirby, Chris, 1997, Measuring the predictable variation in stock and bond returns, *Review of Financial Studies* 10 (3), 579-630.
- Faculty active/interested: Wiedong Tian; Chris Kirby

### *3.2.23 Volatility, Tail Risk*

- Sample Publications/Research Projects
  - Han, Yufeng, 2006, Asset Allocation with a High Dimensional Latent Factor Model, *The Review of Financial Studies* 19 (1), 237-271.
  - Fleming, Jeff, Chris Kirby, and Barbara Ostdiek, 2002, The economic value of volatility timing, *Journal of Finance* 56 (1), 329-352.
- Faculty active/interested: [Christopher Kirby](#); Yufeng Han

## **3.3 Insurance/Risk Management**

### *3.3.1 Adverse selection*

- Sample Publications/Research Projects
  - Lai, Gene C., Hisashi Nakamura, Shinichi Yamamoto, and Takau Yoneyama, 2021, Adverse Retention: Strategic Renewal of Guaranteed Renewable Term Life Insurance Policies, *Journal of Risk and Insurance* 88 (4), 1001-1022.
- Faculty active/interested: Gene Lai

### *3.3.2 Reserve Management*

- Sample Publications/Research Projects
  - Lai, Gene C., Wen-Yen Hsu, and Yenyu Huang, 2019, Reserve Management and Audit Committee Characteristics: Evidence from U.S Property-Liability Insurance Companies, *Journal of Risk and Insurance* 86 (4), 1019-1043.

- Faculty active/interested: Gene Lai

### 3.4 Real Estate

#### 3.4.1 Asymmetric Information

- Sample Publications/Research Projects
  - Smith, Patrick, Crocker H Liu, and Adam D Nowak, 2020, Asymmetric or incomplete information about Asset Values? The Review of Financial Studies 33 (7), 2898-2936.
- Faculty active/interested: Patrick Smith

#### 3.4.2 Housing Markets

- Sample Publications/Research Projects
  - Smith, Patrick, and Adam D. Nowak, 2020, Quality-adjusted House Price Indexes, American Economic Review: Insights 2 (3), 339-356.
- Faculty active/interested: Patrick Smith, [Craig Depken](#), [Tom Mayock](#)

#### 3.4.3 Machine Learning

- Sample Publications/Research Projects
  - Smith, Patrick, and Adam D. Nowak, 2017, NowakTextual Analysis in Real Estate, Journal of Applied Econometrics 32 (4), 896-918.
- Faculty active/interested: Patrick Smith

#### 3.4.4 Real Options

- Sample Publications/Research Projects
  - Womanck, Kiplan, and Henry J. Munneke, 2020, Valuing the Redevelopment Option Component of Urban Land Values, Real Estate Economics 48 (1), 294-338.
- Faculty active/interested: [Kiplan Womack](#)

#### 3.4.5 Development

- Sample Publications/Research Projects
  - Womack, Kiplan, Yiyang Cheng, and Steven P. Clark, 2021, A Real Options Model of Real Estate Development with Entitlement Risk, *Real Estate Economics* 49(1), 106-151.
- Faculty active/interested: [Kiplan Womack](#), [Craig Depken](#), Steven Clark

#### 3.4.6. Redevelopment

- Sample Publications/Research Projects
  - Womack, Kiplan, and Henry J. Munneke, 2015, Neighborhood Renewal: The Decision to Renovate or Tear Down, *Regional Science and Urban Economics* 54, 99-115.
- Faculty active/interested: [Kiplan Womack](#)

#### 3.4.7 REITs

- Sample Publications/Research Projects
  - Womack, Kiplan, and J. Harold Mulherin, 2013, Competition, Auctions and Negotiations in REIT Takeovers, *The Journal of Real Estate Finance and Economics*, 50 (2), 151-180.
- Faculty active/interested: [Kiplan Womack](#)

#### 3.4.8 Housing

- Sample Publications/Research Projects
  - Womack, Kiplan, Ben T. Gilbert, Tyler Kjorstad, and Eli Beracha, 2018, On the Relation between Local Amenities and Housing Price Dynamics, *Real Estate Economics*, 46 (3), 612-654.
- Faculty active/interested: [Kiplan Womack](#), [Craig Depken](#), [Tom Mayock](#)

#### 3.4.9 Land values

- Sample Publications/Research Projects

- Womack, Kiplan, and Henry J. Munneke, 2020, Valuing the Redevelopment Option Component of Urban Land Values, Real Estate Economics, 48 (1), 294-338.
- Faculty active/interested: [Kiplan Womack](#), [Craig Depken](#)

#### 3.4.10 Mortgage Markets

- Sample Publications/Research Projects
  - Chu, Yongqiang, and Tim Zhang, 2022, Political influence and banks: Evidence from mortgage lending, Journal of Financial Intermediate 52, 100982.
- Faculty active/interested: [Yongqiang Chu](#).



