We would like to congratulate Professor Barry Blecherman and thank him for 25 years of service to NYU Tandon School of Engineering. We appreciate all that he does for the students, staff, alumni and fellow faculty in the Department of Finance and Risk Engineering.
As George Harrison, lead guitarist of the Beatles, once wrote, “It’s been a long cold lonely winter!”

I’m writing this welcome note on the day before the vernal equinox. With spring’s arrival, it’s time to shake off the winter blues, look forward to summer, and start preparing for fall. In February, we welcomed our new assistant manager of communications, Jennifer Novicki, (see page 10), who will be making sure that the rapid-fire changes we are making get communicated to all of our stakeholders. For example, we are no longer requiring students to declare tracks, we have added a module to our boot camp, and we have added flexibility to the core. As we head into the home stretch on AY 2018-19, we will be repeating our successful alumni event and giving selected students complimentary passes to industry conferences I am speaking at.

As our seniors graduate in May, and our freshman class takes up summer internships, our incoming class begins boot camp this June. We have a record number of deposits for next year’s class. We are also likely to have our largest enrollment ever, but we continue to cap class size at 30 and target an average class size of 15. We will be introducing a Python module in the boot camp for the incoming class for the first time. We have also revised the core requirement for the incoming group in various ways.

First, we have converted our elective Introduction to Machine Learning to one of three optional core classes. Second, we have added flexibility to the core by converting two previous mandatory courses, namely Risk Management and Economics, into optional core classes. Thanks to the efforts of our hyper-dedicated career placement director, Sara DeLusant, we will have a record number of firms doing on-campus recruitment, including the hedge fund behemoth Bridgewater Associates for the first time.

We continue to welcome new adjunct faculty who work at marquis firms such as Goldman Sachs and Amazon. Our full-time faculty family will also be growing, in more ways than one.

Whether you enter the summer as a graduate, a summer intern, or a boot camper, please know that the FRE faculty and staff are here every weekday, tirelessly working to ensure that your Tandon experience is one you will never forget.

Best Wishes
Professor Peter Carr
Department Chair
NYU Tandon Finance and Risk Engineering

More about our chair:

As an acknowledged leader in the world of finance and risk engineering, Peter Carr maintains a demanding calendar of high-profile speaking engagements. In January, for example, he presented the paper “Decomposing Long Bond Returns: A Decentralized Modeling Approach” at the American Finance Association (AFA) annual meeting, held in Atlanta. The following month he served as the keynote speaker at the Bloomberg Quant (BBQ) Seminar Series, where he presented a talk on the topic of “Just in Time Portfolio Insurance.”
We’re Tops

Tandon’s master’s degree program in Financial Engineering (one of the largest and longest-running of its kind) was named among the top-10 in the nation by QuantNet, an online community for financial engineering and quantitative mathematics education applicants and employers.

The 2019 QuantNet ranking was based upon several achievements: 87 percent of NYU Tandon’s financial engineering graduates who were seeking employment found positions within three months of graduation, and starting salaries averaged $91,000. The rankings also noted our department’s customized educational environment, with small class sizes (averaging 15, and none larger than 30) and more than 50 course offerings.

The program ranked ninth in the country, tied with the Massachusetts Institute of Technology Master of Finance. (NYU’s Mathematics in Finance program at the Courant Institute of Mathematical Sciences was also included among the leaders.)

“We are gratified that the QuantNet has recognized the work of our faculty in redefining financial engineering and bridging theory and practice through their research and the preparation of our students for highly sought quant, risk, and tech careers,” said Department Chair Peter Carr.

The program was also recently recognized as one of the best in the nation by the online news platform TFE Times, which listed it at number four – up three places from the previous year. TFE Times rankings are based on mean GRE scores, mean starting salary and bonus, mean undergraduate GPA, acceptance rate, full-time graduates employed at graduation and three months after graduation, total number of distinct courses available and total research expenditures, all areas in which the department enjoys strong statistics.

