
# CRAFT

CENTER FOR RESEARCH TOWARD ADVANCING FINANCIAL TECHNOLOGIES

# Industry Advisory Board Meeting

## October 23 – 24, 2025

STEVENS INSTITUTE OF TECHNOLOGY 1870

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RENSSELAER POLYTECHNIC INSTITUTE 1824

# ANNOUNCEMENTS

CRAFT is excited to present the 9th Industry Advisory Board Meeting.

The meeting will be on October 23, 2025 (open session) and October 24, 2025 (closed session) at the Stevens Institute of Technology

To access the meeting on Zoom, please use the links below

**Day 1 Zoom Link** Meeting Password: CRAFT2025

**Day 2 Zoom Link (IAB Members Only)** Meeting Password: CRAFT2025!

# OVERVIEW

This meeting is jointly hosted by Stevens Institute of Technology Rensselaer Polytechnic Institute. CRAFT is an industry-university cooperative research center funded by the National Science Foundation. CRAFT Industry Advisory Board meetings are bi-annual and take place on a Spring/Fall cycle. Fintech research project proposals will be presented at each meeting during Day 1 and then discussed, voted on, and selected by the Industry Advisory Board on Day 2 during a closed session. During the closed session, current CRAFT projects will also present their research findings.

Featuring:

- Welcome addresses by CRAFT, RPI, and Stevens leadership
- Keynote address by Vall Herard, CEO and Co-Founder of Saifr
- Keynote address by Dr. Douglas Cumming, Professor, Stevens Institute of Technology
- Panel discussion on The Future of Fintech
- Academic Presentation by Northeastern University
- Academic Presentation by Stony Brook University
- Research Proposal Presentations
- Industry Advisory Board Member Presentations

**To become a CRAFT Industry Partner, or to learn more about the Center, please contact CRAFT@Stevens.edu.**

# OPEN SESSION: THURSDAY, OCTOBER 23

**8:00 - 9:00 AM -** Registration, Breakfast, and Networking

**9:00 - 9:15 AM -** CRAFT Leadership Welcome

- Steve Yang, CRAFT Director, Associate Professor, Stevens Institute of Technology
- Mohammed Zaki, CRAFT Site Director, Professor and Department Head, Rensselaer Polytechnic Institute
- George Calhoun, CRAFT Managing Director, Professor, Stevens Institute of Technology

**9:15 - 9:25 AM -** Welcome from Stevens/RPI Leadership

- GJ de Vreede, Dean of School of Business, Stevens Institute of Technology
- Liad Wagman, Dean of Lally School of Management, Rensselaer Polytechnic Institute

**9:25 - 10:10 AM -** Keynote Address - "Practical Explanations vs Full Explainability - AI Agent Adoption for Regulatory Compliance"

- Vall Herard, CEO and Co-Founder of Saifr

**10:10 - 10:25 AM -** Northeastern University Presentation

- Mikhail Oet, Associate Teaching Professor, Northeastern University
- Paul W. Chiou, Associate Teaching Professor, Northeastern University

**10:25 - 10:30 AM -** High Frequency Trading Competition Spring 2026

- Ionut Florescu, Research Professor, Stevens Institute of Technology

**10:30 - 10:45 AM –** BREAK

**10:45 - 12:00 PM -** Project Proposal Presentations

- 10:45 - 11:00 AM - "Algorithmic Market Making for Tokenized Securities", PI Zachary Feinstein
- 11:00 - 11:15 AM - "Cascade-Adjusted Risk Analytics: Embedding Self-Organized Criticality into Value-at-Risk and Expected Shortfall", PI Oshani Seneviratne
- 11:15 - 11:30 AM - "Financial Multimodal LLMs via Novel Semantic GraphRAG", PI Mohammed Zaki
- 11:30 - 11:45 AM - "Quantum Resilience of Proof-of-Work Cryptocurrencies", PI Stacy Patterson
- 11:45 - 12:00 PM - "Network analysis for crowdfunding fraud detection", PI Jianxi Gao

