

Discovery *at* Carlson:

THE FACULTY RESEARCH MAGAZINE



CARLSON SCHOOL
OF MANAGEMENT

UNIVERSITY OF MINNESOTA



World-class Carlson School
faculty uphold our rich tradition
of research excellence.

#4

in Management among
U.S. Public Universities

GLOBAL RANKING OF ACADEMIC SUBJECTS

#7

in Management among
U.S. Public Universities

MANAGEMENT DEPARTMENT PRODUCTIVITY
RANKINGS, 2018-2022

TEXAS A&M UNIVERSITY/UNIVERSITY
OF GEORGIA

#14

in the World

TOP 100 WORLD BUSINESS SCHOOL
RESEARCH RANKINGS, 2018-2022

UNIVERSITY OF TEXAS, DALLAS

52

endowed chairs
and professorships

150+

journal articles published or
accepted in the past year



Contents

- 01 Introduction Letter
- 02 Research Insights
- 04 Award Spotlight
- 05 Award-winning Faculty
- 06 New Faculty
- 08 Faculty Recognition
- 10 Projects Underway



Dear *Colleagues*,

Research is a commitment to lifelong learning and staying curious. That passion drives our world-class faculty to explore the greatest challenges facing today's business world and develop insights for a more innovative tomorrow.

In this issue, we celebrate our faculty's achievements from the past academic year, examine research developments in artificial intelligence and the retail supply chain, and look ahead to projects underway. The impact of their research extends from the classroom to the greater academic and business communities.

Our faculty's drive, intellectual curiosity, and dedication to excellence shine brightly in the following pages. It is with great honor that we share the latest *Discovery at Carlson*.

JAMIE PRENKERT

*Dean
Investors in Leadership Distinguished Chair*

ALOK GUPTA

*Senior Associate Dean of Faculty, Research,
and Administration
Curtis L. Carlson Chair in Information Management*

Boosting sales with strategic display of returned items



Selling returned products as open-box is becoming increasingly popular in the retail landscape, leaving retailers devising different ways to display those products along with the new product offerings. Research from Assistant Professor Necati Ertekin and Professor Karen Donohue explores different visual merchandising strategies for new and open-box products.

Paper: “Strategic Visual Merchandising of New and Open-Box Products: Evidence from Experiment and Retail Data”
Journal: *Management Science*
Published: Published online in *Articles in Advance* May 15, 2023

The researchers examined two methods: selling open-box products side-by-side with new products and selling them separately. After completing an online laboratory experiment, they tested their ideas in a field study by partnering with a North American retailer that used the two strategies at different store locations.

The researchers found that selling open-box products separately from the new products increased new product sales by 3.6 percent compared to selling them side-by-side. However, the separate strategy also led to higher costs in the form of more new product returns. Ertekin says their findings are predicated on how the display strategies influence customers’ valuation of new products.

“When customers see returned products next to the new ones, they are more likely to attribute the returns to new products having low quality. Hence, their valuation for the new

products goes down, deterring some customers from buying them under the side-by-side strategy,” he shared. “Those deterred customers already have a high tendency to return items, leaving only customers with a low tendency to return items left buying the new products, leading to lower returns under the side-by-side strategy.”

Ertekin and Donohue suggest that the best visual merchandising strategy will vary by product profile, so retailers should consider a tailored approach. Ultimately, the researchers estimate selling open-box products could increase a retailer’s profits by as much as 3.3 percent—earnings otherwise missed out on if they had shipped off the returned items to a third-party seller or the landfill.

“Selling open-box products allows retailers to very quickly put the items out for sale again,” explained Donohue. “This creates a revenue-generating mechanism, which is also good for the environment. Our research helps guide their strategy with how to best display those returned items.”

Robo-advisors outperform human investors during financial market crash



With advances in machine learning and artificial intelligence, robo-advisors (RAs), which automate investing by using an algorithm, are increasingly used for investment decision support.

But with this technology comes a lot of unknowns, such as how these RAs react to dramatic changes in the financial markets.

Associate Professor Mochen Yang and two co-authors studied the performance of RAs during the economic downturn caused by the COVID-19 pandemic. They found RA users experienced significantly fewer losses during the market downturn compared to human investors. Additionally, RA systems adjusted their portfolios during this time to hold less risky funds, while human investors continued to invest in the status quo and did not reduce the risk of their portfolios.