Dean Jelena Kovačević was unstinting in her praise, saying, “This is an affirmation of the department and faculty’s ability to attract the best and brightest students, push the boundaries in scholarship, expand access with new programs, and create a fertile environment for training the next generation of experts to better access today’s financial industry, as well as projecting future trends.”
An Eventful Few Months

A Gala Affair
The International Association for Quantitative Finance held its Gala Dinner on Wednesday, February 6, 2019, at the Yale Club in New York City. In attendance was Department Chair Peter Carr, along with his special invited guests. Among them were department members Kevin Atteson, Roza Galeeva, Samim Ghamami, Andrey Itkin, Gordon Ritter, David Shimko, and Zhibai Zhang, as well as Rajesh Krishnamachari (formerly of Courant), Mykhaylo Shkolnikov (of Princeton), Liuren Wu (of Baruch), and Yuzhao Zhang (of Rutgers).

At the event, Francis Longstaff, the Allstate Professor of Insurance and Finance at UCLA Anderson School of Management and former Senior Associate Dean, was named the 2018 IAQF/Northfield Financial Engineer of the Year.

Our entire department congratulates Dr. Longstaff on garnering the well-deserved honor.

“Quant-ifiably” Good Advice
For the third straight year, the department organized a group of impressive women professionals to provide insight into all things “quant” during an engaging panel discussion and networking event on Wednesday, February 27, 2019. The panel – which was moderated by Edith Mandel, NYU Tandon Adjunct Professor and founder of Greenwich Street Advisors – featured Ioana Boier (Senior Quant Researcher), Adila McHich (FRE Alumnae and Director of Energy Research and Product Development at CME Group), and Sujatha Srinivasan (co-head of Market Risk Specialists at Goldman Sachs). With our department’s student population at near-perfect gender balance (46% women), it’s no surprise that this was a well-attended event!

Mixing It Up
On December 12, 2018 & April 29, 2019, FRE alumni gathered on campus to reflect on their time at Tandon and share their personal and professional news. Attendees enjoyed cheese, wine, and great company as they caught up with former classmates and professors at the FRE Alumni Wine and Cheese Networking Mixer. (Current FRE students were also welcome to attend the event, meet alumni, and network.)

The department plans continue these events on a bi-annual basis, so if you would like to attend the next Alumni Mixer, please contact set11@nyu.edu for more details.

The Forecast is Favorable
Analysts skilled at accurate forecasting can reduce costs, increase opportunities, and improve outcomes for their clients, and gaining the knowledge and experience needed to do so is vital. To aid in that process, in early December, NYU Tandon co-sponsored the M4 Conference, which was keynoted by Distinguished Professor of Risk Engineering Nassim Nicholas Taleb, who discussed uncertainty in financial forecasting.

The Conference was held following the completion of the M4 Competition, the fourth iteration of a challenge that had been launched in 1982 with the goal of enabling participants to learn to improve forecasting accuracy and advance the field as much as possible. M4 drew numerous academicians and practitioners, who competed using a variety of techniques to predict time-series data. The focus was practical, rather than theoretical, and the event was aimed at providing an empirical look at which major time-series methods objectively performed best. Organizers pointed out that accurate predictions and the correct assessment of the uncertainty surrounding them are indispensable for all types of future-oriented decisions, from determining appropriate inventory and sales levels to buying and selling financial instruments.

Master’s degree candidate Thomas Havversang, who was in attendance at the Conference, said, “Professor Taleb’s talk was excellent; he focused a lot on what he called ‘the expert problem,’ which is especially pertinent to forecasting – and to academia as a whole. He explained fat tails, the limitations that they present in modeling, and the new statistical tools we need to use. He made a fascinating point
that even though we cannot model the fat-tailed real world, we can still structure our models to be robust to such random and detrimental phenomenon.” Another Tandon student, Rupal Jain, concurred, explaining, “The M4 Conference was a great learning experience for me as it demonstrated a blend of Machine Learning and Forecasting and their importance in the financial industry. It provided a chance to learn from pioneers of the field such as Professor Taleb and Spyros Makridakis [the director of the Institute for the Future at the University of Nicosia, co-sponsor of the event], who shared their own experiences and presented a different perspective on risk and forecasting it.”