## 4.0 Information Systems / Business Analytics

### 4.1 Misinformation

- *Research areas:*
  - *Understanding online misinformation strategies and misinformation dissemination or sharing behavior (e.g., through social network analysis, visualization, graph analysis)*
  - *Building machine learning models for automated online misinformation detection (e.g., fake news detection, fake online consumer product review detection; phishing detection; online fraud detection)*
  - *Developing effective methods for misinformation intervention*
  - *Focusing on misinformation in a variety of application domains, including, but not limited to, business, healthcare, politics, and entertainment.*
- Sample Publications/Research Projects

- Lina Zhou (PI) and Dongsong Zhang (Co-PI): “SBE: Small: Behavioral Control of Deceivers in Online Attacks”. National Science Foundation (NSF). Award #: SES 1527684. September 2015 – Aug., 2021. \$499,912.
- Lina Zhou (PI) and Dongsong Zhang (Co-PI): Spear Fishing Detection Training with Gamification, Behavior, and Inclusiveness Design. North Carolina Partnership for Cybersecurity Excellence (NC-PaCE). NCAE-C-001-2021: NCSU NCAE Excellence in Cybersecurity-NCSU-Spear phishing (NCSU prime, DoD/NSA funded). May 2022 - Dec 2023. \$96,334
- Zhou, L., J. Tao, D. Zhang (In Press). Do Fake News in Different Languages Tell the Same Story? An Analysis of Multi-level Thematic and Emotional Characteristics of News about COVID-19, Information Systems Frontier.
- Shan, G., Zhou, L., and Zhang, D. (2021). From Conflicts and Confusion to Doubts: Examining Review Inconsistency for Fake Review Detection. Decision Support Systems. 144.
- Zhang, D., Zhou, L., Kehoe, L. J., and Kilic, I. (2016). What Online Reviewer Behaviors Really Matter? A Study of Effects of Verbal and Nonverbal Behaviors on Online Fake Review Detection. Journal of Management Information Systems. 33(2). P.456-481
- Zhou, L., Shi, Y, and Zhang, D. (2008).A Statistical Language Modeling Approach to Online Deception Detection. IEEE Transactions on Knowledge and Data Engineering (TKDE). 20(8): pp.1077-1081.
- Faculty active/interested: [Dongsong Zhang](#), [Lina Zhou](#), [Antonis Stylianou](#)

## 4.2 Artificial Intelligence

- Sample Publications/Research Projects
  - Tao, J. L. Zhou, K. Hickey (2022). Making Sense of the Black-boxes: Toward Interpretable Text Classification using Deep Learning Models, Journal of the Association for Information Science and Technology, 1-16. <https://doi.org/10.1002/asi.24642>.
  - Zhou, L., Paul, S., Demirkan, H., Yuan, L., Spohrer, J., Zhou, M., & Basu, J. (2021). Intelligence Augmentation: Towards Building Human-Machine Symbiotic Relationship. AIS Transactions on Human Computer Interaction, 13(2), 243-264. <https://doi.org/10.17705/1thci.00149> DOI: [10.17705/1thci.00149](https://doi.org/10.17705/1thci.00149)
  - Tao, J. and L. Zhou (2020), A Weakly Supervised WordNet-guided Deep Learning Approach to Extracting

Aspect Terms from Online Reviews, ACM Transactions on Management Information Systems, 11(3), 1-22.

- Zhou, L., S. Pan, J. Wang, and A.V. Vasilakos (2017), Machine Learning on Big Data: Opportunities and Challenges, Neurocomputing, 237, 350-361.
- Faculty active/interested: [Lina Zhou](#), [Antonis Stylianou](#)

## 4.3 Health Informatics

### 4.3.1 Using IS/IT to improve health outcomes

- Sample Publications/Research Projects:
  - Silver, R. A., Subramaniam, C., Stylianou, A. C. “The Impact of Portal Satisfaction on Portal Use and Health Seeking Behavior: A Structural Equation Analysis,” Journal of Medical Internet Research 22, 3, (2020), <https://www.jmir.org/2020/3/e16260/>
  - Zhou, L., T. Siddiqui, S.L. Seliger, J.B.Blumenthal, Y. Kang, R. Doerfler, J.C.Fink (2019). Text Preprocessing for Improving Hypoglycemia Detection from Clinical Notes—A Case Study of Patients with Diabetes, International Journal of Medical Informatics, September 129, 374-380. <https://doi.org/10.1016/j.ijmedinf.2019.06.020>
  - Zhou, L. and A.P. Rupa (2018). Categorization and Association Analysis of Risk Factors for Adverse Drug Events, European Journal of Clinical Pharmacology, 74(4), 389-404.
- Faculty active/interested: [Reggie Silver](#), [Antonis Stylianou](#), [Chandra Subramaniam](#), [Lina Zhou](#)

### 4.3.2 Cybersecurity in HealthIT

- Sample Publications/Research Projects:
  - Alaiad, A. and L. Zhou (2017), Patients’ Adoption of WSN-based Smart Home Healthcare Systems: An Integrated Model of Facilitators and Barriers, IEEE Transactions on Professional Communication, 60(1), 4-23.
  - Zhang, D, J. Lim, L. Zhou, and A. Dahl (In Press), Breaking the Data Value-Privacy Paradox in Mobile Mental Health Systems: Toward User-Centered Privacy Protection, JMIR Mental Health, 8(12), December, [doi:10.2196/31633](https://doi.org/10.2196/31633).
- Faculty active/interested: [Lina Zhou](#)



