



**Stevens Institute of Technology
School of Business, Ph.D. Program in Business Administration
Call for Applicants**

The Stevens Institute of Technology Ph.D. program in Business Administration seeks highly motivated students who are passionate in their desire to seek answers to complex questions related to business and technology. The Ph.D. program at the School of Business is accredited by AACSB and offers a Ph.D. degree in Business Administration with three broad emphasis areas:

- a) Finance,
- b) Information Systems & Analytics,
- c) Entrepreneurship & Innovation.

The program's primary goal is to prepare its graduates for successful academic careers. Students work closely with faculty who are conducting research in a range of research topics. Currently, we are seeking applicants interested in working on the research topics listed below, as well as others.

Research Area 1: Finance

Financial Innovation

(Prof. Stefano Bonini, sbonini@stevens.edu)

Institutional Trading around the World

(Prof. Ying Wu, ywu4@stevens.edu)

Financial Disclosures

(Profs. Elaine Henry, elaine.henry@stevens.edu, and Nan Hu, nan.hu@stevens.edu)

Research Area 2: Information Systems & Analytics

Collective Creativity

(Prof. Jeffrey V. Nickerson, jeffrey.nickerson@stevens.edu)

Stochastic Modeling and Control of Health Care Facilities (Prof. Chihoon Lee,
Chihoon.Lee@stevens.edu)

Digital Innovation

(Prof. Aron Lindberg, alindber@stevens.edu)

Understanding the Role Competition plays in the Business Impact of Social Media (Prof. Gaurav Sabnis, gsabnis@stevens.edu)

Process Innovation and Decision Automation

(Prof. Michael zur Muehlen, michael.zurmuehlen@stevens.edu)

Quantitative Analysis of Management Decisions

(Prof. Tal Ben-Zvi, tbenzvi@stevens.edu)

Technology-Enabled Sensory Marketing
(Prof. Adriana Madzharov, amadzhar@stevens.edu)

Research Area 3: Innovation & Entrepreneurship

The Role of the Lean Startup Framework for Large Enterprises

(Prof. Peter Koen, pkoen@stevens.edu)

Nature and Selection of Business Opportunities

(Prof. Thomas Lechler, tlechler@stevens.edu)

Innovation Performance of Exceptional New Product Development Teams

(Prof. Gary S. Lynn, glynn@stevens.edu)

Eligible candidates must hold a graduate degree (MSc, MBA) and must apply by **Feb. 1, 2018**, at the following address: www.stevens.edu/graduate/apply.

For more information about the research topics listed above, please directly contact the faculty member indicated next to the topic of interest.

All of our students are fully supported by teaching and research assistantships that include competitive stipends, tuition and health benefits. Student study plans are tailored to the individual needs of the student that will lead to successful research. More information about our doctoral program is available at <http://www.stevens.edu/school-business/phd-business-administration>. Please contact us at businessphd@stevens.edu, or call 201.216.5047 with specific questions.

CURRENT RESEARCH PROJECTS

Research Area: Finance

Research Topic: Financial Innovation

Faculty member: Prof. Stefano Bonini (sbonini@stevens.edu)

Description: Innovative financial products such as securitized assets and structured securities have been at the epicenter of the last financial crisis. Yet, financial innovation, in its more appealing form, Fintech, is one of the hottest areas for both new ventures development and capital investment. Despite these obvious material effects on the economy at large, both the sources of financial innovation and the factors that may determine the loss of control over innovative products remain limitedly studied and very poorly understood. This research project aims at shedding light on the theoretical underpinnings of the development of innovation in financial markets and at identifying early warning systems to prevent systemic collapses due to the introduction of novel products/services in the market.

Requirements: Master's degree in Finance, or Economics.

Research Area: Finance

Research Topic: Institutional Trading Around the World

Faculty member: Prof. Ying Wu (ywu4@stevens.edu)

Description: We examine the role of institutional investors in driving equity trading around the world. A large body of research documents that individual investors are generally small, unsophisticated investors who trade primarily for reasons unrelated to information (such as liquidity or rank speculation). In contrast, institutional investors are both more sophisticated and more important price-setters in capital markets. Although extensive research has documented the implication of institutional on pricing determination, we know relatively little about the fundamental mechanism that drive it by means of trading activities. We conduct a comprehensive study on how equity trading is driven by institutions and how it varies across countries and markets and over time by using weekly trading data of over 40,000 stocks from 48 countries from 1976 to 2012.