The informative Conference also featured a panel hosted by Department Chair Peter Carr, “We had a wide-ranging discussion of when machine learning was more relevant than statistical models and came to the general conclusion that a hybrid approach was most effective,” he said. “It was a pleasure to be part of such a well-organized and well-attended event, and I forecast that Tandon will be involved in M5 when it is held.”

FRE IS MOVING!

This summer, the FRE Department is moving to 1 MetroTech Center - Suite 1001.
Mathieu Loing had set his sights on an automotive career from an early age. His father had forged a fulfilling career in that industry, and given his love of math and science, it seemed a natural choice to study mechanical engineering. Still, after completing an internship with a GT3 racing team – a seemingly glamorous stint that would be the envy of any aspiring automotive engineer – Loing found himself confused. Working in the race world, while exciting, was not really conducive to the family life he envisioned having eventually.

He still wanted to use his math and technical skills to problem solve, however, and was happy to discover that although the finance and risk engineering program at Tandon is geared towards graduate students, he could still take courses there. “Professor Barry Blecherman became a mentor to me and helped me make the decision to pivot to management consulting, where I could take what I had learned in case analysis and strategic analysis courses and use it to solve big problems,” Loing explains.

With an FRE minor, he was able to keep a hand in mechanical engineering as part of NYU Hyperloop, a multidisciplinary group designing and building “pods” that will speed people and freight through a visionary transportation system conceived by Elon Musk, and as president of the team he developed leadership skills that will serve him well in his career. Loing has accepted a job as a consulting analyst at MasterCard, a post every bit as exciting to him as working with race cars.

Name: Clio Wei  
Hometown: Shenzhen, China  
Degree: Financial Engineering, M.S.

What was your journey to NYU Tandon like?

I liked math when I was very young and came to the U.S. to pursue a degree in Applied Mathematics at UCLA. I took a course in Financial Mathematics out of curiosity and loved it so much. It was practical and hands-on and seemed like that it could be a good career path for me. When I was looking for a graduate school, I was attracted to Tandon’s flexible curriculum and small classes, as well as the seminars and resources available to students. Knowing that Professor Peter Carr was the chair of the Finance and Risk Engineering Department firmed up my decision to pursue my master’s degree at NYU Tandon.

What do you consider to be among the most valuable experiences you had here, and how did it help shape you?

I developed many technical skills during my first year. Along the way, I realized that I also needed more practice in soft skills, such as collaboration, networking, and conversational skills for the real world. My peers, especially international students, needed to have that skill set, as well, to be successful professionally. Therefore, I worked with my classmates to launch the FRE Club (article page 15). As Vice President and FRE Ambassador, I helped organize career coaching and faculty mixer events, and we’ve invited industry experts to give talks and inspire club members and students. During the process, I’ve enhanced my leadership skills and became a better communicator.

What’s next?

I received a full-time job offer and will join the Return on Capital Optimization Team at PWC in New York as a quant. I will help corporate clients price complex products, measure their performance and provide solutions to optimize their return on capital.
What was your journey to NYU Tandon like?

I visited New York in 2013 and fell in love with the city. After I earned a bachelor’s degree in industrial engineering from Universidad Adolfo Ibáñez, I decided I wanted to study financial engineering; I knew that as a major financial hub, there would be no better place to do that than NYC. I’ll admit that living and studying in New York turned out to be something of a shock initially. It was faster-paced and more demanding than I was used to. That’s one of the reasons I helped found the Bulls and Bears Club and served as a co-president – to help other students settle in and make the most of their time in the department.

What do you consider to be among the most valuable experiences you had here, and how did it help shape you?

It’s been an honor to study with people like Nassim Taleb, who is internationally renowned for his work on extreme risk. He has a unique approach to the world, and in studying with him and the other professors in the department I learned to question my own approach.

What’s next?

I’ll be working as a quant at Citibank after graduation. Many Tandon alumni work there, so I was able to meet a lot of people and learn about the great company culture. One day, sometime in the future, I’d like to consider starting my own firm.