## 4.4 Online Communities & Crowdsourcing

### 4.4.1 Understand user motivations to contribute to online communities

- Sample Publications/Research Projects
  - K Zhao, B Zhang, X Bai, Estimating contextual motivating factors in virtual interorganizational communities of practice: peer effects and organizational influences, *Information Systems Research*, 2018
  - Alasmari, A. and L. Zhou (2021), Share to Seek: The Effects of Disease Complexity on Health Information Seeking Behavior, *Journal of Medical Internet Research*, 23(3), [10.2196/21642](https://doi.org/10.2196/21642).
  - Temizkan, O and Kumar, R. (2015) Exploitation and Exploration Networks in Open Source Software Development: An Artifact-Level Analysis. *Journal of Management Information Systems*. 32 (1) 116-150 .
  - Temizkan, O and Kumar, R. Understanding Knowledge Crowdsourcing to Support Social Coding (In-progress)
  - Zheng, Y., Zhao, K., and Stylianou, A.C. "[The Impacts of Information and System Quality on Users' Continuance Intention in Online Communities: An Empirical Investigation](#)," *Decision Support Systems* 56, (2013), 513-524.
- Faculty active/interested: [Ram Kumar](#), [Kexin Zhao](#), [Lina Zhou](#), [Antonis Stylianou](#)

## 4.5 Blockchain Adoption

### 4.5.1 Blockchain adoption in supply chains

- Sample Publications/Research Projects
  - In progress
- Faculty active/interested: [Chandra Subramaniam](#), [Xue Guo](#), Vinay Vasudev

## 4.6 Online Reviews

### 4.6.1 What factors motivate users to provide high quality online reviews

- Impacts of online user reviews
  - Sample Publications/Research Projects:
    - X Guo and K Zhao, An empirical investigation of the bi-directional effects between online reviews and offline business performance. Work-in-progress

- K Zhao, P Zhang, HM Lee, Understanding the impacts of user-and marketer-generated content on free digital content consumption, *Decision Support Systems*, 2022
- R Mousavi, K Zhao, Examining the Impacts of Airbnb's Review Policy Change on Listing Reviews, *Journal of the Association for Information Systems*, 2022
- Zhao, K., Stylianou, A.C., and Zheng, Y., "[Sources and Impacts of Social Influence from Online Anonymous User Reviews](#)," *Information & Management* 55, 1, (2018), 16-30.
- Faculty active/interested: [Xue Guo](#), [Kexin Zhao](#), [Antonis Stylianou](#)

## 4.7 Machine Learning in Business Research

### *4.7.1 Apply cutting-edge machine learning methods to understand business phenomena*

- Sample Publications/Research Projects:
  - A.X. Liu, K Zhao, A. Liu, The Information Value of IT Risk Disclosures: A Semi-supervised Machine Learning Approach, Work-in-progress
  - A.X. Liu, K Zhao, S Song, CEO-COO social cohesion via language style matching and firm operational leanness. Work-in-progress
  - Tao, J. and L. Zhou (2020), Can Online Consumer Reviews Signal Restaurant Closure: A Deep Learning Based Time Series Analysis, *IEEE Transactions on Engineering Management*.
- Faculty active/interested: [Angela Xia Liu](#), [Kexin Zhao](#), [Lina Zhou](#), [Antonis Stylianou](#)

## 4.8 Knowledge Management

### *4.8.1 Knowledge-Intensive Service Delivery*

- Dong, S., Johar, M., Kumar, R. (June, 2019) Design of Contracts and Workflows for Knowledge Intensive IT Service Environments. *Decision Sciences (Journal of)*. 50 (3) 418-458 . .
- Dong, S., Johar, M., Kumar, R. (May, 2012) Understanding key issues in designing and using knowledge flow networks: An optimization-based managerial benchmarking approach. *Decision Support Systems*. 25 (3) 646-659 . .
- Dong, S., Johar, M., Kumar, R. (January, 2012) A Benchmarking Model for Knowledge Intensive Service

Delivery Management. *Journal of Management Information Systems*. 28 (3) 127-160.

- Stylianou, A.C., Subramaniam, C., and Niu, Y. "The Role of Knowledge Management in the Relationship between IT Capability and Interorganizational Performance – An Empirical Investigation," *Communications of the AIS* 45, (2019), 65-94. <https://aisel.aisnet.org/cais/vol45/iss1/4/>
- Faculty Active/Interested: [Monica Johar](#), [Ram Kumar](#), [Antonis Stylianou](#)

## 4.9 Digital Inclusion

### 4.9.1 Mobile Payments

- Sample Publications/Research Projects
  - Zaffar. A., Kumar, R., Zhao, K. (February, 2019) Using agent-based modeling to investigate diffusion of mobile-based branchless banking services in a developing country. *Decision Support Systems*. 117 62-74 .
- Faculty Active/Interested: [Ram Kumar](#), [Kexin Zhao](#)

## 4.10 Ethical Issues in Information Technology

- Sample Publications/Research Projects
  - Stylianou, A.C., Winter, S., Niu, Y., Giacalone, R., and Campbell, M. "Understanding the Behavioral Intention to Report Unethical Information Technology Practices: The Role of Machiavellianism, Gender and Computer Expertise," *Journal of Business Ethics* 117, 2, (2013), 333-343. <https://link.springer.com/article/10.1007/s10551-012-1521-1>
  - Campbell, M., Stylianou, A.C., and Shropshire, J. "A Stitch in Time Saves Nine: The Role of Moral Judgment in Reducing Internet Policy Violations," *International Journal of Business Information Systems* 24, 3, (2017), 369-386. <https://dl.acm.org/doi/10.1504/IJBIS.2017.082040>
- Faculty Active/Interested: [Antonis Stylianou](#)



