



PRINCETON UNIVERSITY
BENDHEIM CENTER
FOR FINANCE

ANNUAL REPORT 2020-2021

BENDHEIM ANNUAL REPORT 2021

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MESSAGE FROM THE DIRECTOR



As the COVID crisis continued through the 2020/2021 academic year, the Center continued to teach on a fully remote schedule for both semesters. While we were capable of rethinking and implementing almost every aspect of how we as educators and researchers teach our students, the students themselves missed the informal interaction that often happened before and after classes.

In addition to the challenges of teaching, we also faced some challenges in our numbers in both the Undergraduate Certificate and the Master In Finance program. We owe part of the impact to the UCF program due to undergraduates taking a gap year to avoid the remote learning aspects of attending college; but we also acknowledge that there are increasingly more certificates offered on campus. In our Master's program, there was a request by some students to defer their admission until the 2021/2022 Academic year. Due to the extreme remote aspects of the year, it was more difficult to find jobs and internships, which also added to the stress for the students.

Despite these challenges both of our academic programs continue to be successful. Our MFIN program continues to be one of the top programs in the world. Lindsay Bracken, BCF's new Manager of Career Development, who started at the beginning of the pandemic, was key in placing all our Masters in Finance students in a challenging job market environment. One hundred percent of the 29 MFIN students graduated with a job lined up. This year, even more students obtained the MFIN certificate in Machine Learning that we coordinate with the Center for Statistics and Machine Learning. The UCF Class of 2021 was 48 strong; and, our Class of 2022 has 96 students currently enrolled.

On the Administrative side, the Center was able to handle the crisis well by implementing MS Teams to keep the staff in regular contact and the collaborative spirit we work so well under was able to persist. Because of the ability to stay so collaborative, we successfully revamped our website and updated our logo. Our events and programs did not suffer and we continued to stay productive. We held a virtual conference on "Racial Justice and Finance" co-organized with the Federal Reserve Bank of Atlanta. Special thanks to Raphael Bostic for standing as our Keynote Speaker. We continued our weekly webinar series, which significantly enhanced the visibility of Princeton's BCF. Federal Reserve Chairman Jay Powell attracted a lot of interest with live-streaming on CSPAN and CNBC. Another highlight was the inflation debate between Paul Krugman and Larry Summers. Overall, we have had about 80 webinars since the start of the pandemic.

Last year, with a generous donation by Ben Bernanke, we established the Ben Bernanke Prize. This prize is intended to encourage job market Ph.D. students to complete a first draft of their papers early. Our first award was given in the Fall of 2021.

The Center also congratulates our faculty. Nobuhiro Kiyotaki, together with Ben Bernanke (chairman of our advisory council), won the prestigious BBVA Frontiers of Knowledge Award. Atif Mian was awarded the 2021 Guggenheim Fellowship and I became vice president of the American Finance Association.

Overall, our programs are thriving. Still, we know that our students will face new challenges, many of which we will only uncover as time goes by. To best support our students, we are committed to remaining agile and adaptive, no matter what course the year takes.

We at BCF continue to emphasize the "Princeton Difference" of using a scientific approach to serve our increasingly global society and are very grateful to your ongoing support.

Markus Brunnermeier
Edwards S. Sanford Professor
Director, Bendheim Center for Finance

FACULTY



MARK AGUIAR is the Walker Professor of Economics and International Finance at Princeton University. Professor Aguiar's research addresses issues in open- and closed-economy macroeconomics. He has studied emerging market business cycles, sovereign debt, the political economy of capital taxation, and growth. His recent research on sovereign debt concerns self-fulfilling debt crises and equilibrium maturity choice. He has also investigated life-cycle consumption, time allocation, and trends in labor supply. He received his Ph.D. in economics from MIT in 1999.



CAIO ALMEIDA has recently become a lecturer in the Department of Economics at Princeton University where he teaches risk management, fixed income, and applications of machine learning in asset pricing. He also serves as our Director of Graduate Studies. He holds an MS and a Ph.D. in Electrical Engineering from Pontifical Catholic University in Rio de Janeiro and has been an Associate Professor of Finance at Getulio Vargas Foundation during the last 13 years. His research interests lie in the intersection of financial economics, econometrics and machine learning and include proposing and testing pricing models and creating alternative metrics to analyze asset pricing models. He was the president of the Brazilian Society of Finance (2013-2015), an Associate Editor of the Journal of Banking and Finance and is an Associate Editor of the Journal of Financial Econometrics.



YACINE AÏT-SAHALIA is the Otto A. Hack '03 Professor of Finance and Economics. He served as the founding director of the Bendheim Center for Finance from 1998 until 2014. He was previously a professor at the University of Chicago's Graduate School of Business. He was named an outstanding faculty member by BusinessWeek's 1997 Guide to the Best Business Schools and is the recipient of the 1997 Michael Brennan Award, the 2001 FAME Award, and the 2003 Aigner Award. He received fellowships from the Sloan and Guggenheim Foundations. He is a fellow of the Econometric Society, the American Statistical Association, and the Institute of Mathematical Statistics, and a research associate for the National Bureau of Economic Research. He currently serves as a co-editor of the Journal of Econometrics. He edited the Handbook of Financial Econometrics with Lars P. Hansen and recently co-authored High Frequency Financial Econometrics with Jean Jacod. He received his Ph.D. in economics from the Massachusetts Institute of Technology in 1993 and his undergraduate degree from École Polytechnique.



SANJEEV ARORA is a faculty member in Computer Science and expert in algorithms and their analysis, with a special interest in machine learning and deep learning. He is a winner of the ACM Prize in Computing and a member of National Academy of Science. Since 2017 Sanjeev has also been visiting Professor at Institute for Advanced Study in Princeton. He received his Ph.D. in Computer Science from UC Berkeley and has been on the faculty at Princeton University since 1994.



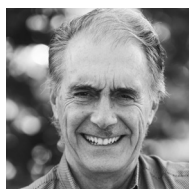
NATALIE COX is an Assistant Professor in the Department of Economics and Bendheim Center for Finance. Her research focuses broadly on household finance, industrial organization and public economics. Her current work includes studying the efficiency and equity implications of changes in the \$1.3 trillion student loan market, repayment of student debt, and the impact of federal loan guarantees and credit subsidies. Bachas earned her Ph.D. in Economics from the University of California at Berkeley. She joined Princeton's faculty in 2018.



ALAN BLINDER is the Gordon S. Rentschler Memorial Professor of Economics and Public Affairs at Princeton University, and a regular columnist for the Wall Street Journal. Blinder served as Vice Chairman of the Board of Governors of the Federal Reserve System from June 1994 until January 1996. Before becoming a member of the Board, Blinder served as a member of President Clinton's original Council of Economic Advisers from January 1993 until June 1994. During presidential campaigns, he was an economic advisor to Bill Clinton, Al Gore, and Hilary Clinton. Blinder has written scores of scholarly articles, and is the author or co-author of 21 books, including the prize-winning best-seller, *After the Music Stopped: The Financial Crisis, the Response, and the Work Ahead*. His latest book, *Advice and Dissent: Why America Suffers When Economics and Politics Collide*, was published in 2018. Blinder earned his A.B. at Princeton University, M.Sc. at London School of Economics, and Ph.D. at Massachusetts Institute of Technology.