Requirements: Master's degree in Finance, Accounting or Economics.

Research Area: Information Systems & Analytics

Research Topic: Financial Disclosures

Faculty Members: Profs. Elaine Henry (ehenry@stevens.edu) & Nan Hu (nhu4@stevens.edu)

Description: At the intersection of financial accounting, corporate governance and capital markets, topics in financial disclosure provide a rich area for various research directions. Our research focus pertains to accounting and governance issues such as related-party transactions. These issues are subject to extensive disclosure requirements for U.S. firms, but how useful and value relevant are these disclosures as currently prescribed? Can textual analytics be used to increase their usefulness for an investor?

Requirements: Master's degree in Accounting or Information Systems.

Research Area: Information Systems & Analytics

Research Topic: Collective Creativity

Faculty member: Prof. Jeffrey V. Nickerson (jeffrey.nickerson@stevens.edu)

Description: I am interested in how crowds and communities can be organized to solve large scale societal design problems. Together with my students, I want to enable crowds and online communities to design products and services. My colleagues and I are currently performing research on 3D printing and energy sustainability. We have also studied Wikipedia editing. I am looking for students who want to both analyze and design systems. A background in information systems, computer science, or the natural sciences will be helpful, as well as an interest in computational social science and computational design. In particular, I am looking for students who would like to create organizations of humans and autonomous learning machines to tackle design problems.

Requirements: Master's degree in Information Systems, Management, Computer Science, or a related field is preferred. A Bachelor's student interested in obtaining an M.S. along the way to the Ph.D. may also be considered.

Research Area: Information Systems & Analytics

Research Topic: Stochastic modeling and control of health care facilities

Faculty member: Prof. Chihoon Lee (Chihoon.Lee@stevens.edu)

Description: This research analyzes in-hospital contact process data between environments and hosts, where environments are servers and hosts are customers, e.g., doctors and patients. Understanding the transmission dynamics of diseases is essential in controlling health care facilities. The key research question is how to find an optimal health care policy that maximizes an aggregated utility subject to certain resource constraints on budget and space. We intend to develop a versatile modeling framework by combining tools from queueing theory, optimization and statistics.

Requirements: Master's degree in Statistics or Operations Research.

Research Area: Information Systems & Analytics

Research Topic: Digital Innovation

Faculty member: Prof. Aron Lindberg (aron.lindberg@stevens.edu)

Description: This research program focuses on the relationship between routines and innovation in design contexts, primarily those with "open source-like" characteristics. This involves understanding variables and phenomena such as routine variation, sequential structuring, structural evolution, and temporal modes and their impacts on design outcomes such as effective coordination, digital artifact innovation, and requirements computation. To conduct this inquiry, we mainly use digital trace data and computational techniques such as text mining, sequence-, cluster-, and social network analysis, but also various forms of qualitative inquiry.

Requirements: Master's degree in Information Systems, Management, or Software Engineering

Research Area: Information Systems & Analytics

Research Topic: Understanding the Role Competition plays in the Business Impact of Social Media

Faculty member: Gaurav Sabnis (gsabnis@stevens.edu)

Description: Social media impacts many functions of businesses such as marketing, information systems, distribution, and public relations. The role that competition plays in this impact is not fully understood. For example, how does an uptick in social media posts about iPhones impact the sales of Android devices? This research project will build on my prior published work related to social media analytics and competition modeling to come up with conceptual frameworks and methodologies to better understand this role. The papers under it will involve data mining social media in various industries and using cutting edge statistical and econometric tools to rigorously test a variety hypotheses related to competition in these domains.

Requirements: Master's degree in Information Systems, Computer Science, Management, Marketing, or any quantitative areas such as Statistics, Econometrics, or Mathematics.