## 5.0 Management

### 5.1 Entrepreneurship

- Sample Publications/Research Projects:
  - McSweeney, J. J., McSweeney, K. T., Webb, J. W., & Devers, C. E. (2022). The right touch of pitch assertiveness: Examining entrepreneurs' gender and project category fit in crowdfunding. *Journal of Business Venturing*, 37(4), 106223.
- Faculty active/interested: Justin Webb, Franz Kellermanns, Torsten Pieper, Laura Stanley, Vijay Patel

### 5.2 Family Business

- Sample Publications/Research Projects:
  - Lohwasser, T. S., Hoch, F., & Kellermanns, F. W. 2022. Strength in Stability: A Meta-Analysis of Family Firm Performance Moderated by Institutional Stability and Regime Type. *Entrepreneurship Theory and Practice*, 46(1): 117-158.
  - Yu, X., Stanley, L., Li, Y., Eddleston, K & Kellermanns, F.W. (2020). The invisible hand of evolutionary psychology: The importance of kinship in first generation family firms. *Entrepreneurship Theory and Practice*. 44(1) 134-157.
- Faculty active/interested: Franz Kellermanns, Torsten Pieper, Justin Webb, Laura Stanley, Vija Patel

### 5.3 Leadership and DEI

- Sample Publications/Research Projects:
  - Loignon, A. C., Gooty, J., Rogelberg, S. G., & Lucianetti, L. (2019). Disagreement in leader–follower dyadic exchanges: Shared relationship satisfaction and investment as antecedents. *Journal of Occupational and Organizational Psychology*, 92(3), 618-644.

- Faculty active/interested: George Banks, Janaki Gooty, Scott Tonidandel, Natasha Randle, Steven Rogelberg , David Woehr

#### 5.4 Organizational Science/Behavior

- Sample Publications/Research Projects:
  - Loignon, A. C., & Woehr, D. J. 2018. Social class in the organizational sciences: A conceptual integration and meta-analytic review. *Journal of Management*, 44(1): 61-88.
  - Rogelberg, S. G., Leach, D. J., Warr, P. B., & Burnfield, J. L. (2006). " Not another meeting!" Are meeting time demands related to employee well-being? *Journal of Applied Psychology*, 91(1), 83-96.
- Faculty active/interested: George Banks, Janaki Gooty, Scott Tonidandel, Laura Stanley, Natasha Randle, Steven Rogelberg , David Woehr

#### 5.5 Ethics

- Sample Publications/Research Projects:
  - Banks, G. C., †Fischer, T., †Gooty, J., & Stock, G. (2021). Ethical leadership: Mapping the terrain for concept cleanup and a future research agenda. *The Leadership Quarterly*, 32, 101471 †indicates equal contributor. (Won the 2021 best paper *The Leadership Quarterly*, Center for Creative Leadership)
  - Arnold, D. G. (2021). Universal Research Ethics and International Business Studies. *Journal of International Business Studies*, 52, 1229–1237.
- Faculty active/interested: Denis Arnold , George Banks, Karen Ford-Eickoff

#### 5.6 Research Methods and Statistics (data science, measurement, multilevel modeling, meta-analysis, open science, survey nonresponse, causal inference)

- Sample Publications/Research Projects:
  - Heggestad, E., Scheaf, D., Banks, G. C., Hausfeld, M.M., Tonidandel, S., Williams, E. (2019). Scale adaptation in

organizational science research: A review and best-practice recommendations. *Journal of Management*, 45, 2596-2627.

- Faculty active/interested: George Banks, Janaki Gooty, Steven Rogelberg, David Woehr, Scott Tonidandel



## 6.0 Marketing

### 6.1 Digital Marketing

- Sample Publications/Research Projects
  - [Golmohammadi, Alireza](#), Taha Havakhor, Dinesh K. Gauri, and Rajiv Sabherwal (Accepted), "Do Early Words from New Ventures Predict Fundraising? A Comparative View of Social Media Narratives," *MIS Quarterly*.
  - [Liu, Angela Xia](#), Yilin Li, and Sean Xin Xu (2021), "[Assessing the Unacquainted: Inferred Reviewer Personality and Review Helpfulness](#)," *MIS Quarterly*, 45 (3), 1113-1148.
  - Johnson, Garrett A., Scott K. Shriver, and [Shaoyin Du](#) (2020), "[Consumer privacy choice in online advertising: Who opts out and at what cost to industry?](#)" *Marketing Science* 39, no. 1: 33-51.
- Faculty active/interested: [Shaoyin Du](#), [Sunil Erevelles](#), [Alireza Golmohammadi](#), [Nima Jalali](#), [Angela Xia Liu](#), [Sangkil Moon](#)

### 6.2 Marketing Analytics

- Sample Publications/Research Projects
  - [Chen, Ming](#), Ray Burke, Sam Hui, and Alex Leykin (2021), "[Understanding Lateral and Vertical Biases in Consumer Attention: An In-Store Ambulatory Eye-Tracking Study](#)," *Journal of Marketing Research*, Vol 58(6), 1120-1141.
  - [Golmohammadi, Alireza](#), Taha Havakhor, Dinesh K. Gauri, Johann Joseph Comprix (2021), "[Complaint Publicization in Social Media](#)," *Journal of Marketing*, 85 (6), 1-23.

