

FINANCIAL REPORT

LAST UPDATED
4 MIN AGO

97%

93%

PERFORMANCE

INCOME STATEMENT

REVENUES	6,554,224.00
NOT SALES	3,420,563.00
Investment	6,764,784.00
EXPENSES	6,550,452.00
Research-Development	1,337,886.00
Operating expenses	2,699,500.00
Marketing	500,799.00
NET INCOME	59,877,892.00

BALANCE SHEET

ASSETS	3,478,900.00
Current Assets	1,238,700.00
Non-Current Assets	2,240,200.00
LIABILITY	3,478,789.00
Current Liability	3,358,569.00
Non-Current Liability	2,611.00
EQUITY	2,571,232.00
Current EQUITY	3,354,312.00
Non-Current EQUITY	5,332.00

CASHFLOW STATEMENT

OPERATIONS	6,554,224.00
NOT SALES	3,420,563.00
Investment	6,764,984.00
EXPENSES	9,550,452.00
Development	8,337,886.00
Operating expenses	2,699,500.00
Marketing	500,799.00
NET INCOME	59,877,892.00

EQUITY STATEMENT

REVENUES	6,554,224.00
NOT SALES	3,420,563.00
Investment	6,764,784.00
EXPENSES	6,550,452.00
Research-Development	1,337,886.00
Operating expenses	2,699,500.00
Marketing	500,799.00
NET INCOME	59,877,892.00



CRAFT

CENTER FOR RESEARCH TOWARD ADVANCING FINANCIAL TECHNOLOGIES

INDUSTRY ADVISORY BOARD MEETING

MARCH 27 - 28, 2025





ANNOUNCEMENTS

- CRAFT is excited to present the 8th Industry Advisory Board Meeting.
- The meeting will be on March 27, 2025 (open session) and March 28, 2025 (closed session) at the Rensselaer Polytechnic Institute in the Howard P. Isermann Auditorium.

Webex link for virtual attendees:

<https://rensselaer.webex.com/rensselaer/j.php?MTID=m499b6f0b780731883fe2ad1690196086>

Meeting Password: **CRAFTIAB25**



OVERVIEW



CRAFT is the first I/UCRC focusing on Fintech research and innovation to bring together academic and industry participants, as well as representatives from all levels of government, and support the agenda of advanced research projects related to the Fintech challenges of the financial services industry.

This meeting is jointly hosted by Rensselaer Polytechnic Institute and Stevens Institute of Technology. CRAFT is an industry-university cooperative research center funded by the National Science Foundation. Featuring:

- Welcome addresses by CRAFT, RPI, and Stevens leadership
- Keynote address by the BNY Mellon
- Panel discussion on Digital Disruption in the Age of AI
- Research Presentations by CRAFT's newest academic member, The University of Connecticut
- Industry Advisory Board Member Presentations

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.

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



CENTER DIRECTORS



Dr. Steve Yang | CRAFT Director, Associate Professor
Stevens Institute of Technology, School of Business

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, IRRR, 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. He is the founding co-chair for the BLOKDD series of workshops. He is currently an associate editor for Data Mining and Knowledge Discovery, and he has also served as Area Editor for Statistical Analysis and Data Mining, and as Associate Editor for ACM Transactions on Knowledge Discovery from Data, and Social Networks and Mining.



Dr. George Calhoun | CRAFT Managing Director, Program Director, Quantitative Finance, Professor,
Stevens Institute of Technology, School of Business

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.





SPEAKERS



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.



David Bergman | Interim Associate Dean for Faculty & Research, University of Connecticut

David Bergman is the Interim Associate Dean for Faculty & Research at the University of Connecticut and an Associate Professor in the Operations and Information Management Department. He received his Ph.D. in Algorithmic, Combinatorics, and Optimization from Carnegie Mellon University through a joint program between the Tepper School of Business, the Computer Science Department, and the Mathematics Department. His research focuses on the development of advanced algorithms for solving large-scale, complex optimization problems, with extensive publications in top Operations Research journals. Beyond academia, David has industry experience at McKinsey & Company and has served as a consultant across a wide array of sectors. He is also a recognized figure in the sports betting world, having won several high-profile competitions, including the prestigious DraftKings Fantasy Football World Championship in 2020. His work uniquely bridges rigorous academic research with applied innovations in sports analytics and betting strategy.