Name: Claudio Gonzalez
Hometown: Santiago, Chile
Degree: Financial Engineering, M.S.
Nassim Nicholas Taleb Garners Award from Wolfram Research

Distinguished Professor of Risk Engineering Nassim Nicholas Taleb recently became a recipient of a Wolfram Innovator Award. The prize was given at the 2018 Wolfram Technology Conference in Champaign, Illinois, held in mid-October.

The Innovator Awards are given to those who play a major role in pushing the boundaries of how Wolfram technology can be leveraged for innovation across fields and disciplines. Taleb was honored for his use of Mathematica, an integrated software platform that covers the breadth and depth of technical computing. In its decision, the company cited his “contributions to decision making under complicated and less-idealized probabilistic structures.” (Probabilistic structures provide a useful method of approximating data points in large data sets.) Wolfram also cited Incerto, his four-volume essay on uncertainty (Antifragile, The Black Swan, Fooled by Randomness, The Bed of Procrustes), in which he explored computational preasymptotics, a field that is often ignored.

“We are honored to count Professor Taleb as a member of Tandon’s Department of Finance and Risk Engineering and grateful that our students receive the benefit of his deep experience and thought leadership,” said Department Chair Peter Carr. “This latest honor from Wolfram is confirmation of the esteem in which he is held and his importance to the fields of global finance and risk.”
FRE Maintains Its Streak of Triumphs

Visitors to the Department of Finance and Risk Engineering could find themselves wondering what kind of elite athletes train there, given the gleaming trophies on display. Look closer, however, and it becomes apparent that while elite accomplishment is, indeed, being celebrated, it’s not that of swimmers or runners, but of the nation’s finest, young financial engineers.

On Friday, November 2, 2018, Tandon teams took part in the prestigious annual University Trading Challenge competition, held at Bentley University in Boston, where Team Everclear Investments took top place in the Trading Challenge, Foreign Exchange (Forex) Trading Challenge, and Portfolio Management Challenge, before being named overall first-place winner. The team included students Abhirit Kanti, Thomas Haversang, and Jose Fernando Lozano Toledo, and Haversang also garnered the top prize in the category of Individual Portfolio Management.

The previous, another Tandon Team, Alquant, had performed in similarly impressive fashion, bringing home the first-place overall trophy.

“Every member on the team had a unique comparative advantage, and that positioned us to excel in multiple categories,” Kanti commented. “We planned our opening trades every night and collectively hedged any speculative positions. The Portfolio and Trading Simulators were an enriching experience that exposed us to what finance in the real world is like. Finally, NYU’s resources and faculty of industry practitioners were instrumental in helping us hone our skill. A special thanks to our advisor, Dr. Ronald Slivka, who offered useful insight and made himself readily available for our questions.”

Hearty congratulations are also owed to Tandon students Vansh Mehta, Shishir Agrawal and Aditya Vikram Sharma, team members of Wolves of Wall Street, who landed in second place overall and contributed greatly to Tandon’s dominance in the event, which drew highly skilled teams from schools across the country for the chance to apply their academic skills to real-world trading simulations and financial analysis.

In other contest news, FRE students participated in the 2019 Rotman International Trading Competition, held this year at the University of Toronto. An annual event that brings teams of students from universities around the world to participate in a unique three-day simulated market challenge, the competition focuses on Volatility Trading, Fixed Income Trading, Equity Trading, Algorithmic Trading, Commodities Trading, and Quantitative Outcry. The NYU Tandon team, which was mentored by Adjunct Professor Ronald Slivka and former competitor Tinghao (Lenny) Li consisted of Ruichen Wang, Hao Zhan, Mengrui Zhang, Jason Cui, Avinash Lakhota, and Shishir Agrawal. Joining 52 other teams at the event, they got the opportunity to meet like-minded future finance professionals and ultimately finished in the top half of the field.
New and Noteworthy

Communication Is Key

FRE has a new Assistant Manager of Communications, Jennifer Novicki, whose duties include overseeing the department’s communication strategy, branding, digital marketing, social media, and outreach to external partners, among other key initiatives. Prior to joining Tandon, Jennifer produced web content for nyu.edu as an integral member of the university’s Digital Communications Group. She is a subject matter expert on digital accessibility and has worked closely with the NYU Digital Accessibility Group this past year to educate more than 500 users of the university’s content management system.