- Pang, Jun, [Angela Xia Liu](#), Peter N. Golder (2021), “[Critics’ Conformity to Consumers in Movie Evaluation](#),” [Journal of the Academy of Marketing Science](#), forthcoming.
- [Liu, Angela Xia](#), Jan-Benedict Steenkamp, and Jurui Zhang (2018), “[Agglomeration as a Driver of the Volume of Electronic Word of Mouth in the Restaurant Industry](#),” [Journal of Marketing Research](#), 55(4), 507-523.
- [Liu, Angela Xia](#), Tridib Mazumdar, and Bo Li (2015), “[Counterfactual Decomposition of Movie Star Effects with Star Selection](#),” [Management Science](#), 61(7), 1704-1721.
- Faculty active/interested: [Ming Chen](#), [Nima Jalali](#), [Angela Xia Liu](#), [Sangkil Moon](#), [Craig Depken](#)

### 6.3 Marketing Strategy

- Sample Publications/Research Projects
  - Song, Reo, [Sangkil Moon](#), Haipeng (Allan) Chen, and Mark B. Houston (2018), “[When Marketing Strategy Meets Culture: The Role of Culture in Product Evaluations](#),” [Journal of the Academy of Marketing Science](#), 46 (3), 384-402.
  - [Liu, Angela Xia](#), Yong Liu, and Ting Luo (2016), “[What Drives a Firm's Choice of Product Recall Remedy? The Impact Remedy Cost, Product Hazard, and the CEO](#),” [Journal of Marketing](#), 80(3), 79-95.
- Faculty active/interested: [Sunil Erevelles](#), [Alireza Golmohammadi](#), [Mason Jenkins](#), [Angela Xia Liu](#), [Sangkil Moon](#)

### 6.4 Blockchain

- Sample Publication/Research Project
  - [Erevelles, Sunil](#), Maanasi Bulusu, Timea Honeycutt, Stephanie Seligman and Padma Bulusu (2022), “The Patient-Centric Blockchain,” [Association of Marketing Theory and Practice Proceedings 2022](#), 23. (Winner of Best Paper Award)
- Faculty active/interested: [Sunil Erevelles](#)



## 7.0 Operations & Supply Chain Management

### 7.1 Operations-Marketing Interface

#### 7.1.1 Promotions and inventory management

- Sample Publications/Research Projects
  - Khouja, M. X. Liu and J. Zhou. 2020. To Sell or Not to Sell to an Off-Price Retailer in the Presence of Strategic Consumers. *Omega*, 90, January 2020, 102002.
  - Khouja, M. and J. Zhou. 2019. Early Sale of Seasonal Inventory in the Newsvendor Problem. *IIE Transactions*, Vol. 51, No. 6, pp. 672-689.
  - Khouja M., J. Pan and J. Zhou. 2016. Effects of Gift Card Sales on the Optimal Order and Discount of Seasonal Products. *European Journal of Operational Research*, Vol. 248, No. 1, January 2016, pp. 159-173.
  - Khouja, M., S. Park and J. Zhou. 2013. A Free Gift Card Alternative to Discounting Products in the Newsvendor Problem. *Omega*, Vol. 41, No. 4, August 2013, pp. 665-678.
- Faculty active/interested: Moutaz Khouja, SungJune Park, and Jing Zhou

#### 7.1.2 Return policies and inventory interactions

- Sample Publications/Research Projects
  - Fan, H., M. Khouja, and J. Zhou. 2022. Design of Win-Win Return Policies for Online Retailers. *European Journal of Operational Research*, Vol. 301, No. 2, 1 September 2022, pp. 675-693.
  - Fan, H., M. Khouja, J. Gao, and J. Zhou. 2022. Incorporating Social Learning into the Optimal Return and Pricing Decisions of Online Retailers. Major revision under *Omega*.
- Faculty active/interested: Moutaz Khouja and Jing Zhou

#### 7.1.3 Dynamic pricing

- Sample Publications/Research Projects
  - Li, Y., M. Khouja, J. Pan, and J. Zhou. 2022. Buy-One-Get-One Promotions in a Two-Echelon Supply Chain. Forthcoming *Management Science*.
  - Khouja, M., Y. Li and J. Zhou. 2022. Nonlinear Pricing for Yield Management and Countering Strategic Consumer



Behavior. *European Journal of Operational Research*, available online 31 August 2022.

- Li, G, X. He, J. Zhou, and H. Wu. 2019. Pricing, Replenishment and Preservation Technology Investment Decisions for Non-Instantaneous Deteriorating Items. *Omega*, 84, April 2019, pp. 114-126.
- Faculty active/interested: Moutaz Khouja, Jing Zhou, and Xiuli He

## 7.2 Sustainable Operations

### 7.2.1 Management of personnel protective equipment

- Sample Publications/Research Projects
  - Khouja, M. and Hamm R., (2022). *Building Viable Stockpiles of Personnel Protective Equipment*. *European Journal of Operational Research*, in press.
  - Hammami, R., Salman, S., Khouja, M., Nouria, I., and Alaswad, S. (2022). Government strategies to secure the supply of medical products in pandemic times. *European Journal of Operational Research*, in press.
- Faculty active/interested: Moutaz Khouja, Jing Zhou