MARKUS BRUNNERMEIER is the Edwards S. Sanford Professor of Economics at Princeton University. He is a faculty member of the Department of Economics and director of Princeton's Bendheim Center for Finance. He is the founding and former director of Princeton's Julis Rabinowitz Center for Public Policy and Finance and affiliated with the International Economics Section. He is/was a member of several advisory groups, including to the IMF, the Federal Reserve of New York, the European Systemic Risk Board, the Bundesbank and the U.S. Congressional Budget Office. Brunnermeier was awarded his Ph.D. by the London School of Economics (LSE). His research focuses on international financial markets and the macroeconomy with special emphasis on bubbles, liquidity, financial and monetary price stability. He is a Sloan Research Fellow, Fellow of the Econometric Society, recipient of the Bernácer Prize and Guggenheim Fellowship. He has been awarded several best paper prizes and served on the editorial boards of several leading economics and finance journals. He has tried to establish the concepts: liquidity spirals, CoVaR as systemic co-risk measure, the Volatility Paradox, Paradox of Prudence, ESBies, financial dominance and the redistributive monetary policy. Markus has published two books; *"The Euro and the Battle of Ideas"* and most recently, *"The Resilient Society"*.



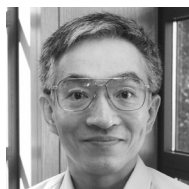
RENÉ CARMONA is the Paul M. Wythes '55 Professor of Engineering and Finance. He joined Princeton in 1995. He was elected fellow of the Institute of Mathematical Statistics in 1984, and of the Society for Industrial and Applied Mathematics in 2009. He is also a member of the Bachelier Finance Society. Among his many editorial responsibilities, he was the co-founder and editor in chief of Electronic Journal in Probability, Communications in Probability and SIAM Journal on Financial Mathematics. He works on mathematical models for the commodity and high frequency markets, and computational methods for quantitative finance.



JIANQING FAN is the Frederick L. Moore '18 Professor of Finance. His research interests include financial econometrics, asset pricing, machine learning, high-dimensional statistics, nonparametric modeling, and computational biology. As a specialist in statistics, machine learning, and financial econometrics, Fan received the 2000 Presidents' Award from the Committee of Presidents of Statistical Societies, the 2007 Morningside Gold Medal of Applied Mathematics, the Guggenheim Fellowship in 2009, Academician of Academia Sinica in 2012, Guy Medal in Silver of Royal Statistical Society in 2014, and Noether Senior Scholar Award in 2018. He was the president of the Institute of Mathematical Statistics, is an elected fellow of the American Association for the Advancement of Science, the Society of Financial Econometrics, the American Statistical Association, and the Institute of Mathematical Statistics. He has coauthored three highly regarded books. He serves as the co-editor of the Journal of Business and Economics Statistics and associate editor of Management Science. He has served as the co-editor (in-chief) of the Annals of Statistics, Probability Theory and Related Fields, Journal of Econometrics, and Econometrics Journal, and associate editor of Econometrica, Journal of the American Statistical Association, and Journal of Financial Econometrics. He earned his Ph.D. from the University of California-Berkeley.



JAKUB KASTL is a Professor of Economics at Princeton University, Research Associate at the National Bureau of Economic Research and Research Fellow at the Center for Economic Policy Research. His research is in the field of industrial organization, finance and microeconomics. He is a recipient of the Sloan Fellowship and a CAREER grant by the National Science Foundation. His main research interests are in the empirical and theoretical analysis of auction markets, with particular emphasis on links with financial markets. He has worked with the European Central Bank, the Bank of Canada, and the US Department of Treasury. He was involved in the design and performance evaluation of various auction markets ranging from treasury bill auctions to spectrum auctions. Kastl received his Ph.D. at Northwestern University.



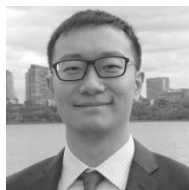
NOBUHIRO KIYOTAKI is the Harold H. Helm '20 Professor of Economics and Banking. He received his Ph.D. at Harvard University. He has published widely in macroeconomics and monetary economics, including “*Monopolistic Competition and the Effects of Aggregate Demand*,” with Olivier Blanchard in 1987, “*On Money as a Medium of Exchange*,” with Randall Wright in 1989, “*Credit Cycles*,” with John Moore in 1997, and “*Banking, Liquidity and Bank Runs in an Infinite Horizon Economy*” with Mark Gertler in 2015. Kiyotaki also serves as an academic consultant for the Federal Reserve Banks of New York and Richmond. Among professional honors, Kiyotaki received in 2010 the Stephen A. Ross Prize in Financial Economics and 2014 Banque de France – TSE Senior Prize in Monetary Economics and Finance. He is a Fellow of the Econometric Society and a Fellow of the British Academy.



MORITZ LENEL joined the Bendheim Center for Finance as a Pyewacket Research Fellow in 2018 and became an Assistant Professor in 2019. His research interests are in macroeconomics and finance. Currently, he is particularly interested in the transmission channels of monetary policy in financial markets. Lenel studied Economics in Germany and Spain, before earning his Ph.D. in Economics from Stanford. Before joining Princeton, he was a research fellow at the Becker Friedman Institute at the University of Chicago.



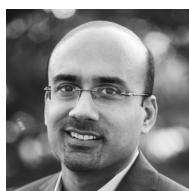
CHEN XU LI is a postdoctoral research associate and a lecturer of the Bendheim Center for Finance, Princeton University. He obtained his Ph.D. from Peking University in July, 2018. His research interests include but are not limited to financial econometrics, financial engineering, stochastic modeling, applied probability, and statistics. His current work centers on the inference of models underlying financial derivatives and the estimation of models with latent factors.



ERNEST LIU joined the BCF as an assistant professor in 2019. His research interests are in networks, finance, trade, growth, and macro-development. He has done work that uses production network theory to understand industrial policies, specifically the strong government support for upstream industries that are widely adopted in developing economies. His other work shows how low long-term interest rates encourage market concentration and slow down productivity growth; how financial market imperfections not only distort economic allocations via underinvestment, but may have much amplifying effects because of the interactions across economic sectors or because the relationships between borrowers and lenders create underdevelopment traps. His recent work investigates the extent to which nations’ economic interests influence their political behavior and finds that as a country becomes more economically dependent on a trade partner, it realigns politically towards that trade partner. He received his Ph.D. in Economics from MIT in 2017 and was a post-doc fellow at the Julis-Rabinowitz Center for Public Policy and Finance at Princeton from 2017 to 2019.



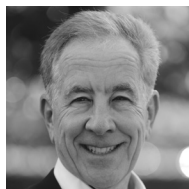
ADRIEN MATRAY is an Assistant Professor of Economics and Finance and is affiliated with the Julis-Rabinowitz Center for Public Policy and Finance. Part of his research deals with understanding the frictions affecting entrepreneurship, SME growth and technology adoption and how new technologies affect SME productivity, employment and income growth. In addition, he also studies the determinants and consequences of access to banking services for low-income households. In particular he studies how the supply of bank branches affect financial inclusion and how health risk and the expansion of publicly-provided health insurance affects low-income household debt. His final interest is in behavioral economics and finance where he studies if professional managers of large listed firms display behavioral biases and may have distorted beliefs. He holds a Ph.D. in Finance from HEC-Paris. He received a M.A in Economics from the Paris School of Economics in 2009 and a M.A. in Finance from the Ecole Polytechnique in 2008. He has previously been a Consultant for the French Ministry of Economic and Finance and for the World Bank.