Xiao-Yang Liu Yanglet | Columbia Fu Foundation School of Engineering and Applied Science and Faculty, Rensselaer Polytechnic Institute,

Xiao-Yang Liu Yanglet, PhD, founding member of lab GenAI Research on Open Finance, Columbia University; an affiliated member at CRAFT, Linux Foundation, and PyTorch Foundation. In 2023-2024, he was a teaching faculty at RPI CS. His research areas are reinforcement learning, quantum-inspired machine learning, and applications in finance. He created the popular open-source projects, FinGPT, FinRL, and Open FinLLM Leaderboard.



Graeme Muirhead | Managing Director, Bank of America

Tyler started his career as the eighth hire for Plug and Play's Silicon Valley Insurtech practice, which quickly grew to be the largest vertical in Plug and Play's global ecosystem. He led the East Coast market for the practice, working closely with partners across the insurance value chain including Cigna, The Hartford, Guy Carpenter, AXIS, and many more. After Plug and Play, Tyler led insurance go-to-market for unicorn fintech startup, Array, before returning to Plug and Play to lead the firm's first East Coast accelerator, NJ FAST.



Gregory Prastacos | Professor and Former Dean, Stevens Institute of Technology, Director of Strategy, CRAFT

As Dean at Stevens (2012-24) Gregory was the driving force for the development and implementation of an ambitious strategic plan, the launching of new majors and programs, the doubling of enrollments, hiring of top faculty, the boosting of research, the international expansion, the accreditation of the school by AACSB (2015), and its rebranding from a school of technology management to a school of business. In 2023 the school was ranked by US News # 53 among the top-100 business schools. In 2024 the school was ranked by US News #5 in terms of employers' recognition.



Kumar Bhaskaran | Financial Services Technology & Innovation Leader, IBM

Kumar is an innovation leader with over 30 years of experience, including Program Director, Head of Research, and other leadership positions. Throughout his career, he has built a track record of pioneering and game-changing contributions within a Fortune 50 corporation, guiding global teams in the development and launch of breakthrough solutions. Leveraging a broad range of knowledge, skills, and experience, he provides the strategic and hands-on leadership to help drive companies to the next level of success.



Saed Shonnar | Director, AI Hub, BNY Mellon

Saed is a director at BNY's Artificial Intelligence (AI) Hub. Saed drives strategy, enablement and client outreach in the AI Hub – an enterprise-level organization that defines the firm's strategic approach to AI, builds the foundational capabilities and infrastructure needed to adopt AI at scale, and deploys solutions leveraging the technology. He focuses on defining our strategic approach to deliver innovative solutions powered by AI, facilitating engagement with internal stakeholders to promote AI adoption, assessing innovation trends and developments related to AI in financial services, and outreach to external stakeholders.



Jennifer Schell | CEO and Founder, Finliti

As Finliti's Founder and CEO, Jen wanted to create an engaging place to learn about finance and investing. She is a passionate wealth management professional with over 15 years of financial experience at six of Canada's largest financial institutions. When Jen first began her career, she was curious about the stock market but felt intimidated by the information overload and fancy jargon. But, once Jen committed to building a solid foundation of knowledge and principles, she was able to defeat the fear around investing. Sure— she made her share of mistakes, but it only made her stronger. By overcoming her fears and biases around money, she realized that there was actually a lot of emotion involved in the investment process. This resulted in Jen's desire to build an accessible way to invest, where anyone could learn to be successful.



Yaacov Kopeliovich | Associate Professor, Finance, University of Connecticut

Highly analytical and results oriented finance professional with more than 10 years of exceptional experience in a variety of complex financial disciplines including derivatives, fixed-income products, equities, and currency related products. Holds a double-doctorate degree in finance and mathematics as well as a master's degree in financial engineering. Strategic thinker with quantitative and conceptual problem solving abilities, who is able to provide senior management with solutions and identify opportunities for improvement. Possess in depth technical knowledge of buy-side multi-asset portfolio management, portfolio risk, and, market risk, performance attribution, and pension fund liability management techniques. Able to perform investment and equity research. Well versed in stress testing algorithms, portfolio optimization including stochastic optimization. Excellent programming knowledge of C#, Java, C++, Scala, Matlab and R.