## 7.3 Risk Management

### 7.3.1 Portfolio/Operational risk/Cyber risk

- Sample Publications/Research Projects
  - A. Bensoussan, C. Hoe, J. Kim, Z.F. Yan. (2022) A Risk Extended Version of Merton's Optimal Consumption and Portfolio Selection, *Operations Research*, 70(2):815-829.
  - A. Bensoussan, C. Hoe, J. Kim, Z.F. Yan, Inventory Management in Over-The-Counter Markets, Work-in-progress.
- Faculty active/interested: Joohyun Kim

### 7.3.2 Energy market risk

- Sample Publications/Research Projects
  - A. Bensoussan, J. Kim, S.C.P. Yam, Optimization of Consumer-Producer Storage in Renewable Energy Markets: A Mean Field Approach, Work-in-progress.
- Faculty active/interested: Joohyun Kim

### 7.3.3 Supply chain risk

- Sample Publications/Research Projects
  - S. Cetinkaya, J. Kim, Optimal Inventory Policy under Supply Uncertainty and with or without Bullwhip effects, Work-in-progress.
  - Kumar, R., Park, S. (April, 2019) A Portfolio Approach to Supply Chain Risk Management, *Decision Sciences (Journal of)*. 50 (210) 244 .
- Faculty active/interested: Joohyun Kim, Moutaz Khouja, Ram Kumar, Sungjune Park

### 7.3.4 Cyber Risk

- Sample Publications/Research Projects
  - Temizkan, O., Kumar, R., Park, S., Subramaniam, C. (January, 2012) Patch Release Behaviors of Software Vendors in Response to Vulnerabilities: An Empirical Analysis. *Journal of Management Information Systems*. 28 (4) 305-338 .
- Faculty active/interested: Ram Kumar, Sungjune Park, Chandra Subramaniam



## 8.0 School of Data Science

### 8.1 Area 1: Artificial Intelligence and Machine Learning

#### *Research interests:*

Capitalize on our prior successes and invigorate collective efforts under the broad umbrella of Artificial Intelligence.

1. Designing and leveraging innovative computing hardware informed by and optimized for the fundamental principles and algorithms of AI.
2. Developing fundamental machine learning (ML) and data mining methods, including reinforcement learning, energy-based methods, and deep learning.
3. Autonomous Systems: object tracking, semantic and 3D scene understanding, federated learning, robot motion planning and control, multiple robot coordination, and embedded AI.
4. Human-assistive AI: AI techniques such as natural language processing (NLP) and visualization combined with human-computer interaction (HCI) techniques

including augmented reality (AR) and virtual reality (VR) will augment human capability by enabling people to interact naturally and leverage AI systems intuitively and transparently.

- SDS faculty: Minwoo Lee, Liyue Fan, Sid Krishnan, Xi Niu, Hamed Tabkhi, Benjamin Radford, Albert Park, Jason Windett, Wlodek Zadrozny, etc.

#### *Sample Grants/Projects*

1. Minwoo Lee (co-PI): SocialBit: Establishing the accuracy of a wearable sensor to detect social interactions after stroke. NIH AREA R15 (#1R01HD099176-01A1)
2. Xi Niu (PI): "CHS: Small: Promoting Unexpected Information Discovery: An Interactive Framework for Computational Serendipity"; Xi Niu (PI), Mary Lou Maher (Co-PI), Jingfeng, Xia (Co-PI); NSF CISE IIS core program; Award Number: 1910696; \$496,041; 2019 – 2022
3. Jason Windett (PI): National Science Foundation, Resource Implementation for Data Intensive Research (RIDIR), Collaborative Research: DAPPR: Diffusion Analytics for Public Policy Research." SES-1636695, Fall 2016-2019. \$808,129

#### *Sample publications*

1. Giang Dao and Minwoo Lee (2019). Relevant Experiences in Experience Replay. IEEE Symposium on Adaptive Dynamic Programming and Reinforcement Learning (ADPRL).
2. Niu, X., Fan, X., & Zhang, T. (2019). Understanding Faceted Search from Data Science and Human Factor Perspectives. ACM Transactions on Information Systems (TOIS), 37(2)
3. M. Mendieta and H. Tabkhi (2021). CARPe Posterum: A Convolutional Approach for Real-time Pedestrian Path. Prediction", Thirty-fifth AAAI Conference on Artificial Intelligence.

## **8.2 Area 2: Leadership and Data Science**

### *Research interests:*

To study leader behaviors through the use of data science in order to improve leadership training and development.

1. Leverage machine learning algorithms to automatically score leader and follower behaviors through text, audio, and visual data
2. Develop training interventions that facilitate leadership skills regardless of one's demographic background to promote a more diverse and inclusive group of

future leaders

- SDS faculty: George Banks and Scott Tonidandel

#### *Sample Grants/Projects*

1. George Banks (PI), Wenwen Dou (Co-PI), Scott Tonidandel (Co-PI): “FW-HTF-P: Collaborative Research: Artificial Intelligence-Supported Development of Future Organizational Leaders”. National Science Foundation. Oct. 1, 2021 – Sept. 30, 2022. \$114,096
2. Scott Tonidandel, Co-PI, \$475,000, three-year grant from the National Science Foundation titled “When Team Diversity Facilitates Performance: Understanding and Overcoming Fractured Behavioral Patterns”, 2015-18.