**12:00 - 1:00 PM –** LUNCH

# OPEN SESSION: THURSDAY, OCTOBER 23

**1:00 - 1:15 PM -** Stony Brook University Presentation

- C. S. Richard Chan, Associate Professor, Stony Brook University

**1:15 - 2:00 PM -** Keynote Address - "FinTech and Regulation"

- Dr. Douglas Cumming, Professor of Finance, Stevens Institute of Technology

**2:00 - 2:45 PM -** Panel Discussion on “The Future of Fintech”

- Ian Mehok, Prudential Financial (Moderator)
- Arion Cheong, Stevens
- Zachary Feinstein, Stevens
- Thomas Ferguson, RPI
- Oshani Seneviratne, RPI

**2:45 - 3:00 PM -** BREAK

**3:00 - 4:00 PM -** IAB Member Use Case Presentations

- 3:00 - 3:15 PM - Xiao-Yang Liu Yanglet, Director of Research Lab and Startup Founder, SecureFinAI Lab, “Industry Use Cases of FinAgents Powered by FinGPT”
- 3:15 - 3:30 PM - Alexander McGee, Co-Founder & Chief Business Officer, Balcony Technology Group, “mTrace: Real Estate Intelligence for Risk, Ownership, and Compliance”
- 3:30 - 3:45 PM - Paul Lashmet, Business Integration Architect, Park Avenue Finance, “Real-World GenAI Solutions Driving Efficiency and Growth”
- 3:45 - 4:00 PM - Rohit Kapa, Vice President, Data Science at Prudential Financial, “Building and Deploying AI Agents”

**4:00 PM –** Adjourn

**4:00 - 5:30 PM -** Reception (Gallery Room, upstairs near the entrance of the University Center)

# CLOSED SESSION: FRIDAY, OCTOBER 24

**8:00 - 8:30 AM -** Breakfast & Networking

**8:30 - 10:00 AM -** Administrative Meeting (IAB + ALT Only)

**10:00 - 10:20 AM -** Break

**10:20 - 10:40 AM -** "Explainable Risk and Coverage with Computable Insurance Contracts"

- PI Oshani Seneviratne

**10:40 - 11:05 AM -** "Assessing the Risks of Alternative Data" (Pilot Project Final Presentation)

- PI Zach Feinstein

**11:05 - 11:25 AM -** "Privacy-Preserving Synthetic Data Generation for Financial Machine-Learning Tasks"

- PI Oshani Seneviratne

**11:25 - 11:50 AM -** "Identifying Drivers of Volatility in Energy Commodities" (Pilot Project Final Presentation)

- PI Sebastian Souyris

**11:50 - 1:00 PM** - Lunch

**1:00 - 1:25 PM -** "Testing Financial Foundation Models' Safety via Causal Learning" (Pilot Project Final Presentation)

- PI Ali Tajer

**1:25 - 1:45 PM -** "A Neurosymbolic Semantic Layer for Compliance Checking",

- PI Thomas Ferguson

**1:45 - 2:05 PM -** "Advancing Accounting Estimation Using Agentic AI",

- PI Arion Cheong

**2:05 - 3:00 PM -** IAB Voting & Closed Meeting (IAB Only)

**3:00 - 3:30 PM -** IAB Report to ALT (IAB + ALT Only)

# CENTER DIRECTORS

**Steve Yang, CRAFT Director, Associate Professor, Stevens Institute of Technology**

Dr. Steve Yang is an Associate Professor of the School of Business at Stevens Institute of Technology. He holds a Ph.D. in Systems and Information Engineering from University of Virginia with concentration on Financial Engineering. Dr. Steve Yang is currently the Director of the Center for Research toward Advancing Financial Technologies established by Stevens Institute of Technology and Rensselaer Polytechnic Institute, co-sponsored by the National Science Foundation (NSF). Dr. Steve Yang's research has been focused on understanding markets' irrationality and impact on trading, portfolio, risk management, and systemic risk using decision science tools such as Markov decision processes, reinforcement learning and other artificial intelligence (AI) methods. His research has been funded by NSF, DoD, IRRC, IAAER, CFTC, Accenture, KPMG, SWIFT, etc.