Jennifer makes her home in Jersey City, where she enjoys being with her two cats (Kookie and Earl), cooking, and watching true crime documentaries. The entire department welcomes her and is excited that she’s now working with us in Brooklyn.

Welcome to the Family

Our FRE family is expanding in amazing ways! No . . . it’s not another new faculty or staff member. We are happy to announce that Professor Andrew Papanicolaou recently tied the knot with fiancé Lauren Roth, an alum of NYU’s College of Global and Public Health. Although the two share many interests, when it comes to sports, they don’t see eye-to-eye. Andrew, who hails from California, is a diehard San Francisco 49ers fan, and Lauren, who has lived in New York for several years, still roots for her hometown team, the Philadelphia Eagles. There is no disagreement, however, on their love for George Papanicolaou, who was born on March 22 of this year. Please join us in congratulating Mr. and Mrs. Papanicolaou on their recent nuptials and in welcoming George to the world.
Our Faculty Grows

Once again this semester, FRE welcomes a group of new instructors who collectively bring with them decades of industry experience, real-world insights, and technological savvy.

James Adams

Samim Ghamami

Dan Gode

Conall O’Sullivan

Ken Perry

Michael Sotiropoulos

George Varughese

Jifei (Jeff) Wang

Jane Zhao
Professor David Shimko’s paper “Long-Term Project Valuation in Capital-Constrained Firms” was recently accepted for publication in Revue Finance, the journal of the French Finance Association. It will appear this summer in a special issue entitled Quantitative Corporate Finance: Where Do We Stand? This year the publication celebrates the 25th anniversary of Hayne Leland’s award-winning 1994 article, “Corporate Debt Value, Bond Covenants, and Optimal Capital Structure.”

Adjunct Professor Alec Schmidt’s paper “Beta Hedging: Performance Measures, Momentum Weighting, and Rebalancing Effects” has been accepted for publication in the Journal of Investment Strategies.

Prolific author Charles Tapiero, the Topfer Distinguished Professor of Financial Engineering and Technology Management, published the paper “Financial and Data Intelligence” in a recent issue of the Journal of Financial Transformation. Additionally, his paper “Randomness and Fractional Stable Distributions,” co-written with a colleague from the Université de Lorraine’s Institut de Mathématiques Élie Cartan, appeared recently in Physica A.

Adjunct Professor Michael Sotiropoulos is the co-author of “Short-Term Trading Skill: An Analysis of Investor Heterogeneity and Execution Quality,” which was featured in the March edition of the Journal of Financial Markets. In the first study of its kind in the era of high-frequency electronic trading, he and his colleagues (Mehmet Sağlam of the University of Cincinnati and Ciamac C. Moallemi of Columbia Business School) use a novel proprietary dataset and uncover several stylized trading patterns of skilled trading: skilled investors choose larger trade sizes, avoid dark pools, trade fewer stocks on any given day, but they do not time high-liquidity periods.

Adjunct Professor Anatoly (Alec) Schmidt, who also serves as the Lead Research Scientist at Kensho Technologies, has had his recent paper “Beta Hedging: Performance Measures, Momentum Weighting, and Rebalancing Effects” accepted for publication in an upcoming issue of the Journal of Investment Strategies. The paper discusses the various performance measures of beta hedging and offers a new synthetic criterion that accounts for both risk-adjusted returns and losses of trading. Schmidt’s research interests include agent-based modeling of financial markets, market microstructure, quantitative investing theory, and algorithmic trading, and his experience in these fields is reflected in his many journal articles, as well as in his books: Quantitative Finance for Physicists: An Introduction (2004) and Financial Markets and Trading: Introduction to Market Microstructure and Trading Strategies (2011).
The FRE Club “Bulls & Bears” was launched to spark community engagement within the department and create a tighter-knit cohort. The congenial group strives to supplement FRE coursework with the soft skills, financial intuition, and networking ability needed to thrive in the world of finance.