#### *Sample publications*

1. \*Banks, G. C., Woznyj, H. M., Wesslen, R., & Ross, R. (2018). A review of best practice recommendations for text-analysis in R (and a user friendly app). *Journal of Business and Psychology*, 33, 445-459. \*2018 Editor Commendation
2. Tonidandel, S., King, E. B., & Cortina, J. M. (2018). Big data methods: Leveraging modern data analytic techniques to build organizational science. *Organizational Research Methods*, 21, 525-547. doi: 10.1177/1094428116677299
3. Tonidandel, S., Summerville, K. M., Gentry, W. A., & Young, S. F. (2021). Using structural topic modeling to gain insight into challenges faced by leaders. *The Leadership Quarterly*, 101576.

### **8.3 Area 3: Nanoscale Science and Materials**

#### *Research interests:*

1. Developing mathematical models for the anomalous protein diffusion near folding/unfolding transition, and mathematical models for protein aggregation.
  2. Developing empirical models that fit calorimetry data, and quantify stability/flexibility relationships to inform protein design, and elucidate protein evolution.
  3. Applying molecular dynamics simulation and employ machine learning to glean mechanistic insights
  4. Developing new therapeutics based on manipulating protein-protein interactions
- SDS faculty: Donald Jacob, Harish Cherukuri, Shan Yan, etc.

#### *Sample Grants/Projects*

1. Harish Cherukuri, PI: “Advanced Modeling and Simulation of Thermal Kinetics in Additive Manufacturing”, DOD DA Army Research Office. 9/2018-8/2021, \$598,562
2. Harish Cherukuri, PI: “North Carolina Consortium for Self-Aware Machining and Metrology (CSAM),” NC-ROI. 08/2018-07/2022. \$1,665,502
3. Shan Yan (PI): “Mechanism of APE1 in DNA damage response”, NIH/NCI - 1R01CA225637-01. 02/13/18-01/31/23. \$1.9 million
4. Shan Yan (co-PI): “Understanding the reciprocal regulation between Hsp70 and the DNA damage response,” NIH/NCI - 1R01CA225637-01, 12/03/20-11/30/24. \$1,179,511.

#### *Sample Publications*

1. Nguyen KTP, Druhan LJ, Avalos BR, Zhai L, Rauova L, Nesmelova IV, Dréau D. (2020). “CXCL12-CXCL4 heterodimerization prevents CXCL12-driven breast cancer cell migration”, 2020, *Cell Signal.*, 66:109488. PMID: 31785332.
2. Tyler Grearg, Chris Averyg, John Patterson, Donald Jacobs (2021). *Molecular function recognition by supervised projection pursuit machine learning*, Nature: Scientific Reports, 11:4247.
3. Ha, A., Lin, Y, and Yan, S. (2020). A non-canonical role for the DNA glycosylase NEIL3 in suppressing APE1 endonuclease-mediated ssDNA damage. *J Biol Chem.* 295 (41): 14222-14235.

## **8.4 Area 4: Online Misinformation Behavior, Impact, Detection, and Mitigation**

#### *Research Interests:*

1. Understanding online misinformation strategies and misinformation dissemination or sharing behavior (e.g., through social network analysis, visualization, graph analysis)
  2. Building machine learning models for automated online misinformation detection (e.g., fake news detection, fake online consumer product review detection; phishing detection; online fraud detection)
  3. Developing effective methods for misinformation intervention
  4. Focusing on misinformation in a variety of application domains, including, but not limited to, business, healthcare, politics, and entertainment.
- SDS faculty: Dongsong Zhang, Frederico Batista Pereira, Lina Zhou, Shi Chen, Wenwen Dou, Siddharth Krishnan, Shannon Reid, Antonis Stylianou, etc.

#### *Sample grants/projects:*

1. Lina Zhou (PI) and Dongsong Zhang (Co-PI): “SBE: Small: Behavioral Control of Deceivers in Online Attacks”. National Science Foundation (NSF). Award #: SES 1527684. September 2015 – Aug., 2021. \$499,912.
2. Frederico Batista Pereira (co-PI). Political Elites and the Appeal of Fake News in Brazil. Facebook Research Award on Misinformation and Polarization, 2021.
3. Wenwen Dou (PI): “Deception Detection, Tracking and Factuality Assessment in Social and News Media”, Pacific Northwest National Laboratory. 2017-2018. \$50,000.

*Sample Publications:*

1. Safarnejad, L., Xu, Q., Ge, Y., Krishnan, S., Bagarvathi, A., Chen, S. (2020). Contrasting Real and Misinformation Dissemination Network Structures on Social Media during the 2016 Zika Epidemic. *American Journal of Public Health*, 110: S340-347.
2. Shan, G., Zhou, L., & Zhang, D. (2021). From Conflicts and Confusion to Doubts: Examining Review Inconsistency for Fake Review Detection. *Decision Support Systems*. 144
3. Zhang, D., Zhou, L., Kehoe, L. J., and Kilic, I. (2016). What Online Reviewer Behaviors Really Matter? A Study of Effects of Verbal and Nonverbal Behaviors on Online Fake Review Detection. *Journal of Management Information Systems*. 33(2). p.456-481
4. Ryan Wesslen, Sashank Sathanam, Alireza Karduni, Isaac Cho, Samira Shaikh, Wenwen Dou. Investigating Effects of Visual Anchors on Decision-Making about Misinformation. *Computer Graphics Forum* 38 (3), 161-171, 2019

## **8.5 Area 5: Smart and sustainable cities**

*Research Interests:*

Mitigate socio-economic gaps, enable upward mobility for underserved communities, and chart a path of sustainable, environmentally friendly growth.