**Mohammed Zaki, CRAFT Site Director, Professor and Department Head, Rensselaer Polytechnic Institute**

Mohammed J. Zaki is a Professor and Department Head of Computer Science at RPI. He received his Ph.D. degree in computer science from the University of Rochester in 1998. His research interests focus novel data mining and machine learning techniques, particularly for learning from graph structured and textual data, with applications in bioinformatics, personal health and financial analytics. He has around 300 publications (and 6 patents), including the Data Mining and Machine Learning textbook (2nd Edition, Cambridge University Press, 2020). He has served as program chair for most of the major conferences in data mining and knowledge management, such as SDM, SIGKDD, CIKM, and ICDM. He is currently serving on the Board of Directors for ACM SIGKDD -- the special interest group on knowledge discovery and data science. He was a recipient of the National Science Foundation CAREER Award and the Department of Energy Early Career Principal Investigator Award. He is a Fellow of the IEEE, a Fellow of the ACM, and a Fellow of the AAAS.

**George Calhoun, CRAFT Managing Director, Professor, Stevens Institute of Technology**

Dr. George Calhoun is a Co-Founder of InterDigital Communications Corporation (NASDAQ: IDCC), which currently has a market cap of $1.5 billion. He was vice chairman of Geotek Communications, and was chairman of the company's joint venture with a branch of the Government of Israel. Dr. Calhoun was the chairman and CEO of Illinois Superconductor Corporation (AMEX: ISO), a public company focused on the application of high-temperature superconducting materials and advanced signal processing techniques.

# SPEAKER BIOs

**GJ de Vreede, Dean of School of Business, Stevens Institute of Technology**

GJ de Vreede is Dean of the School of Business at Stevens Institute of Technology. Previously he served as Associate Dean and Interim Dean at the Muma College of Business of the University of South Florida and as Director of the Center for Collaboration Science at the University of Nebraska at Omaha. He received his PhD in Information Systems from Delft University of Technology, the Netherlands. He has been a visiting professor at Renmin University (China), the University of International Business & Economics (China), the University of Arizona, and the University of Pretoria (South Africa). His research focuses on AI in teams, crowdsourcing, and Collaboration Engineering.

**Liad Wagman, Dean of Lally School of Management, Rensselaer Polytechnic Institute**
Liad Wagman is Dean at Rensselaer Polytechnic Institute's Lally School of Management, Professor of Economics, and Academic Affiliate at the International Center for Law and Economics. He was previously the Dean and John and Mae Calamos Endowed Chair at Illinois Institute of Technology's Stuart School of Business. Wagman served as Senior Economic and Technology Advisor at the U.S. Federal Trade Commission, provided expert testimony in key privacy and antitrust litigations, and worked at Northwestern, Duke, and Stanford universities. His research received awards and covers technology, entrepreneurship, competition, and policy.

**Vall Herard, CEO and Co-Founder of Saifr**
Vall is the founder and CEO of Saifr, an AI regulatory compliance startup incubated within Fidelity Labs. He specializes in the intersection of financial markets and technology and has a mastery of emerging methods like AI, machine learning, blockchain, and micro-services. He has extensive experience in the financial services industry, including FinTech, RegTech, InsurTech, capital markets, and hedge funds.
Vall is a technical CEO with a proven track record of taking companies from ideation to scale on a global basis, including multiple FinTech exits. His strategies have helped build profitable businesses in banking, investment management, analytics, consulting, and sales. He has previously worked in quantitative finance and financial technology at UBS Investment Bank, BNP Paribas, BNY Mellon, Numerix, Moody's Analytics, and more.

**Mikhail V. Oet, Associate Teaching Professor and Lead Faculty, Commerce and Economic Development, College of Professional Studies, Northeastern University.**
Mikhail joined Northeastern University in 2019, after dedicating 19 years to financial stability research, risk analytics, and economic forecasting. As an Economist at the Federal Reserve Bank of Cleveland, he created the Cleveland Financial Stress Index and the SAFE early warning system for systemic banking risk, the first U.S. regulatory early warning system combining public and private supervisory data. Mikhail also served as Director of Economic Forecasting at Bank of New York Mellon and Director of Analytics at Financial Network Analytics. He has authored 25 research papers in peer-reviewed journals, including Review of Finance, Journal of Financial Stability, Journal of Banking & Finance, and European Journal of Finance. Regulatory authorities and financial institutions have adopted his work on financial stress measurement and early warning systems.