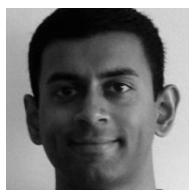
ATIF MIAN holds a bachelors degree in Mathematics and Ph.D. in Economics from MIT. Prior to joining Princeton in 2012 he taught at the University of Chicago Booth School of Business and U.C. Berkeley. His research studies links between financial markets and the macro economy. Mian's work emphasizes the role played by political, governance, and organizational constraints in shaping the effectiveness and scope of financial markets. His more recent work centers on understanding the origins of the global financial crisis, the political economy of government intervention in financial markets, and the link between asset prices, household borrowing, and consumption. Mian's highly profiled book *"House of Debt"* was released in 2014.



ULRICH MÜLLER is a Professor in the Department of Economics. He received his Ph.D. in economics from the University of St. Gallen, Switzerland. His research interest is in econometrics. His recent work focuses on low-frequency variability, heavy tails and spatial correlation robust inference.



JOHN MULVEY is a Professor of Operations Research and Financial Engineering. His research interests center on designing financial planning systems, primarily for pension plans, hedge funds, and individual investors; developing optimal ALM strategies; combining financial optimization and stochastic models; stochastic optimization algorithms; and decentralized risk management. He is a fellow of the Institute for Operations Research and Management Science. He is a member of the Statistics and Machine Learning Center at Princeton, senior consultant for RBC Capital Markets and First Republic Bank in the area of Fintech. He received his Ph.D. in management from the University of California-Los Angeles.



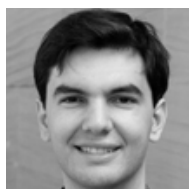
ARVIND NARAYANAN is an Associate Professor of Computer Science at Princeton. He leads the Princeton Web Transparency and Accountability Project to uncover how companies collect and use our personal information. Narayanan also leads a research team investigating the security, anonymity, and stability of cryptocurrencies as well as novel applications of blockchains. He co-created a Massive Open Online Course as well as a textbook on Bitcoin and cryptocurrency technologies. His doctoral research showed the fundamental limits of de-identification, for which he received the Privacy Enhancing Technologies Award. Narayanan is also an affiliated faculty member at the Center for Information Technology Policy at Princeton and an affiliate scholar at Stanford Law School's Center for Internet and Society. He received his Ph.D. from UT Austin and did his post-doctoral work at Stanford University.



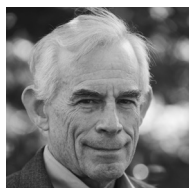
JONATHAN PAYNE is currently a Pyewacket Fellow at the Bendheim Center for Finance in the Department of Economics at Princeton University. He is an Assistant Professor. He completed his Ph.D. at New York University and was a Pyewacket Fellow at the Bendheim Center for Finance in 2020 and 2021. His research studies questions in finance, banking and macroeconomics.



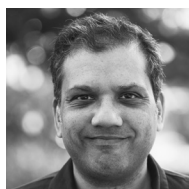
DAVID SCHOENHERR joined the Bendheim Center for Finance as an Assistant Professor in July 2016. David finished his Ph.D. in Finance at London Business School. His main research interests are in corporate finance, financial contracting, and the intersection of finance and labor economics. He was the recipient of Top Finance Graduate Award in 2016.



MYKHAYLO SHKOLNIKOV is a Professor in the Operations Research and Financial Engineering department. He also held a faculty appointment with Princeton's Math Department. His research interests include studying interacting particle systems arising in mathematical finance, mathematical physics, and neuroscience using tools from stochastic analysis and PDE/SPDE. More broadly he is interested in probability theory and PDEs; random operators, integrable probability, models of random growth, concentration of measure, large deviations, and probabilistic approaches to hyperbolic and parabolic PDEs. Mykhaylo is an associate editor for Applied Mathematical finance. He received his Ph.D from Stanford University and did post-doctoral work at U.C. Berkeley.



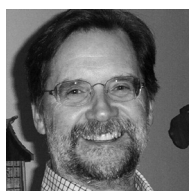
CHRISTOPHER SIMS is the John J. F. Sherrerd '52 University Professor of Economics. He received his Ph.D. from Harvard University in 1968. He taught in the economics department at Harvard from 1967 to 1970, then at the University of Minnesota from 1970 to 1990. In 1990 he moved to Yale, where he taught until 1999. He is a member of the National Academy of Sciences and a fellow of the Econometric Society, for which he has served as president and as co-editor of *Econometrica*. He became president elect of the American Economic Association in 2011 and served as president during 2012. He was, along with Thomas Sargent, the co-recipient of the 2011 Nobel Prize in Economics. He has intermittently served as an adviser, consultant, and visitor to several regional Federal Reserve banks. He has worked on econometric methods, economic theory, and empirical work, mostly related to macroeconomics and monetary policy.



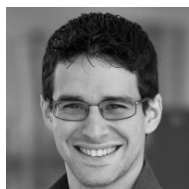
RONNIE SIRCAR is the Eugene Higgins Professor of Operations Research and Financial Engineering (ORFE) at Princeton University, and is affiliated with the Bendheim Center for Finance, the Program in Applied and Computational Mathematics, and the Andlinger Center for Energy and the Environment. He received his doctorate from Stanford University, and taught for three years at the University of Michigan in the Department of Mathematics. He has received continuing National Science Foundation research grants since 1998. He was a recipient of the E- Council Excellence in Teaching Award for his teaching in 2002, 2005 and 2006, and the Howard B. Wentz Jr. Junior Faculty Award in 2003. His research interests center on Financial Mathematics, stochastic volatility models, energy markets and exhaustible resources, credit risk, asymptotic and computational methods, portfolio optimization and stochastic control problems, and stochastic differential games. He is a co-author of the book *"Multiscale Stochastic Volatility for Equity, Interest-Rate and Credit Derivatives"*, published by Cambridge University Press in 2011, and was founding co-editor-in-chief of the SIAM Journal on Financial Mathematics, from 2009-2015. He was Director of Graduate Studies for the Master in Finance program at the Bendheim Center for Finance from 2015-2018. He is the current Chair of the ORFE department. He was made a Fellow of the Society for Industrial and Applied Mathematics (SIAM) in 2020 for "contributions to financial mathematics and asymptotic methods for stochastic control and differential games."



ROBERT VANDERBEI has been a Professor in the Department of Operations Research and Financial Engineering since its creation in 1999 and was the chair from 2005-2012. His research interests focus on algorithms for nonlinear optimization and their application to problems arising in engineering and science. Application areas of interest focus mainly on inverse Fourier transform optimization problems and action minimization problems with a special interest in applying these techniques to the design of NASA's terrestrial planet finder space telescope. He is an associate editor for Optimization in Engineering, Optimization Methods and Software and Mathematical Programming. He is a member of numerous professional societies and is a Fellow of three of them: the American Mathematical Society (AMS), the Society for Industrial and Applied Mathematics (SIAM) and the Institute for Operations Research and Management Science (INFORMS). He received his Ph.D. in applied mathematics from Cornell University in 1981.



MARK WATSON is the Howard Harrison and Gabrielle Snyder Beck Professor of Economics and Public Affairs in the Department of Economics and the Woodrow Wilson School. His research interests include econometrics, macroeconomics, and forecasting. He is a research associate at the National Bureau of Economic Research and a fellow of the Econometric Society. He holds a Ph.D. in economics from the University of California-San Diego, and his past credentials include posts at Northwestern University and Harvard University.



MATT WEINBERG is Assistant Professor in the Department of Computer Science. Matt's primary research interest is in Algorithmic Mechanism Design: algorithm design in settings where users have their own incentives. He is also interested more broadly in Algorithmic Game Theory, Algorithms Under Uncertainty, and Theoretical Computer Science in general. Before joining the faculty at Princeton, Matt spent two years as a postdoc in Princeton's CS Theory group, and was a research fellow at the Simons Institute during Fall 2015 (Economics and Computation) and Fall 2016 (Algorithms and Uncertainty) semesters. He completed his Ph.D. in 2014 at MIT.