Importantly, the RA’s superior performance was not simply a continuation of its performance in a normal market; in fact, Yang found RA users to have similar portfolio returns as non-RA investors during normal markets, and the benefits of RA’s risk-reduction trading strategy only manifested during the financial crisis.

“Our work confirms the positive impacts of RAs during the financial market turmoil induced by COVID-19,” Yang says. “In the context of financial decision-making, we show that using an RA system can significantly mitigate losses for investors and that RA’s adaptivity is an important contributor to its robustness.”

To compare the performance, Yang obtained daily portfolio and transaction data of investors on an online investment platform. He matched RA users with other investors who did not use the RA with similar investor and portfolio characteristics before the market crash and then compared their portfolio returns after the crash.

Yang and his colleagues found RA investors had a 12.67 percent performance advantage, which is both statistically significant and economically meaningful. This is significant because in 2019, more than \$820 billion of assets were managed by RAs, and the size of RA-managed assets is projected to have a 26 percent annual growth rate between 2020 and 2024.

Paper: “Judge me on my losers: Do robo-advisors outperform human investors during the COVID-19 financial market crash?”
Journal: *Production and Operations Management*
Published: June 9, 2023



Yi Zhu wins long term impact award for advertising research

Associate Professor Yi Zhu won the prestigious Don Morrison Long Term Impact Award from the INFORMS Society for Marketing Science (ISMS) at the society's annual conference this summer.

The honor highlights meaningful, past research that has continued to inspire work in the field. To be eligible for the award, the paper needed to be published six to ten years ago and have at least 150 Google Scholar citations.

Zhu and his co-authors published the paper "Television Advertising and Online Search" in 2014 in *Management Science* after working on the research together as doctoral students at the University of Southern California. At the time, advertising firms rarely coordinated TV and online campaigns. The researchers found Google searches using branded

keywords would spike after commercials aired on TV. The findings highlighted the importance of integrating television and search advertising campaigns to better connect with consumers to drive sales. Then a novel idea, Zhu says agencies have now widely adopted the coordinated approach.

"Advertising is just one side of the story and online search is just another natural step," Zhu explained. "Now they're all connected and there's more sales conversion through a more streamlined consumer shopping funnel. By thinking about the different offline and online media platforms, we see a much more cohesive advertising strategy."

Zhu shares the award with Mingyu Joo of the University of California-Riverside, Kenneth C. Wilbur of the University of California-San Diego, and Bo Cowgill of Columbia University.

Award-winning faculty



Carlson School faculty members received national recognition from a variety of associations recently for their contributions to their respective disciplines. Some of the honors include:

Professor Gedas Adomavicius

Best Paper Award
INFORMS

Professor Ravi Bapna

INFORMS ISS Haim Mendelson Teaching Innovation Award
INFORMS

Assistant Professor Sofia Bapna

2022 AIS Early Career Award
Association of Information Systems

Professors Mary Benner and Joel Waldfogel

Best Paper Award
Strategy Science

Professor John Budd

2023 James G. Scoville Best International/Comparative Industrial Relations Paper Award
Labor and Employment Relations Association

Associate Professor Elizabeth Campbell

William A. Owens Scholarly Achievement Award
Society for Industrial and Organizational Psychology

Professor Xiaoji Lin

2022 CFRI Research Excellence Award
Corporate Financial Reporting Insights

Assistant Professor Xuege (Cathy) Lu

Best Dissertation
Academy of Management Organizations in the Natural Environment (ONE)

Professor Anant Mishra and

Assistant Professor Necati Ertekin

2022 Meritorious Service Award
Manufacturing & Service Operations Management

Professor Tracy Wang

Wharton Research Data Services Award for Best Empirical Finance Paper
Western Finance Association

Professor Aks Zaheer

Irwin Award for Outstanding Educator
Academy of Management Strategic Management (STR)

Associate Professor Gaoqing Zhang

Excellence in Refereeing
Journal of Accounting Research

Carlson School welcomes new tenure-track faculty

Assistant Professor Nitya Chawla joins the Carlson School after spending three years as an assistant professor at Texas A&M University. Her research centers on how organizations and leaders can build inclusive and humanized workplaces for employees. Inspired by the Black Lives Matter protests in 2020, she recently co-authored a paper that explored the experiences of Black law enforcement officers and their consistent anti-racism efforts amid ongoing discrimination.