Mary Salvaña | Assistant Professor, Statistics, University of Connecticut

Mary Lai Salvaña is an Assistant Professor at the Department of Statistics at the University of Connecticut (UConn). Prior to joining UConn, she was a Postdoctoral Fellow at the Department of Mathematics at University of Houston. She received her Ph.D. in Statistics at the King Abdullah University of Science and Technology (KAUST), Saudi Arabia. She obtained her BS and MS degrees in Applied Mathematics from Ateneo de Manila University, Philippines, in 2015 and 2016, respectively. Her research interests include extreme and catastrophic events, risks, disasters, spatio-temporal statistics, environmental and climate statistics, computational statistics, large-scale data science, and high-performance computing.



Bin Zou | Associate Professor, Mathematics, University of Connecticut

Bin Zou is an associate professor in the Department of Mathematics at the University of Connecticut (UConn). Before joining UConn in 2017, he was a postdoc at the University of Washington and the Technical University of Munich. He obtained his PhD, with specialization in mathematical finance, in 2015 from the University of Alberta. His main research interests are actuarial science and financial mathematics.



Jeff Cohen | Kinnard Scholar in Real Estate and Professor in Finance, University of Connecticut

Jeffrey P. Cohen is the Kinnard Scholar in Real Estate and a Professor of Finance at the University of Connecticut School of Business. Dr. Cohen's research interests focus on the areas of residential real asset prices and how various environmental and sociodemographic factors affect these prices. He is also an expert on various aspects of how investors in residential real assets are impacting sales prices and other market dynamics, including the use of Machine Learning techniques to identify investors and to value real assets. Dr. Cohen's research has been published in top-tier journals in his fields, including the Review of Economics and Statistics, the Journal of Urban Economics, Real Estate Economics, and the Journal of Real Estate Finance and Economics. His recent sponsored research and consulting clients include the U.S. Department of Transportation, the Connecticut Department of Transportation, the Federal Reserve Bank of St. Louis, the Federal Reserve Bank of Boston, the Lincoln Institute of Land Policy, and the Robert Wood Johnson Foundation, among others.



Petros Zerfos | Principal Research Scientist & Manager, IBM

Petros is the principal research scientist and manager of the data engineering for watsonx group at IBM Research, consisting of research staff members and senior software engineers that conduct basic and applied research in large-scale data engineering for large language models (Generative AI), BigData platforms & applications, and applied machine learning. In 2016, he was designated as IBM Master Inventor.



OPEN SESSION: THURSDAY, MARCH 27

8:00 - 9:00 A.M. REGISTRATION, BREAKFAST AND NETWORKING

9:00 - 9:15 A.M. CRAFT LEADERSHIP WELCOME

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

9:15 - 9:30 A.M. WELCOME FROM RPI/STEVENS LEADERSHIP

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

9:30 - 10:10 A.M. KEYNOTE TALK

- **Saed Shonnar**, Director, AI Hub, BNY Mellon
- The presentation will explore BNY's transformative journey in AI adoption, a case study in how a Global Systemically Important Financial Institution (G-SIFI) is leveraging the technology. The presentation will outline the strategic approach to identifying impactful use cases and building a robust AI infrastructure, alongside the commitment to responsible AI practices and talent upskilling. The discussion will highlight Eliza, BNY's innovative AI platform, and collaborations with industry leaders such as OpenAI and Nvidia. The speech will share insights into how BNY is leveraging AI to enhance operational efficiency and drive innovation in the financial services sector.

10:10 - 10:30 A.M. COFFEE BREAK

10:30 - 11:00 A.M. KEYNOTE TALK

- **Xiao-Yang Liu Yanglet**, MOF and FinGPT, Columbia Fu Foundation School of Engineering and Applied Science

11:00 - 11:20 AM AI Compliance Officer

- PI: Zachary Feinstein

11:20 - 11:40 P.M. Smart Encoding and Automation of Over-The-Counter Derivatives Contracts

- PI: Oshani Seneviratne

11:40 - 12:00 P.M. Large Transaction Models (LTMs) for FinTech

- PI: Kristin Bennett

12:00 - 1:00 P.M. LUNCH

1 - 1:20 P.M. Semantically Enhanced Graph Neural Networks for Event-Driven Financial Impact Analysis

- Namir Xia, PI: Mohammed Zaki



OPEN SESSION: THURSDAY, MARCH 27

1:20 - 1:40 PM **Analyzing Financial Information with XBRL-enhanced Foundation LLM**
• Dannong Wang, PI: Xiaoyang Liu