WEI XIONG is Trumbull-Adams Professor of Finance and Professor of Economics in the Department of Economics. His research interests center on capital market imperfections. His earlier work covers speculative bubbles, asset market contagion, limited investor attention, non-standard investor preferences, asset pricing with heterogeneous beliefs, rollover risk, and financialization of commodities markets. His current research focuses on financial crisis, China's financial system, and the digital economy. He received his Ph.D. from Duke University in 2001. He is a research associate of the National Bureau of Economic Research and currently serves as Co-Editor of Journal of Finance.



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EMERITUS FACULTY



DILIP ABREU is the Edward E. Matthews, Class of 1953, Professor of Finance and Professor of Economics. His research interests include behavioral economics and finance, economic theory, and game theory. In these areas he has made particular contributions to the theory of dynamic games, implementation, reputational bargaining, and bubbles and crashes. He is a fellow of the Econometric Society and a fellow of the American Academy of Arts and Sciences. He received a B.A. from Bombay University, an M.A. from the Delhi School of Economics, an M.Phil. from the University of Oxford, and a Ph.D. in economics from Princeton.



GREGORY CHOW is the Class of 1913 Professor of Political Economy, Emeritus. He received his Ph.D. from the University of Chicago in 1955. He taught at MIT, Cornell, Harvard and Columbia universities and was manager of economic research at the I.B.M. Thomas J. Watson Research Center before joining Princeton as director of the Econometric Research Program, renamed the Gregory C. Chow Econometric Research Program in 2001. He is a Distinguished Fellow of the American Economic Association, a member of the American Philosophical Society and of Academia Sinica and a fellow of the American Statistical Association and the Econometric Society. His contributions to economics cover three main areas: 1) econometrics, including the often used “Chow test” for parameter stability, the estimation of simultaneous stochastic equations, and criteria for model selection; 2) dynamic economics, including spectral methods and optimal control methods for the analysis of econometric models and dynamic optimization under uncertainty to be solved by the method of Lagrange multipliers (in lieu of dynamic programming); and 3) the Chinese economy. He writes a column in three major newspapers in China, one in Taiwan and one in Hong Kong. He is editor of the Routledge Handbook of the Chinese Economy, 2015.



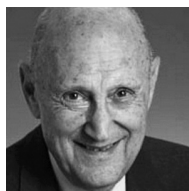
ERHAN CINLAR is the Norman J. Sollenberger Professor of Engineering in the Department of Operations Research and Financial Engineering. He came to Princeton as a visiting professor of statistics in 1979–80. He is a fellow of the Institute of Mathematical Statistics, a fellow of INFORMS, an elected member of the International Statistical Institute, and the recipient of the Science Prize of TUBITAK. He has served as editor or associate editor of more than 12 journals on probability theory and its applications. His research interests center on martingales, Markov processes, stochastic differential equations, dynamic point processes, mass transport by stochastic flows, and their applications to mathematics of insurance and finance, reliability of complex systems, and modeling and estimation of natural hazards. He received the President’s Award for Distinguished Teaching during the June 2010 Princeton Commencement ceremonies. He received the Lifetime Achievement Award for Excellence in Teaching for the Engineering School Student Council in 2011.



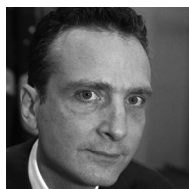
DANIEL KAHNEMAN is a senior scholar and Professor of Psychology and Public Affairs, emeritus, at the Woodrow Wilson School, the Eugene Higgins Professor of Psychology Emeritus at Princeton, and a fellow of the Center for Rationality at the Hebrew University in Jerusalem. Kahneman has held the position of professor of psychology at the Hebrew University in Jerusalem (1970–78), the University of British Columbia (1978–86), and the University of California–Berkeley (1986–94). He is a member of the National Academy of Science, the Philosophical Society, and the American Academy of Arts and Sciences, and a fellow of the American Psychological Association, the American Psychological Society, the Society of Experimental Psychologists, and the Econometric Society. He has been the recipient of many awards, among them the Nobel Prize in Economic Sciences (2002); the Lifetime Contribution Award of the American Psychological Association (2007) and the Grawemeyer Prize (2002), both jointly with Amos Tversky; the Warren Medal of the Society of Experimental Psychologists (1995); the Distinguished Scientific Contribution Award of the American Psychological Association (1982); and the Hilgard Award for Career Contributions to General Psychology (1995). Kahneman holds honorary degrees from numerous universities.



PAUL KRUGMAN is the author or editor of dozens of books and several hundred articles, primarily about international trade and international finance. He is also internationally known for his twice-weekly columns in *The New York Times*. He was the Ford International Professor of International Economics at the Massachusetts Institute of Technology and has served on the staff of the U.S. Council of Economic Advisers. In 2008, Krugman received the Nobel Prize in Economic Sciences. He was the recipient of the 1991 John Bates Clark Medal, an award given every two years by the American Economic Association to an economist under age 40. He received his Ph.D. from the Massachusetts Institute of Technology. He holds a joint appointment with the economics department and the Woodrow Wilson School of Public and International Affairs.



BURTON MALKIEL has been the Chemical Bank Chairman's Professor of Economics at Princeton since 1988. He entered emeritus status in 2011. His research interests center on financial markets, asset pricing, and investment strategies. He is a regular op-ed writer for *The Wall Street Journal*. He also serves on the boards of several financial and non-financial corporations. He has been awarded an Honorary Doctor of Humane Letters from the University of Hartford (1971), Phi Beta Kappa, and the Harvard Business School Alumni Achievement Award for 1984. He has served as the president of the American Finance Association. He received his Ph.D. from Princeton. He is currently working on the 50th-anniversary edition of his book, *"A Random Walk Down Wall Street."*



JOSÉ A. SCHEINKMAN joined emeritus status in 2013 and joined Princeton as the Theodore Wells '29 Professor of Economics in 1999. He received an M.S. in mathematics from the Instituto de Matemática Pura e Aplicada, Brazil, and an M.A. and a Ph.D. in economics from the University of Rochester. Scheinkman is a research associate of the National Bureau of Economic Research, a member of the National Academy of Sciences, a fellow of the American Academy of Arts and Sciences and of the Econometric Society, a corresponding member of the Brazilian Academy of Sciences, and a "docteur honoris causa" of the University of Paris–Dauphine. He was named a fellow of the John Simon Guggenheim Memorial Foundation in 2007. From 1973 to 1998, Scheinkman taught at the University of Chicago, where he was from 1995 to 1998 the chair of the economics department, and beginning in 1997 the Alvin H. Baum Distinguished Service Professor of Economics. From 1987–88, he was vice president of the Financial Strategies Group at Goldman, Sachs & Co. During 2002, he held a Blaise Pascal Research Chair (France). His current research interests are the determinants of the size of the financial industry, asset-price bubbles, and developing tools for empirical studies of asset markets. José is currently the Charles and Lynn Zhang Professor of economics at Columbia University.



KENNETH STEIGLITZ is a Eugene Higgins Professor of Computer Science emeritus and senior scholar. He received his doctorate in 1963 from New York University and has been at Princeton ever since. He is a fellow of the Institute of Electrical and Electronics Engineers (1981), a fellow of the Association for Computing Machinery (1997), and a recipient of the Technical Achievement Award of the Signal Processing Society (1981), the Signal Processing Society Award (1986), the IEEE Centennial Medal (1984), the School of Engineering Distinguished Teacher Award (1997), and the IEEE Third Millennium Medal (2000). He is currently working on a monetary flow macroeconomic model. Steiglitz's book "*The Discrete Charm of the Machine: Why the World Became Digital*" (Princeton University Press) was published in January 2019.