**Paul W. Chiou, Associate Teaching Professor of Finance and the founding Director, MathWorks Lab for FinTech and Quantitative Analytics, D'Amore-McKim School of Business, Northeastern University**
Paul joined Northeastern University in 2014, following a decade of being a tenured faculty member at two universities in Pennsylvania and Michigan. He has published 34 research papers spanning international investments, asset pricing, law and finance, financial institutions, market structures, and portfolio and risk management in peer-reviewed journals and handbooks. In addition, Paul assumes roles within the academic community as an Associate Editor for three academic journals and as an active participant on program committees for professional conferences, such as FMA. Professor Chiou has been interviewed by several media outlets, including Forbes, MarketPlace, The Street, Boston Business Journal, Voice of America, and the Commercial Times regarding financial market issues. Before pursuing an academic career, he worked as a banker specializing in credit analyses and economic research. Professor Chiou develops his educational entrepreneurship as the founding director of the MathWorks Lab and as the Principal Contact for the CFA Institute Scholarship Program. Paul earns a Ph.D. in Finance from Rutgers University and an MBA in Finance from National Taiwan University.

**C. S. Richard Chan, Associate Professor, Stony Brook University**
As Co-Director of the Center of Entrepreneurial Finance, Dr. Chan is an avid researcher focusing on how entrepreneurs acquire capital through emerging technologies like crowdfunding and cryptocurrencies. His work is notably interdisciplinary, as he actively collaborates with computer scientists to apply advanced computational methods to business research, with findings published in top-tier journals like the Journal of Business Venturing, Entrepreneurship Theory & Practice, and Strategic Management Journal. Dr. Chan is deeply committed to building a robust entrepreneurial ecosystem by connecting students, faculty, and entrepreneurs and fostering new ventures through regional partnerships and education programs.

**Douglas Cumming, Professor of Finance and Steven Shulman '62 Endowed Chair for Business Leadership, Stevens Institute of Technology**
Douglas Cumming, J.D., Ph.D., CFA, is a Professor of Finance and the Steven Shulman '62 Endowed Chair for Business Leadership at the Stevens Institute of Technology School of Business. Douglas has published over 260 articles in leading journals (including 49 in Financial Times top 50 journals) and 23 books with Oxford, Wiley, and others. Douglas' work has been cited over 35,000 times. Douglas is the Managing Editor-in-Chief of the Review of Corporate Finance and the Journal of Alternative Investments. Douglas' work has been reviewed in The Economist, The New York Times, the Chicago Tribune, the Wall Street Journal, the Globe and Mail, Canadian Business, the National Post, and The New Yorker.

**Ian Mehok, Vice President, Prudential, Global Retirement & Insurance Strategy**
Ian is Vice President of Strategy for Prudential's Global Retirement and Insurance (GRI) businesses and Head of Strategy for GRI Technology and Brand & Marketing. In this role, he leads strategic and M&A initiatives that shape enterprise priorities and power business growth. With more than 15 years at Prudential, Ian has held leadership roles in Strategy, Corporate Development, and Finance. He actively mentors and advises participants in Prudential's Early Talent programs and represents Prudential in industry forums, including the Center for Research toward Advancing Financial Technologies (CRAFT). Ian holds an MBA in Strategy and Leadership & Change Management from New York University and a bachelor's degree in Finance from Seton Hall University.

**Arion Cheong, Assistant Professor, Stevens Institute of Technology**
Arion Cheong received his Ph.D. in Accounting Information Systems from Rutgers University. His research focuses on the application of data analytics in accounting and the managerial implications of information technology. He has advised organizations such as the Brazilian Stock Exchange (B3) and AB InBev on adopting audit data analytics. Arion has published in multiple academic journals, including the Journal of Management Information Systems, Journal of Information Systems, Journal of Emerging Technologies in Accounting, and the European Court of Auditors Journal. He currently serves as an Associate Editor at the Journal of Emerging Technologies in Accounting.

**Zachary Feinstein, Associate Professor, Stevens Institute of Technology**
Dr. Zachary Feinstein is an Associate Professor in the School of Business at Stevens Institute of Technology. He serves as the Director of the FinTech Certificate at Stevens Institute and is the Vice Chair for the INFORMS Section on Finance. Prior to joining Stevens Institute, Dr. Feinstein earned his Ph.D. from Princeton University in 2014 and was a faculty member at Washington University in St. Louis from 2014-2019. He has published numerous works in financial systemic risk, decentralized finance, and machine learning. Dr. Feinstein has written multiple articles on financial topics related to popular fiction; these works have been highlighted on Bloomberg TV, the New York Times, and the Wall Street Journal among many other prominent news outlets.