1:40 - 2:00 P.M. **Quantum Algorithms for Tail Risk in Loan Portfolios**
• PI: Malik Magdon-Ismail

2:00 - 2:15 P.M. **RENSELAER FINANCE CLUB**
• Grace Peckham, Claire Iwelumo, Nicholas Khoo, Sean Mullen, RPI

2:15 - 3:15 P.M. **PANEL: Digital Disruption in the Age of AI**
• Graeme Muirhead (moderator), Managing Director, Bank of America
• Gregory Prastacos, Professor and Former Dean, Stevens Institute of Technology, Director of Strategy, CRAFT
• Kumar Bhaskaran, Financial Services Technology & Innovation Leader, IBM
• Liad Wagman, Dean of Lally School of Management, Rensselaer Polytechnic Institute
• Saed Shonnar, Director, AI Hub, BNY Mellon

3:15 - 3:30 P.M. **COFFEE BREAK**

3:30 - 4:00 P.M. **IAB Member Use Case Presentations**
• Leveraging Behavioral Science to Enhance Wealth Advisory Outcomes, Jennifer Schell, CEO and Founder, Finliti
• The Finliverse: Gamifying Financial Literacy for Lasting Impact, Jennifer Schell, CEO and Founder, Finliti
• Large-scale Data Engineering for Large Language Models, Petros Zerfos, Principal Research Scientist & Manager, IBM

4:00 - 5:00 P.M. **University of Connecticut Faculty Presentations**
• Asset Allocation with Artificial Neural Networks, Yaacov Kopeliovich
• Constrained FNN Risk Scoring Models in Telematics Insurance, Bin Zou
• When Should You Mint or Burn Tokens in DeFi?, Bin Zou
• Self-Organized Criticality Model: Predicting Black Swan Events Before They Happen, Mary Salvana
• Setting Salaries in Daily Fantasy Sports, David Bergman
• Optimal Parlay Building, David Bergman
• Investors in Real Assets When There Are Natural Disasters, Jeff Cohen

5:00 P.M. **ADJOURN**



CLOSED SESSION: FRIDAY, MARCH 28

8:00 - 8:30 A.M. BREAKFAST & NETWORKING (GALLERY)

8:30 - 9:45 A.M. ADMINISTRATIVE MEETING (IAB + ALT ONLY)

9:45 - 10:00 A.M. COFFEE BREAK

RESEARCH PROPOSALS - FIRST SESSION

- 10:00 - 10:15: Model-free Robo-advisor: A dynamic mean quadratic variation portfolio optimization framework
PI: Zhenyu Cui
- 10:15 - 10:30: Testing Financial Foundation Models' Safety via Causal Learning
PI: Ali Tajer
- 10:30 - 10:45: Operationalizing Privacy-Preserving Federated Learning for Financial Applications in Fraud Detection
PI: Stacy Patterson
- 10:45 - 11:00: Network-based Artificial Intelligence for Risk-Averse Investment in Stock Market
PI: Foad Pajouh
- 11:00 - 11:15: Enhancing Financial Predictions with Quantum Computing, Knowledge Graphs, Natural Language, and Machine Learning
PI: Deborah McGuinness

11:15 - 11:30 P.M. BREAK

RESEARCH PROPOSALS - SECOND SESSION

- 11:30 - 11:45: Assessing the Risks of Alternative Data
PI: Zachary Feinstein
- 11:45 - 12:00: A Multi-Agent AI Approach for Enhancing Accounting Estimates
PI: Arion Cheong
- 12:00 - 12:15: Drivers of Volatility in Energy Markets}{Identifying Drivers of Volatility
PI: Sebastian Souyris
- 12:15 - 12:30: Explainable Risk and Coverage with Computable Insurance Contracts
PI: Oshani Seneviratne

12:30 - 1:30 P.M. LUNCH

1:30 - 2:30 P.M. CRAFT Leadership/IAB Closed Meeting "Future of CRAFT"

2:30 - 3:30 P.M. IAB VOTING & CLOSED MEETING

3:30 - 4:00 P.M. IAB REPORT TO ALT



CRAFT

CENTER FOR RESEARCH TOWARD ADVANCING **FINANCIAL TECHNOLOGIES**



School of Business