ERIK VANMARCKE is a Professor of Civil and Environmental Engineering. He received his doctorate from the Massachusetts Institute of Technology in 1970 and joined the faculty, remaining there until 1985. At MIT, he was the Gilbert W. Winslow Career Development Professor and served as director of the Civil Engineering Systems Methodology Group. He has held visiting appointments at Harvard University, Technical University of Delft (the Netherlands), and University of Leuven (Belgium), his undergraduate alma mater, and was the Shimizu Corporation Visiting Professor at Stanford University. He presently holds the Kwang-Hua Chair Visiting Professorship at Tongji University in Shanghai, China. His principal expertise is in risk assessment and applied systems science. He authored *Random Fields: Analysis and Synthesis*, originally published by MIT Press; the second (revised and expanded) was published in 2010 by World Scientific Company. He won several research prizes of the American Society of Civil Engineers and chaired its Council on Disaster Risk Management. He was awarded a Senior Scientist Fellowship from the Japanese Society for the Promotion of Science and is a foreign member of the Royal Academy of Arts and Sciences of Belgium.

VISITING FACULTY

During the academic year the Bendheim Center for Finance welcomed the following visiting faculty:



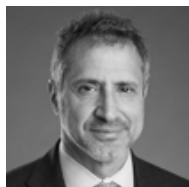
JEAN-CHRISTOPHE DE SWAAN has been teaching at Princeton since the Spring of 2009 as a Lecturer. He teaches a joint undergraduate and graduate course, Asian Capital Markets, and a Freshman seminar, Ethics in Finance. He also teaches at the University of Cambridge and has taught at Yale University, Cheung Kong Business School and Renmin University in Beijing. He is a partner at Cornwall Capital, a multi-strategy hedge fund based in New York. Prior to that, he was a special adviser on China at a global macro hedge fund, a Principal at an Asia-dedicated hedge fund, and a consultant at McKinsey & Company. He is the author of a forthcoming book on virtue in finance (Cambridge University Press). He received his B.A. from Yale University, an MPhil in International Relations from the University of Cambridge, and a Masters in Public Policy from Harvard University's Kennedy School of Government. He is a Member of the Council on Foreign Relations. He is a faculty advisor at Rockefeller College (Princeton University) and an Associate Fellow of Ezra Stiles College (Yale University).



MICHAEL LEE is a Financial Economist in the Research and Statistics Group of the Federal Reserve Bank of New York. His research interests include corporate finance, financial markets, and financial institutions. Michael completed his Ph.D. in Finance from the Wharton School at the University of Pennsylvania in May 2016.



MARCELO C. MEDEIROS is an Associate Professor at the Department of Economics at the Pontifical Catholic University of Rio de Janeiro (PUC-Rio), Brazil. Marcelo holds a BA, MSc. and Ph.D. degrees in Electrical Engineering (Statistics, Optimization and Control Theory) from PUC-Rio. Marcelo's main research interests are High-Dimensional Econometrics/Machine Learning, Financial Econometrics and causal inference. He has been publishing papers in top journals including the Journal of the American Statistical Association, Journal of Econometrics, Econometric Theory, and the Journal of Business and Economic Statistics, among others. Marcelo serves as an associate editor for the Journal of Business and Economic Statistics, Econometric Reviews and the International Journal of Forecasting.



GUSTAVO SCHWED is a Professor of Management Practice at NYU Stern. He teaches private equity courses to MBA students and is currently the Faculty Advisor for the Stern Private Equity Club and the Latin American Business Association. Professor Schwed was named NYU Stern's Professor of the Year by the 2015 MBA graduating class. Prior to joining Stern, he was an investment professional in the private equity industry. During his twenty-five year career, he worked at venture capital and large buy-out firms and lived in and practiced private equity in the US, Europe, and Latin America. Gustavo currently serves on the Board of Managers of Swarthmore College, where he is Chairman of the Finance Committee and is a member of the Executive, Nominations & Governance, Compensation, and Investment Committees. As part of the Investment Committee, he is responsible for the oversight of the college's \$2 Billion endowment, focusing on the endowment's investments in private equity. He received a BA with High Honors from Swarthmore College in 1984 and an MBA from the Stanford University Graduate School of Business in 1988. He is a US, UK and Argentine citizen and speaks English, Spanish, and Portuguese.



MICHAEL SOTIROPOULOS is the global head of quant research for equities trading at Deutsche Bank. Prior to his current role, Michael was a Managing Director at Bank of America Merrill Lynch, where he headed the algorithmic trading quant group. He has also worked for nine years in equity structured products and derivatives pricing at Bank of America and at Bear Stearns. Michael has a Ph.D. in theoretical physics from Stony Brook University. Before joining the finance industry he taught and worked in quantum field theory and particle physics at the University of Southampton, England and at the University of Michigan.

POSTDOCS



ALEXANDR KOPYTOV is a Postdoctoral Research Associate at the Bendheim Center for Finance. His research interests are in the intersection of finance and macroeconomics. His work focuses on various aspects of financial fragility, including, in particular, issues related to financial interconnectedness and systemic risk. He received his Ph.D. in finance from the Wharton School of the University of Pennsylvania in 2019.



SEBASTIAN MERKEL is a Postdoctoral Research Associate at the Bendheim Center for Finance. His research interests are in the intersection of macroeconomics and finance with a focus on theoretical work. His current work centers on the interaction between stock markets and business cycles, and on the macro implications of narrow banking. He received his Ph.D. in economics from the University of Mannheim, Germany, in 2018.

STAFF



LINDSAY BRACKEN is the Manager of Career Development, Alumni Relations and Corporate Affiliates for the Bendheim Center for Finance. Through her efforts, she serves as the Center's point of contact for corporate partners, recruiters and alumni and is responsible for career placement, student mentoring, speaking and networking events and the center's connectivity to the broader financial community. Prior to joining the Bendheim Center, Lindsay was a Managing Director at Sandler O'Neill & Partners, L.P., where she managed the firm's global non-financial activities after a successful career in equity sales and trading.



MATTHEW PARKER is the SCAD for both the Center and Economics. In his role as SCAD he serves as the first point of contact for all things technology related.



KELSEY RICHARDSON is the Center Administrator & Events Coordinator for the Bendheim Center for Finance. In her role, she assists with student, faculty and staff administrative requirements as well as coordinates Civitas Seminars, Ph.D. Workshops and other events that the Center holds.



JESSICA HB ROETHEL is the Manager for Administration and Finance for the Center. In that role she oversees the day to day functions of the Center including its facility in the Julis Romo Rabinowitz Building. Jessica has over 20 years of experience at Princeton and holds a Bachelors in Management from Rider University.



CHARLES SALTZMAN is the Web Developer for both the Center and Economics. In his role as Web Developer he serves as the first point of contact for all things related to the Center's web servers and sites, and also serves as the virtual design specialist for events.



MELANIE HEANEY-SCOTT is the Academic Administrator for the Bendheim Center for Finance. In her role as Academic Administrator, Mel oversees the day to day functions of the Undergraduate Certificate Program and the Master in Finance Program.