Research Area: Information Systems & Analytics

Research Topic: Process Innovation and Decision Automation

Faculty member: Prof. Michael zur Muehlen (michael.zurmuehlen@stevens.edu)

Description: I am interested in the design of organizational processes, both from a technological/methodological perspective (i.e., which tools and methods make transformation efforts effective), and from an organizational perspective (i.e., how should transformation efforts be organized). With my students I want to devise ways to help organizations and individuals to better serve their clients, become more efficient, and remain compliant. Currently, my colleagues and I study how organizations describe, acquire, and use process transformation skills. We have also looked at how technology standards emerge and are adopted (or not), and how the analysis and automation of decisions can help organizations rethink their processes. I am looking for students who have an interest in design methods, technology, and people. A background in information systems, computer science, or the social sciences will be helpful. In particular, I am looking for students who would like to study how individuals and organizations understand and improve their performance.

Requirements: Master's degree in Information Systems, Management, Computer Science, or a related field is preferred. A bachelor's student interested in obtaining an M.S. along the way to the Ph.D. may also be considered.

Research Area: Information Systems & Analytics

Research Topic: Quantitative analysis of management decisions

Faculty member: Prof. Tal Ben-Zvi (tbenzvi@stevens.edu)

Description: The research centers around the following research questions: Under what circumstances should a decision-maker take a certain course of action? How is human decision-making affected by interaction with other groups of individuals or organizations? How can decision-making improve performance? The main objective of the research is to improve the quality and effectiveness of decisions, and to increase understanding of human decision-making. We will study models, methods, tools and applications in which an individual decision-maker contemplates a choice of action in an uncertain environment. Our approach employs systematic analysis, which can help decision-makers clarify the course of action they should choose.

Requirements: Master's degree in Operations Management or Operations Research.

Research Area: Information Systems & Analytics**Research Topic:** Technology-enabled sensory marketing**Faculty member:** Prof. Adriana Madzharov (amadzhar@stevens.edu)**Description:** The study of consumers is crucial for development of companies' marketing strategies. In addition, consumer research has wide implications for public policy. Technology has changed the way companies and government agencies communicate with and study consumers. This research examines these changes in the context of sensory marketing enabled by technology, specifically with research work on how technology in stores and online enables innovative sensory experiences for consumers and can produce biases in the browsing and choice behavior of consumers (for example, the effects of ambient scents and music in the store, and visual and touch displays off and online).**Requirements:** Master's degree in Marketing or Psychology, or MBA.**Research Area: Innovation & Entrepreneurship****Research Topic:** The Role of the Lean Startup Framework for Large Enterprises**Faculty member:** Prof. Peter Koen (pkoen@stevens.edu)**Description:** Lean startup is a new process for developing products and services amid high uncertainty in the market and/or technology — characteristics that typically occur in transformational and disruptive innovations. The lean startup methodology had its beginnings in small companies; as large companies are fundamentally different from startups, the methodology, practices, pitfalls and lessons from small organizations will have limited applicability to large ones. The purpose of this research is to learn how lean startup is actually used in large companies. The research will involve in-depth case studies on transformational or disruptive innovations within General Electric, Goodyear and Intuit.**Requirements:** Master's degree in Management or Economics, or MBA.**Research Area: Innovation & Entrepreneurship****Research Topic:** Nature and Selection of Business Opportunities**Faculty member:** Prof. Thomas Lechler (tlechler@stevens.edu)**Description:** This research analyzes the nature of entrepreneurial business opportunities and conditions that determine their selection. The key research question is whether specific entrepreneurial business opportunities are favored by specific conditions. The conditions reflect socioeconomic, managerial and cultural influences. The results will allow us to predict the occurrence of new ventures under given conditions. Experiments and surveys are the primary methods used to explore and model how these conditions influence the selection of opportunities, as well as the subsequent creation and development of innovative entrepreneurial endeavors achieving exceptional performance.**Requirements:** Master's degree in Management or Economics, or MBA.**Research Area: Innovation & Entrepreneurship****Research Topic:** Innovation Performance of Exceptional New Product Development Teams**Faculty member:** Prof. Gary S. Lynn (glynn@stevens.edu)

Description: Have you ever wondered why some teams have been able to achieve amazing accomplishments, such as Apple, Iomega's Zip Drive and so many other innovations that have changed society? This research focuses on learning the underlying secrets of those super-performing teams.

Requirements: Master's degree in Management or Economics or MBA.