1. Harnessing the recent technology advances of big data cloud computing, AI, Internet-of-Things (IoT), 5G communication, and low-cost sensors, to allow for fine-grained information processing to enable optimal decision making across a range of city services.
2. Developing community-led solutions to meet local needs while addressing privacy and safety concerns of the above-listed technologies.
3. Public safety, public transit Equity, sustainable energy, accessible health, and resilience of power distribution.
4. Creating a “Smart City Research Ecosystem” to enable AI for social good.

SDS faculty: Hamed Tabkhivayghan, Shannon Reid

*Sample Grants/Projects:*

1. The \$2 million [NSF Smart and Connected Communities \(SCC\) project](#) led by Hamed Tabkhivayghan (ECE) on building safe and secure communities through real-time edge video analytics. The project formalizes, and models public safety and security events to be machine detectable, reducing biases, and in enabling broad-based community support and trust.
2. The \$500K [NSF Cyber Physical System project](#) led by Tabkhi (ECE) along with faculty from ETCM on AI for highway worker safety. The project uses deep learning algorithms, edge computing, and assisted reality systems to enable real-time prediction of work zone intrusions and notification of highway workers.

*Sample publications:*

1. S. Rogers, J. Slycord, M. Baharani, and H. Tabkhi, "gem5-SALAM: A System Architecture for LLVM-based Accelerator Modeling", to appear in IEEE/ACM International Symposium on Microarchitecture, Athens, Greece, October 17–21, 2020.
2. C. Neff, M. Mendieta, S. Mohan, M. Baharani, S. Rogers, and H. Tabkhi, "REVAMP2T: Realtime Edge Video Analytics for Multi-camera Privacy-aware Pedestrian Tracking", IEEE Internet of Things Journal, November 2019.
3. J. Sanchez, A. Sawant, C. Neff, H. Tabkhi, "AWARE-CNN: Automated Workflow for Application-aware Real-time Edge Acceleration of CNNs", IEEE Internet of Things Journal, May 2020, DOI: 10.1109/JIOT.2020.2990215.
4. S. Rogers, H. Tabkhi, "Locality-Aware Memory Assignment and Tiling", IEEE/ACM Design Automation Conference (DAC), San Francisco, CA, USA, Jun 2018.

## **8.6 Area 6: Urban health**

*Research Interests:*

Understanding and addressing the primary underlying causes of health inequities - the social determinants of health

1. Using action research methods, community-based participatory research and clinical research methods to improve health outcomes in high-risk clinical populations
2. Implementing community-based chronic disease prevention and management programs
3. Advancing health policy reform, and
4. Promoting racial equity

SDS Faculty: Michael Dulin, Laura Gunn, Shi Chen, Yuqi Guo, Albert Park, Cheryl Brown, Paul Rajib, Monika Sawhney, Jean-Claude Thill, Antonis Stylianou, etc.

*Sample Grants/Projects:*

1. Michael Dulin, site PI: “Implementing Best Practice Care for Sepsis Survivors to Reduce Morbidity & Mortality,” NIH R01NR018434-01A1
2. Michael Dulin, PI: “Transdisciplinary Approach to the Evaluation of Social Determinants of Health,” R01 MD006127-05, National Institute on Minority Health and Health Disparities (NIMHD)
3. Laura Gunn, co-PI: “The SKyRoCKeT Study: Surface-Knit and Reformulate CADENCE-Kids for Translation,” NIH: National Institute of Child Health & Human Development (NICHD) R01 Grant. May 1, 2022 – March 31, 2027. \$2,896,873.
4. Monika Sawhney, Co-PI: “Substance Abuse and Mental Health Services Administration (SAMSHA),” U.S. Department of Health and Human Services, \$945,000, Sept. 2015 – Aug. 2018.

*Sample Publications:*

1. Xu, M., et al. (2021). Accurately Differentiating COVID-19, Other Viral Infection, and Healthy Individuals Using Multimodal Features via Late Fusion. *Journal of Medical Internet Research*, doi: 10.2196/25535.
2. Chen, S., Zhou L, Song Y, Xu Q, Wang P, Wang K, Ge Y, and Janies D. 2020. Comparative Analysis of Viral COVID-19 Sina Weibo and Twitter Contents with a Novel Feature Extraction and Machine Learning Workflow. *Journal of Medical Internet Research*, doi: 10.2196/24889.
3. Coffman MJ, Scott VC\*, Schuch C\*, Mele C, Mayfield C\*, Balasubramanian V\*, Stevens A, Dulin M. Postpartum Depression Screening and Referrals in Special Supplemental Nutrition Program for Women, Infants, and Children Clinics. *J Obstet Gynecol Neonatal Nurs*. 2020 Jan; 49(1):27-40.
4. Pescheny JV, Gunn LH, Randhawa G, Pappas Y. (2019). The Impact of the Luton Social Prescribing Programme on Energy Expenditure: A Quantitative Before-and-After Study. *BMJ Open*, 9:e026862.