BCF IN THE NEWS

- BCF Advisory Council Member, [Elizabeth Prus Myers](#), '91 Elected to Princeton's Board of Trustees
- [Jonathan Choi](#) (MFin '16) Discusses Unexpected Opportunities and the Power of the BCF Alumni Network
- Professor [Atif Mian](#) awarded the 2021 Guggenheim Fellowship in Economics
- Frontiers of Knowledge Award goes to [Nobuhiro Kiyotaki](#), and [Ben Bernanke](#)
- Brunnermeier Paper "Predatory Trading" Featured in [The Economist](#) explaining GameStop Meme Investing
- [Princeton researchers](#) study the many impacts of COVID-19
- Princeton Professor [Markus Brunnermeier](#) elected Vice President of the American Finance Association
- [Anne-Victoire Auriault](#) (Master in Finance '12) named partner at Goldman Sachs
- Princeton BCF Alumnus and T. Rowe Price CFO [Céline Dufétel](#) named to Fortune's Top 40 Under 40
- [Olivier Darmouni](#) (Ph.D. '16) wins 2021 Distinguished Paper Brattle prize
- Bendheim, Blackrock, And Beyond: A Conversation With Princeton BCF Alumnus [JC Campero](#)
- BCF Alumnus [Leo Niu](#) (Mfin '17) on Financial Career Paths and Finding Your Footing as a Postgrad
- From BCF To NFL and Beyond: [Chase Perlen](#) (Mfin '17) Talks Flexibility in Finance

UNDERGRADUATE CERTIFICATE IN FINANCE

In 1999, the Bendheim Center for Finance began offering an Undergraduate Certificate in Finance (UCF) to Princeton undergraduates. Now in its 21st year, the UCF continues to do extremely well. Currently, we have 101 enrolled from the class of 2022 and will enroll 121 juniors from the class of 2023. This will bring our total number of undergraduate students in the program (juniors and seniors) to 222 for the academic year, despite our grade-based admission cap in place. UCF students are drawn to the program from a wide variety of departments.

CLASS OF 2021

Total number of certificates awarded to the class of 2021: 48 (including 12 women, or 25 percent)

TRACKS

- Corporate Finance
- Derivatives Pricing and Risk Management
- Investment Management
- Information Technologies for Finance
- Behavioral Finance
- Finance and Public Policy
- Mathematical Finance

DEPARTMENTAL PRIZES

UCF students continue to be high achievers among the Princeton population and receive a high proportion of the prizes awarded by their respective departments. This year, of the 48 seniors, 7 received departmental prizes; 11 UCF were elected to Pi Beta Kappa Society; 10 UCF students were elected to membership in Society Sigma XI; 5 UCF students were elected to membership in Tau Beta Pi National Engineering Society; while 3 UCF juniors received the Shapiro Prize for Academic Excellence; and 23 UCF students received academic honors (9 Cum Laude, 8 Magna Cum Laude and 6 Summa Cum Laude).

The Bendheim Center for Finance Birch Family Prizes was awarded to Daniel Yao, ECO Major.

The Kathleen Traynor '83 Prize was awarded to Angela Wang, ORFE Major.

MASTER IN FINANCE

The distinctive feature of our interdisciplinary Master in Finance program is its strong emphasis on financial and monetary economics, relying on analytical and computational methods. Graduates of our program have a solid understanding of the fundamental quantitative tools of economic theory, probability, statistics, optimization, computer science, and machine learning, all of which are becoming increasingly vital in the financial industry. There now exists a body of knowledge that is widely agreed to be essential for the proper analysis and management of financial securities, portfolios, and the financial decisions of firms. A driving force behind these developments is an exchange of ideas between academia and the financial industry, a collaboration that is the closest parallel in the social sciences to the academic-private sector interactions routinely seen in engineering and the applied sciences. The Master in Finance program prepares students for a wide spectrum of careers in the financial industry, ranging from quantitative trading strategies, risk management, and financial engineering, to quantitative asset management and macroeconomic and financial forecasting.

MFIN COURSE TRACKS

Elective courses can be chosen according to either individual needs and preferences, or to conform to one of the suggested tracks, listed below.

- Quantitative Asset Management
- Data Science and Financial Technologies
- Valuation and Macroeconomic Analysis

MFIN PLACEMENT

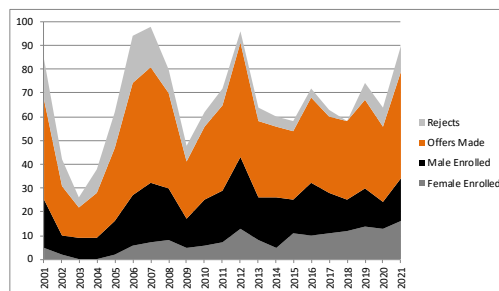
The Bendheim Center for Finance provides extensive career assistance to students, including help with internships and job placement. Our program has continued to enjoy excellent success with 100 percent of our 2021 graduates being placed in finance industry jobs and 100 percent internship placement.

CAREERS UPON GRADUATION

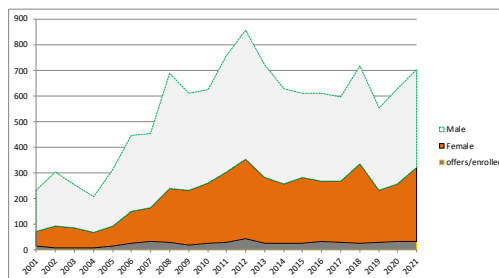
MFIN students who graduated in 2021 started their careers at Akuna Capital LLC, Alger, Astorg Partners, Bank of America Merrill Lynch, BlackRock, BNP Paribas, Capula Investment Management, Citadel Securities, Credit Suisse, Eisler Capital, Ergoteles Capital, Goldman Sachs, MFS Investment Management, MIO Partners, Morgan Stanley, Squarepoint Capital and Volant Trading.

SUMMER INTERNSHIPS FOR FIRST YEAR STUDENTS

Class of 2022 students had summer internships at AQR Capital Management, Bank of America Securities, Barclays, Capula Investment Management, Citigroup, Credit Suisse, Fidelity International, IMC Trading, JP Morgan, L.E.K. Consulting, Morgan Stanley, State Street, and Tower Research Capital.



MFin Students: Male, Female



MFin Applicants: Male, Female

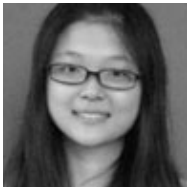
PH.D. STUDENTS

Ph.D. students in the Bendheim Center for Finance are admitted through the Department of Economics, the Department of Operations Research and Financial Engineering, or the Program in Applied and Computational Mathematics. Two students with finance interests received their Ph.D. in 2021.



JOSEPH ABADI

Philadelphia Federal Reserve Board



YIFAN YU

Charles River Associates

SEMINARS, CONFERENCES AND CENTER EVENTS

2020-2021 PRINCETON LECTURES IN FINANCE

Each year, the Bendheim Center invites a leading figure in the field of finance to deliver a set of lectures. This year Amit Seru from Stanford University virtually presented on The Rise of Fintech Intermediaries.