DEPARTMENT: Work and Organizations

RESEARCH SPECIALTIES: Diversity and inclusion with organizations, employee well-being, factors impacting job seekers' success and well-being

FUN FACT: Loves exploring new places and restaurants with her husband and toddler

“

As organizations and business leaders grapple with the 'future of work' and attempt to return to 'normal' in the post-pandemic world, I believe that we have been presented with the unique opportunity to create organizational workspaces that work for everyone, and not just a select group(s) of individuals.

NITYA CHAWLA



Assistant Professor Thomas Helgerman comes to the Carlson School after earning his PhD in Economics at the University of Michigan. With him, he brings an interest in understanding why labor market outcomes vary systematically by gender and how public policy can combat inequities in these outcomes. Among his recent research includes a re-examination of how the Equal Pay Act successfully raised women's wages.

DEPARTMENT: Work and Organizations

RESEARCH SPECIALTIES: Labor economics, economic history, gender and family economics

FUN FACT: Played the trumpet in the University of Pittsburgh Marching Band

“

My work has found that sweeping anti-discrimination policy in the 1960s and 1970s was, in many cases, effective in combating gender inequities, which can help to inform successful policy today.

THOMAS HELGERMAN



Working for four years with public utility clients at PwC instilled in Assistant Professor Shuyan Wang an interest in risk and liquidity management. Wang went on to earn her PhD in Accounting at Duke University. One of her recent projects explored how accounting disclosures shape depositors' beliefs central to panic. The research received media attention during the regional banking crisis earlier this year.

DEPARTMENT: Accounting

RESEARCH SPECIALTIES: Information disclosure, corporate hedging, and banking

FUN FACT: Recently picked up tennis as her fourth racket sport

“

Risk and liquidity management lie at the center of companies' financial decisions. Through my research, I hope to understand how information and disclosures influence businesses' hedging efficiency and funding stability.

SHUYAN WANG



After earning his PhD in Economics this year at Stanford University, Assistant Professor Adam Zhang joined the Carlson School. Teaching financial literacy classes as a doctoral student led him to research how asset price movements impact people's daily lives. Zhang has also examined the recent rise of target date funds, a new financial instrument that's changing retirement saving dynamics.

DEPARTMENT: Finance

RESEARCH SPECIALTIES: Asset pricing, household finance, macro-finance

FUN FACT: Hasn't seen snow in about 10 years, but expects that will soon change

“

My research focuses on household financial decisions and equilibrium asset prices to understand their connection on a macro level. I enjoy studying these questions because the answer to them guides us in achieving equitable financial well-being for everyone.

ADAM ZHANG



Tenure/Tenure-Track Faculty

ACCOUNTING

Associate Professor **Cyrus Aghamolla**
Associate Professor **Salman Arif**
Professor **Frank Gigler** • Curtis L. Carlson Chair in Accounting
Associate Professor **Michael Iselin**
Professor **Chandra Kanodia** • Arthur Andersen & Co./Duane R. Kullberg Chair in Accounting & Information Systems
Assistant Professor **Nan Li**
Assistant Professor **Paul Ma**
Associate Professor **Joshua Madsen**
Professor **Pervin Shroff** • Frederick H. Grose Chair in Accounting • Department Chair
Assistant Professor **Shuyan Wang**
Associate Professor **Gaoqing Zhang** • Honeywell Professorship in Accounting • Lawrence Fellow
Professor **Haiwen (Helen) Zhang** • Carl L. Nelson Professor in Accounting

FINANCE

Assistant Professor **Jacelly Cespedes**
Professor **Murray Frank** • Piper Jaffray Fellow in Finance
Professor **Robert Goldstein** • Piper Jaffray Chair in Finance
Professor **Xiaoji Lin** • U.S. Bancorp Professorship in Financial Markets and Institutions
Professor **Pinar Karaca-Mandic** • C. Arthur Williams, Jr. Professor in Healthcare Risk Management • Distinguished McKnight University Professor
Associate Professor **Erik Loualiche**
Professor **Stephen T. Parente** • Minnesota Insurance Industry Chair of Health Finance • Associate Dean, Global Initiatives
Assistant Professor **Juliana Salomao**
Professor **Rajdeep Singh** • Arthur Upgren Chair in Investment Management
Assistant Professor **Martin Szydlowski**
Assistant Professor **Richard Thakor**
Professor **Tracy Yue Wang** • John Spooner Professor of Finance • Department Chair
Assistant Professor **Colin Ward**
Professor **Andrew Whitman**
Professor **Andrew Winton** • Minnesota Chair in Banking & Finance
Assistant Professor **Adam Zhang**