Its co-founders and officers are:
- President Alex Marchi (‘19), who holds a B.S. in Mathematics from McGill and will be working with the global fintech company Flow Traders upon leaving Tandon.
- Co-President Claudio González (‘19), who graduated from Universidad Adolfo Ibáñez with a B.S. in Industrial Engineering and is an incoming Quant Analyst with Citi.
- Vice-President Abhirit “Abhi” Kanti (‘20), who graduated from Purdue with a B.S. in Electrical Engineering and work experience at Tesla.
- Co-Vice-President Clio Wei (‘19), who graduated with a B.S. in Applied Mathematics from UCLA and has accepted a full-time offer with PwC.

The club has already hosted an array of illustrious industry speakers, including Louis Scott, an officer at the Federal Reserve whose CV also includes stints as managing director at UBS and Morgan Stanley. (Additionally, he is teaching the course GPUs in Finance in spring 2019.) Also on the roster has been RBC Global Head of Fixed Income Quantitative Strategies Vasily Strela, whose accomplishments include earning a doctoral degree from MIT and serving as managing director at Morgan Stanley and executive director at JP Morgan Chase. Under the auspices of Sara (Tomeo) DeLusant, the FRE Career Placement Director, the club recently organized a presentation by Linda Lin, a former Director of Global Investment and Corporate Banking at Citi who currently specializes in helping international students to crack their dream jobs on Wall Street through her company Cross Culture Coach.

Future speakers include:
- Britni Ihle, a credit derivatives trader at Credit Suisse who studied at MIT and Courant and who will be giving a trading demonstration using a Bloomberg Terminal.
- Chris Hla-Gyaw, an alum of NYU Tandon and Stern who is currently a financial analyst at Infiniteum and who will talk about Applied Corporate Finance.
- Pranav Ghai, Courant alum and CEO of Calcbench, whose talk will be hosted in conjunction with FRE faculty member Thomas Philips. (The event will be of particular interest to Computer Science and Electrical Engineering students interested in the FinTech space.)

In addition to bringing industry speakers, Bulls & Bears pilots weekly Wall Street Journal discussion groups. “Word on the Street” meetings allow students to keep up-to-date with financial news and discuss trading strategies – akin to real interview questions. The club plans in the future to invite professors to contribute deeper insight.

Other future plans include organizing a FRE Faculty Mixer to enable students to talk to professors about their research and courses prior to Fall registration; stock pitch events; earnings call listening parties; and field trips to financial landmarks.

Join the FRE Club WeChat group to learn more.
Spring 2019 Lecture Series

The department kicked off a lecture series this spring with invited speakers from across academia and industry discussing a broad range of topics in finance. This semester, the talks are being held on Thursdays at 6PM, in the event room at Tandon’s MakerSpace. Below is a schedule of past and upcoming talks:

Thursday, February 14
Peter Carr,
FRE Department Head
MakerSpace Event Space

Thursday, February 21
David Shimko
NYU Tandon School of Engineering
MakerSpace Event Space

Thursday, February 28
Bob Kricheff
Shenkman Capital Management, Inc.
LC 400 (Dibner Building – 4th Floor)

Thursday, March 7
Jifei Wang
NYU Courant
LC 400 (Dibner Building – 4th Floor)

Friday, March 8 at 1pm
Carey Caginalp
University of Pittsburgh
LC 400 (Dibner Building – 4th Floor)

Thursday, March 14
David Zhang
MSCI Inc.
MakerSpace Event Space

Thursday, March 28
Antigoni O. Polychroniadou
JP Morgan Chase
MakerSpace Event Space

Thursday, April 4
Andrew Papanicolaou
NYU Tandon School of Engineering
MakerSpace Event Space

Thursday, April 11
Yud Izhakian
Baruch College Zicklin School of Business
LC 400 (Dibner Building – 4th Floor)

Thursday, April 18
Tim Leung
University of Washington
LC 400 (Dibner Building – 4th Floor)

Thursday, April 25
Albert Cohen
Michigan State University
LC 400 (Dibner Building – 4th Floor)

Thursday, May 2
Ioannis Karatzas
Columbia University
MakerSpace Event Space

Get ready for the fall series, which will kick off on September 19th with our own Topfer Distinguished Professor of Financial Engineering and Technology Management Charles Tapiero.