2020-2021 MARKUS' ACADEMY

Princeton Bendheim Center for Finance Director Markus Brunnermeier hosts a conversation with an acclaimed academic or thought leader on critical issues facing the global economy. Event may be hosted from Princeton but it is available worldwide to watch live on zoom or via the Center's YouTube channel. The 2020-2021 list of speakers included:

- Michael Spence on tracking the global pandemic recovery
- Robert J. Shiller on narrative economics and COVID-19
- Arminio Fraga on Brazil's perfect storm
- Richard Zeckhauser on climate policy: moving beyond ostriches and pollyannas
- Raghuram Rajan on emerging markets (especially India) and the coronavirus
- Eric Schmidt: A Q&A on digital innovation, privacy, and cybersecurity
- Jean Tirole: Public and private spheres and the authentic self
- Esteban Rossi-Hansberg: The economic geography of climate change
- Luigi Zingales: Which Capitalism?
- Christopher Sims: How to worry about government debt
- Bengt Holmstrom: The seasonality of COVID-19
- Robert Hall: the natural behavior of unemployment
- Emily Oster: COVID-19 school dashboard: reopen evidence
- Stephen Redding: Pandemics and the future of globalization
- Jason Furman: When, if ever, should we worry about the debt?
- Nick Bloom: Working from home: Will it persist?
- Adam Posen: International Economic Challenges for the President-elect: trade, China, the dollar, and pandemic recovery
- Markus Brunnermeier: COVID-19 economic lessons: taking stock of the webinar series in 2020
- Charles Goodhart: Less lower for Longer; more higher and sooner
- A conversation with Federal Reserve Chair Jerome Powell
- James Stock: Macroeconomics, carbon pricing and climate pricing
- William Nordhaus: Climate compacts to combat free riding in international climate agreements
- Andrew Lo: New Funding models for biomedical innovation
- Esther Duflo: Encouraging Social Distancing: Evidence from Several Randomized Controlled Trials
- Paul Krugman and Larry Summers: Will the Biden Stimulus Lead to Inflation
- Lasse Pedersen: GameStop and Predeatory Trading
- Monica de Bolle: Chronic Pandemic? Vaccine Geopolitics
- Jean-Pierre Landau: International Currency Competition: The Digital Dimension
- Ivan Werning: Taming a Minsky Cycle
- Alan Auerbach: International Taxation in a Digital World
- Robin Brooks: Emerging Markets: Taper Tantrum Redux?
- Gary Gorton: Recent Changes and the Future of the US Financial System
- Emi Nakamura: Is the Philips Curve Getting Flatter?

- Barry Ritzholtz: Market Values, Cycles and Bubbles
- Agustin Carstens: Central Banks and Inequality
- A Conversation with Paschal Donohoe
- Reunions Lecture with Liz Myers: Finance from the front lines in 2021
- Markus Brunnermeier: Inflation, Safe Assets and Debt Sustainability
- Olivier Blanchard: Rethinking fiscal and monetary policy, post COVID
- Antoinette Schoar: Bitcoin adoption: what regulators need to consider
- Alberto Cavallo: COVID Inflation: Evidence from Real-Time Data
- Philippe Aghion: the power of creative destruction

CIVITAS FOUNDATION FINANCE SEMINAR

Each week, Bendheim Center for Finance organizes a seminar in which academic experts are invited to present their latest research to the faculty and graduate students of the center. Our 2020-2021 Speakers included:

Fall 2020

- Sasha Indarte, Assistant Professor of Finance, UPenn: The Wharton School, “Moral Hazard vs. Liquidity in Household Bankruptcy”
- Mindy Xiaolan, Assistant Professor of Economics, University of Texas at Austin, “Human Capitalists”
- Sebastian Merkel, Postdoc Princeton, “The Macro Implications of Narrow Banking: Financial Stability versus Growth”
- Anthony Zhang, Assistant Professor of Finance, UChicago: Booth School of Business, “Competition and Manipulation in Derivative Contract Markets”
- Joseph Abadi, Ph.D. Princeton, “Opaque Intermediation and Credit Cycles”
- Liliana Varela, Assistant Professor of Finance: London School of Economics, “The Micro and Macro Dynamics of Capital Flows”
- Simon Schmickler, Ph.D. Princeton, “Payout-Induced Demand Pressure: Spillover Effects on Asset Prices and Corporate Investment”
- Pablo Ottonello, Assistant Professor of Economics, University of Michigan Ann Arbor, “The Micro Anatomy of Macro Consumption Adjustments”
- Karsten Mueller, Ph.D. Princeton, “Credit Allocation and Macroeconomic Fluctuations”
- Sean Myers, NBER, “Public Employee Pensions and Municipal Insolvency”

Spring 2021

- Alireza Tahbaz-Salehi, Prof. of Managerial Econ & Decision Sciences, Northwestern: Kellogg, “Model Complexity, Expectations and Asset Prices”
- Kelly Shue, Prof. of Finance, Yale: School of Management, “The Gender Gap in Housing Returns”
- Maarten Meeuwis, Assistant Prof. of Finance, Wash U: Olin Business, “Wealth Fluctuations and Risk Preferences: Evidence from US Investor Portfolios”
- Rebecca DeSimone, Assistant Prof. of Finance, London Business School, “Tax Enforcement and Corporate Governance”
- Olivier Wang, Assistant Prof. of Finance, NYU: Stern Business, “Let the First One Fail: A credible solution to the too-big-to-fail conundrum”
- Mark Egan, Assistant Professor of Finance, Harvard: Business, “Recovering Investor Expectation from Demand for Index Funds”
- Dean Corbae William Sellery Trukenbrod, Chair in Finance, UW-Madison: Business School, “A Quantitative Theory of the Credit Score”
- Adrien Verdelhan, Associate Professor, Department of Finance, MIT: Sloan Business, “Foreign Exchange Risk in Public Forms”
- Juliane Begenau, Assistant Professor of Finance, Stanford: GSB, “Stable NIM and Interest Rate Exposure of US Banks”

FINANCE PH.D. STUDENT WORKSHOPS

Each week, the Bendheim Center for Finance organizes a seminar for its Ph.D. students and faculty in which preliminary research ideas are presented internally. Our 2020-2021 speakers included:

Fall 2020

- Karsten Mueller, "Electoral Cycles in Macroprudential Regulation"
- Don Noh, "Moral Hazard vs. Liquidity in Household Bankruptcy"
- Shushen Hou, "An Information Approach to Credit Cycles"
- Simon Schmickler, "Payout-Induced Trading"
- Shumiao Ouyang, "The Digital Privacy Paradox of Digital Wallet Users"
- Thomas Kroen, "Do Myopic Firm Owners Trade off Payouts for Investment: Evidence from Share Buyback Reform"
- Kech Wu, "Organizational Capabilities and Firm Dynamics: a Venture Capital Perspective"
- Anshu Chen, "Studying the Effects of Recessions on Industry Concentration"

Spring 2021

- Daniel Morrison, "Disentangling the Motivations for Campaign Contributions: Corruption or Policy Alignment"
- Anshu Chen, "Short and Long Run Effects of US Recessions on Industry Concentration"
- Carlos Burga, "Bank Competition and Firm Dynamics: Evidence from Peru"
- Ziang Li, "Flight-to-Safety in a New Keynesian Model"
- Faizaan Kisat, "Algorithms & Credit Outcomes"
- Haiyue Yu, "The Importance of Investor Heterogeneity: An Examination of the Corporate Bond Market"
- Jihong Song, "Portfolio Dynamics of Institutional Investors in Flight-to-Safety Episodes"
- Shumiao Ouyang, "Mobile Payment and Consumer Welfare"
- Simon Schmickler, "The Cross-Section of Expected Real Estate Returns"
- Thomas Kroen, "Payout Restrictions and Bank Risk-Shifting"

MFIN CAREER SPEAKER SERIES

A number of guest speakers from a variety of areas of finance visited the Bendheim Center in 2020-2021 to address Master in Finance, undergraduate, and Ph.D. students.