**Thomas Ferguson, Associate Professor, Rensselaer Polytechnic Institute**

After receiving a PhD in philosophy from the City University of New York, Thomas spent several years in industry working on the Cyc artificial intelligence project before moving to the data firm Dun & Bradstreet as their principal ontologist. After postdoctoral positions at the Institute for Logic, Language and Computation at the University of Amsterdam, the University of St. Andrews, and the Institutes of Philosophy and Computer Science at the Czech Academy of Science, he arrived at Rensselaer Polytechnic Institute as associate professor of cognitive science. Thomas's primary research interests focus on mathematical, philosophical, computational, and practical aspects of reasoning and language, generating research that has appeared in journals including Philosophical Studies, the Journal of Philosophical Logic, the Review of Symbolic Logic, Studia Logica, the Journal of Logic and Computation, among others.

**Oshani Seneviratne, Assistant Professor, Rensselaer Polytechnic Institute**

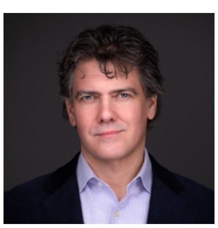
Oshani Seneviratne is an Assistant Professor of Computer Science at Rensselaer Polytechnic Institute (RPI), where she leads the BRAINS Lab (Bridging Resilient, Accountable, Intelligent Networked Systems). Her research focuses on decentralized systems, including web technologies, blockchain, and decentralized learning, with applications in health informatics and fintech. Her research has been recognized with multiple best paper awards and the Yahoo! Key Scientific Challenges Award. For more information about Oshani, please refer to her website http://oshani.info .

**Xiao-Yang Liu Yanglet, Director of Research Lab and Startup Founder, SecureFinAI Lab**

Dr. Xiao-Yang Liu is the Director of SecureFinAI Lab, Columbia University. His research interests include deep reinforcement learning, big data, and high-performance computing. He created several open-source projects, such as FinGPT, FinRL, and ElegantRL. He contributed chapters to a textbook on reinforcement learning for cyber- physical systems and a textbook on tensors for data processing. He serves as a senior PC member for NeurIPS, ICML, ICLR, AAAI, IJCAI, AISTATS, and ICAIF. He organized FinRL Competition at ACM ICAIF 2023/2024/2025, the First/Second Workshop on Quantum Tensor Networks in Machine Learning (QTNML) at NeurIPS 2020/2021, and IJCAI 2020 Workshop on Tensor Networks Representations in Machine Learning.

**Alexander McGee, Co-Founder & Chief Business Officer, Balcony Technology Group**

Alex is the Head of Government Affairs and Co-Founder of Balcony, where he serves as the vital bridge between government customers and the engineering team. With a background in real estate development and a career spent working closely with local governments, Alex brings a deep, firsthand understanding of the public sector's challenges and priorities.



**Paul Lashmet, Business Integration Architect, Park Avenue Finance**

Paul Lashmet is a business integration architect with expertise in orchestrating global strategic programs across the financial services landscape, including capital markets, investment banking, mortgage, retail banking, and wealth management. He has a proven track record of optimizing risk mitigation and revenue generation through a cross-functional and layered approach to evaluating challenges and implementing solutions. As a former senior vice president at HSBC and through leadership roles at Deutsche Bank, Fannie Mae, Salesforce, and Cloudera, Paul has been recognized by colleagues as an enterprising contributor with the ability to articulate complex issues, uncover new opportunities, and identify patterns and connections not obvious to others.

**Rohit Kapa, Vice President, Data Science at Prudential Financial**

Rohit Kapa is Vice President of Data Science at Prudential, where he leads AI strategy and delivery for the Individual Life Insurance business. His expertise lies in applying advanced machine learning to underwriting, mortality risk assessment, and assumption development. He led the creation of Prudential's first automated underwriting model and mortality risk models that are improving operational efficiency and driving new business solutions. Rohit also leads Prudential's Generative AI and Agentic AI initiatives, designing intelligent systems that support advisor enablement, underwriting automation, and domain-driven decision support. His focus also includes scalable LLMOps, responsible AI governance, and platform architecture for deploying enterprise-grade AI applications.

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