INFORMATION AND DECISION SCIENCES

Professor **Gediminas Adomavicius** • Larson Chair for Excellence in Business Education
Professor **Ravi Bapna** • Curtis L. Carlson Chair in Business Analytics and Information Systems
Assistant Professor **Sofia Bapna** • Lawrence Fellow
Assistant Professor **Xuan Bi**
Associate Professor **Jason Chan** • Lawrence Fellow
Professor **Shawn Curley**
Assistant Professor **Kartik Ganju**
Professor **Alok Gupta** • Curtis L. Carlson Chair in Information Management • Senior Associate Dean for Faculty, Research, and Administration
Professor **De Liu** • Xian Dong Eric Jing Professor for Business Teaching
Assistant Professor **Semi Min**
Professor **Gautam Ray** • Curtis L. Carlson Professorship in Information & Decision Sciences • Department Chair
Associate Professor **Yuqing Ren** • Lawrence Fellow
Associate Professor **Soumya Sen** • McKnight Presidential Fellow • 3M Excellence in Business Analytics Fellowship • Lawrence Fellow
Assistant Professor **Yicheng Song**
Associate Professor **Mani Subramani**
Associate Professor **Mochen Yang**
Assistant Professor **Teng Ye**

MARKETING

Professor **Rohini Ahluwalia** • Curtis L. Carlson Trust Professor of Marketing
Professor **Mark Bergen** • James D. Watkins Chair in Marketing
Professor **Tony Cui** • Ecolab-Pierson M. Grieve Chair in International Marketing
Professor **Vladas Griskevicius** • Curtis L. Carlson Family Foundation Chair in Marketing • Associate Dean, Undergraduate Program
Associate Professor **William Hedgcock**
Professor **Deborah Roedder John** • Curtis L. Carlson Chair in Marketing
Professor **George John** • General Mills/Paul S. Gerot Chair in Marketing
Assistant Professor **Byungyeon Kim**
Assistant Professor **Irene Nahm**
Professor **Akshay Rao** • General Mills Chair in Marketing

Professor **Joseph Redden** • Curtis L. Carlson Chair in Marketing Analytics
Professor **Kathleen Vohs** • Land O'Lakes Chair in Marketing • Distinguished McKnight University Professor • Department Chair
Associate Professor **Alison Jing Xu** • Lawrence Fellow
Associate Professor **Linli Xu**
Associate Professor **Yi Zhu** • Margaret J. Holden and Dorothy A. Werlich Endowed Professorship • Lawrence Fellow

STRATEGIC MANAGEMENT AND ENTREPRENEURSHIP

Assistant Professor **Moshe Barach**
Professor **Mary Benner** • John and Nancy Lindahl Professor for Excellence in Business Education • Department Chair
Assistant Professor **Sunasir Dutta**
Associate Professor **Daniel Forbes**
Associate Professor **Russell Funk** • Edward & Eleanor Asplin Fellowship in Ethical Business Cultures • Lawrence Fellow
Professor **Aseem Kaul** • The Mosaic Company - Jim Prokopanko Professor for Corporate Responsibility • Lawrence Fellow
Assistant Professor **Xuege (Cathy) Lu**
Associate Professor **Jiao Luo** • Andrew Van de Ven Fellowship
Professor **Ian Maitland**
Professor **Alfred Marcus** • Edson Spencer Endowed Chair in Strategy & Technological Leadership
Professor **Jamie Prenkert** • Dean • Investors in Leadership Distinguished Chair
Professor **Myles Shaver** • Curtis L. Carlson Chair in Corporate Strategy
Professor **Paul Vaaler** • John and Bruce Mooty Chair in Law & Business
Associate Professor **Gurneeta Vasudeva Singh**
Professor **Joel Waldfoegel** • Frederick R. Kappel Chair in Applied Economics
Assistant Professor **Jeremy Watson**
Assistant Professor **Alex Wilson**
Assistant Professor **Sandy Yu**
Professor **Aks Zaheer** • Curtis L. Carlson Chair in Strategic Management
Professor **Sri Zaheer** • Elmer L. Andersen Chair in Global Corporate Social Responsibility • Dean (2012-2023)
Professor **Shaker Zahra** • Robert E. Buuck Chair in Entrepreneurship