- PwC Insurance Structured Products Group Presentation
- Capula Investment Virtual Information Session
- Citi Financial Strategy and Solutions Group
- Career Speaker Series: Centerbridge - Ben Langworthy and Adam Balkan
- BNP Paribas Information Session
- Market Risk Management with Credit Suisse w/ Tair Aurmont
- AQR Capital Management Information Session
- JC de Swaan - Book Talk: Seeking Virtue in Finance: Contributing to Society in a Conflicted Industry
- Squarepoint Capital Presentation
- Rick Grove: Derivatives Markets: Some History and a Look into the Future, Rick Grove, Rutter Associates
- NFL & Finance: A Discussion on Strategy, Business Models & Careers, Christopher Halpin '98, National Football League, Executive Vice President and Chief Strategy & Growth Officer
- Torsten Stok: Outlook for the US Economy and Financial Markets after the Election
- Getting Started in FinTech - Marshall Lux & Gerti Divershi
- Diana Farrell, President and Chief Executive Officer, JPMorgan Chase Institute

SPECIAL LECTURES AND CENTER EVENTS

The Center hosts and sponsors several guest lectures and special events throughout the year

- 11th annual Princeton Fintech and Quant Conference
- 10th annual Princeton Initiative: Macro, Money and Finance

RESEARCH INITIATIVES

The Center engages in several research related initiatives.

PRINCETON INITIATIVE: MACRO, MONEY AND FINANCE

Following the Princeton tradition of incorporating financial frictions in macroeconomic models the Princeton Initiative Camp brings together top 2nd year Ph.D. students from various Universities, who wish to write a Ph.D. thesis at the intersection between macroeconomics, monetary economics, and finance. The recent experience starting with the run-up of imbalances and bubbles in the first decade of the 21st century, followed by a severe financial crisis that ultimately led to the Great Recession, calls for new frameworks to study macro-prudential policy tools and to design a new international financial architecture. The aim of this meeting is to bridge the gap between modern finance, monetary and macroeconomics and expose the best students from across the country to macroeconomic models with financial frictions and/or non-standard expectations. Yuliy Sannikov and Markus Brunnermeier lead this effort. BCF is grateful for the generous support of the SLOAN Foundation for the first four years of our camp.

FINTECH@PRINCETON

Bridging domain and technology expertise in finance together on campus. Topics included Blockchains, Robo advising, Payments, Insurance, and VC funding. Invited speakers spanned alumni and leaders in industry and academia from such firms as Wealthfront, Sultant, Alipay, MasterCard, Clearmatics, Fluent, Washington Square Tech, Predata, Ayasdi, Bain Capital, Tudor and featured high-profile speakers including Larry Summers, former U.S. Treasury Secretary, and Michael Evans, President of Alibaba.

BCF CHINA INITIATIVE

The Princeton-BCF China initiative aims to develop an interface for facilitating collaborative research and academic exchanges between faculty and students in Princeton and China. This initiative serves the quickly growing demands from academic and policy communities across the world to systematically study the Chinese economy and its financial system and the risks and opportunities it presents to the global economy. Despite having the 2nd largest economy in the world, China has a very different institutional structure from most western countries. Princeton economists can substantially benefit from interacting with local scholars and researchers in China, who tend to have better institutional knowledge about the Chinese economy and better access to Chinese economic data. At the same time, local academics can also learn from Princeton economists, who tend to have a better understanding of fundamental economic concepts and a more rigorous training in the methods of modern western economic analysis. The initiative tries to bridge these gaps and provide an intellectual interface between researchers in China and top academics at Princeton. It also aims to provide a platform for both graduate and undergraduate students at Princeton to visit and study China. BCF is also supporting the new webpage www.VoxChina.org. The Princeton-BCF China initiative will be coordinated by Wei Xiong, the Hugh Leander and Mary Trumbull-Adams Professor in Finance and Professor of Economics, together with the director of BCF.

FINANCIAL INSURANCE WORKSHOP

The purpose of the workshop is to teach Ph.D. students about research at the intersection of insurance and financial economics. Topics include risks in the insurance sector, pricing of insurance liabilities, reinsurance, and asset management. It is taught by BCF faculty Motohiro Yogo and Ralph Koijen of Booth School of Business. The third annual workshop was held June 15-16 virtually due to the pandemic. Over 100 Ph.D. students from around the world participated. The previous two workshops were held on Princeton's campus on June 8-9, 2019 and June 7-8, 2020. The initial two years were financially supported by an NSF grant and the BCF.

2020-2021 ADVISORY COUNCIL

The Advisory Council for the Bendheim Center is comprised of distinguished leaders in the financial industry.

Curtis Arledge, Former Vice Chairman and CEO of Investment Management, BNY Mellon

Ben Bernanke, Former Chairman, Federal Reserve Bank and Chair of the Center's Advisory Board

Frank Brosens, Co-Founder, Taconic Capital

Hamid Biglari, Global Co-Head, Central Liquidity Group, Point 72 Asset Management

Richard Bott, Former Vice Chairman, Morgan Stanley Investment Banking Division

David A. DeNunzio, Managing Director & Global Head, Mergers and Acquisitions,
Wells Fargo Securities

Jeremy Diamond, Guggenheim Investments

Mr. William C Dudley, Former President of the Federal Reserve Bank of New York

J. Michael Evans, President, Alibaba

John Hepburn, Advisory Vice Chairman, Morgan Stanley & Co.

William H. Heyman, Vice Chairman and Chief Investment Officer, The Travelers Companies

Alfred F. Hurley, Jr., Corporate Director and Consultant, Emigrant Bank

William H. Janeway, Senior Advisor, Warburg Pincus

Marshall J. Lux '82, Harvard Kenney School

Hugh E. McGee III, Chief Executive Officer, Intrepid Financial Partners

Elizabeth Prus Myers '91, Head of Global Equity Capital Markets, JP Morgan

Michele Kreisler Rubenstein, Independent Investment Manager and Consultant

Charles Schorin, Portfolio Manager, Elliott Management Corporation

Lynn Thoman, Co-President, Leon Lowenstein Foundation

CORPORATE AFFILIATES PROGRAM

The Corporate Affiliates Program offers companies an opportunity to build a significant relationship with the Center. Corporate affiliates gain a strong presence and visibility, interact with faculty and students, learn about important faculty research, and secure a competitive recruiting advantage.

2020-2021 Affiliates

- Alpine Investors
- AQR Capital Management
- Arrowstreet Capital
- BMW North America
- Capula Investment Management
- Citadel Investment Group
- Cubist Systemic Strategies
- Ergoteles Capital
- Goldman Sachs
- RADAN LLC
- Stevens Capital Management
- Strike Derivatives

GIFT OPPORTUNITIES

Early in 1998, a \$10 million gift from the Leon Lowenstein Foundation enabled Princeton to launch the Bendheim Center for Finance. To establish the University as a national resource for innovative thinking on finance and finance-related topics, the Center brings together leading experts in teaching and scholarship. Significant support beyond the generous Bendheim gift is needed for faculty, visitors, and curriculum development, in order to realize this vision, therefore in 2015 the University initiated a \$6 million campaign in an effort to support true excellence in financial economics which requires a critical mass of finance researchers, approaching the size of a finance department in a leading business school, as well as important educational initiatives in a state-of-the-art setting. The campaign seeks support in the following areas:

ACADEMIC PERSONNEL

Endowed Visiting Professorship

To support a distinguished senior visitor who provides expertise in a particular area of study

\$2,000,000

FELLOWSHIPS

Graduate Fellowships

To support a new generation of scholars concentrating in finance

\$500,000

FINANCIAL RESEARCH AND TEACHING

Research and Course Development Funds

Endowed funds to support research and course development

\$100,000 minimum

China Initiative

Term support to foster better links between Asia and Princeton in finance research

\$250,000 annually

ACKNOWLEDGEMENTS

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