SUPPLY CHAIN AND OPERATIONS

Assistant Professor **Hailong Cui**
Professor **Karen Donohue** • Curtis L. Carlson Chair in Supply Chain
Assistant Professor **Necati Ertekin**
Associate Professor **Susan Meyer Goldstein**
Assistant Professor **Ximin (Natalie) Huang**
Professor **Anant Mishra** • Andrew Van de Ven Professorship
Professor **Christopher Nachtsheim** • Frank A. Donaldson Chair in Operations Management
Associate Professor **Karthik Natarajan**
Professor **Rachna Shah**
Professor **Kingshuk Sinha** • Elmer L. Andersen Chair in Sustainable Supply Chain • Department Chair
Assistant Professor **Dayton Steele**

WORK AND ORGANIZATIONS

Assistant Professor **Abdifatah Ali** • Lawrence Fellow
Professor **Avner Ben-Ner**
Associate Professor **Alan Benson** • Lawrence Fellow
Professor **John Budd** • Industrial Relations Land Grant Chair
Associate Professor **Elizabeth Campbell** • Lawrence Fellow
Assistant Professor **Nitya Chawla**
Professor **Michelle Duffy** • Vernon H. Heath Chair of Organizational Innovation and Change • PhD Program Director
Professor **Theresa Glomb** • The Toro Company-David M. Lilly Chair in Human Resources • Department Chair
Assistant Professor **Thomas Helgerman**
Professor **John Kammeyer-Mueller** • Curtis L. Carlson Professor in Industrial Relations
Professor **Colleen Flaherty Manchester** • Board of Advisors Professorship in Work and Organizations • Lawrence Fellow
Professor **Priti Shah**
Professor **Connie Wanberg** • Industrial Relations Faculty Excellence Chair
Professor **Mary Zellmer-Bruhn** • David M. Bond Fellowship for Ethics and Corporate Behavior • Associate Dean, MBA and MS Programs

Research in *progress*

Here's a snapshot of two research projects, supported by notable grants, currently underway:



Examining COVID-19 medication treatments during the pandemic

A nearly \$1.6 million grant, supported by the Agency for Healthcare Research and Quality, will help uncover how the rapid flow of information during the COVID-19 pandemic impacted medication treatments for the disease.

Professor Pinar Karaca-Mandic is leading the project over the next four years out of the Carlson School's Business Advancement Center for Health (BACH) alongside Mayo Clinic researchers.

Through this grant, the researchers aim to gain a better understanding of what influenced the adoption and de-adoption of various COVID-19 treatments. During the pandemic, physicians and healthcare providers had to navigate changing information and shifting policies to treat the fast-spreading disease.

The researchers will be examining the use of hydroxychloroquine, some corticosteroids, ivermectin, and more during the pandemic. They will analyze prescription data for Medicare patients along with a multitude of factors, including demographic information, state policies, and hospitalization rates. By identifying the factors influencing providers, the researchers hope to determine outreach strategies to help make treatment safer and more equitable.



Analyzing the dynamics of scientific discovery

Associate Professor Russell Funk will be helping lead two projects that will expand on his recent research that explored the slowing of disruptive scientific discoveries.

The first, supported by a nearly \$1 million grant from Wellcome Leap, will examine how different models for funding and organizing research may relate to the disruptiveness of science. The team will study whether research developed under the Pasteur's Quadrant model, which supports projects that both advance science and societal need, is more disruptive than other work and provides positive "ripple effects" to the larger research ecosystem.

A \$700,000 grant from the National Science Foundation powers the second study: a three-year project aimed to measure novel social mechanisms that might influence scientific progress. Through this project, the researchers intend to evaluate the rate of scientific progress, whether research

funders are becoming more conservative, and how the current social organization of research shapes scientific discoveries.

The findings from both projects carry impacts beyond academic communities, as science is a key driver of economic growth.



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Carlson School of Management
University of Minnesota

321 Nineteenth Avenue South, Suite 4-300
Minneapolis, Minnesota 55455

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