

# 2015 Conference on High Frequency and Algorithmic Trading

**Monday, November 2, 2015**

8 a.m.-6 p.m. Central Time

Illinois Institute of Technology Stuart School of Business

Downtown Campus Auditorium

565 W. Adams St., Chicago, IL 60661

Register online: [bit.ly/csf-conference](http://bit.ly/csf-conference)

*Hosted by:*

Stuart School  
of Business 

ILLINOIS INSTITUTE OF TECHNOLOGY

Center for Strategic Finance

**ALGORITHMIC  
FINANCE**

*In conjunction with:*



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To learn more about the Center for Strategic Finance at the Stuart School of Business, please visit <http://stuart.iit.edu/csf>.



## Conference Schedule

Time	Presenter	Presentation Title
8:00 a.m.	Benjamin E. Van Vliet	Welcome and Introduction
8:10 a.m.	Holly A. Bell	Beyond Regulation: A Cooperative Approach To High Frequency Trading and Financial Market Monitoring
8:50 a.m.	Rick Cooper	The Capability Paradigm in Algorithmic Trading
9:30 a.m.	<b>Break</b>	
9:40 a.m.	Jonathan Seddon	Computerized High Frequency and Algorithmic Trading: Correlation and Causation
10:20 a.m.	Yam Peleg	Market Price Prediction Using Artificial Neural Network
11:00 a.m.	Dimitri Kroujiline	Forecasting the Stock Market Return Over Multiple Time Horizons
11:40 a.m.	<b>Lunch</b>	
12:50 p.m.	James A. Overdahl	<b>The CME Foundation Featured Speaker:</b> High Frequency Trading and the Current Regulatory Framework
1:30 p.m.	Viktor Manaov and Maxim Gusev	Front-running Scalping Strategies and Market Manipulation: Why Does High Frequency Trading Need Stricter Regulation?
2:10 p.m.	Tao Wu	Pricing Parisian Options
2:40 p.m.	<b>Break</b>	
2:50 p.m.	Matthew Dixon	Backtesting Trading Strategies with Deep Neural Networks
3:10 p.m.	Benjamin E. Van Vliet	FinQL: A Query Language for Finance
3:40 p.m.	Craig M. Lewis	<b>The CME Foundation Keynote Address</b>
4:45 p.m.	<b>Cocktail Reception</b>	

### Make a week of it!

The 2015 Conference on High Frequency and Algorithmic Trading is being presented in conjunction with the Fall 2015 STAC Summit, which is being held on Tuesday, November 3. Please contact Ben Van Vliet at [bvanvliet@stuart.iit.edu](mailto:bvanvliet@stuart.iit.edu) for more details.

The 2015 FIA Futures and Options Expo is November 4-6 at the Hilton Chicago on Michigan Avenue. Access to the exhibition hall is free, though access to the speaker events requires a fee. See [expo2015.fia.org](http://expo2015.fia.org) for more details, and visit the Illinois Institute of Technology Stuart School of Business at Booth #710.



**Keynote Speaker: Craig M. Lewis, CPA, Ph.D.**

Craig M. Lewis is the Madison S. Wigginton Professor of Finance at Vanderbilt University's Owen School of Management. He has held regulatory positions as Director, Division of Economic and Risk Analysis, U.S. SEC, Chief Economist, U.S. SEC, Vice Chairman, Committee on Emerging Risk, International Organization of Securities Commissions (IOSCO), and Economic Fellow, U.S. SEC. He received his Ph.D. in Finance and M.S. in Finance from the University of Wisconsin - Madison, and his B.S. in Accounting from the Ohio State University.



His interests include corporate financial policy and asset pricing. Most recently, he has employed textual analysis of qualitative factors in corporate disclosures to detect potential fraud. Earlier work included topics such as convertible debt financing, corporate capital formation, forecasting stock market volatility, and herding by equity analysts.

A frequent speaker and guest lecturer, Craig primarily teaches corporate finance. He is a two-time recipient of the James A. Webb Award for Excellence in Teaching (1991, 2000), Outstanding EMBA Professor (1991), and the Dean's Award for Teaching Excellence (1992, 1999). Professor Lewis is also a Certified Public Accountant and worked for Arthur Young & Company prior to completing his advanced degrees.

**Featured Speaker: James A. Overdahl, Ph.D.**

Prior to joining Delta Strategy Group as a partner in 2013, Jim Overdahl was a Vice President in the Securities and Finance Practice at NERA Economic Consulting in Washington, DC. From 2007 to 2010, he was Chief Economist and Director of the Office of Economic Analysis for the US Securities and Exchange Commission (SEC). He served as principal economic advisor on policy, rulemaking, and litigation support and supervised the SEC's economics program. From 2002 to 2007, Overdahl served as Chief Economist and Director of the Office of the Chief Economist for the US Commodity Futures Trading Commission (CFTC).



Overdahl has testified before Congress on behalf of the SEC and CFTC, and provided staff support and briefings for members of the President's Working Group on Financial Markets. He has also provided expert testimony in complex financial litigation matters. Overdahl has published extensively in leading economics and finance journals and has co-edited and co-authored, with Robert Kolb, four books in multiple editions including Financial Derivatives: Pricing and Risk Management and Futures, Options, and Swaps. Overdahl graduated from St. Olaf College in 1980 and received his PhD from Iowa State University in 1984.



## Presenters

**Holly A. Bell** is an Associate Professor at the University of Alaska Anchorage where she teaches finance and economics. She is also an affiliated scholar with the CATO Institute and the Mercatus Center at George Mason University where she works on issues related to financial market structure & efficiency, high-frequency trading, and policy. Her other research interests include economic decision-making and the political economy. Dr. Bell's work has been cited by the Center for Financial Security, the Securities and Exchange Commission, the Congressional Research Service, the Financial Industries Association, the Securities Industry and Financial Markets Association, China's National Association of Financial Market Institutional Investors, and has appeared in *The Wall Street Journal*, *American Banker*, and the *Journal of Investing* to name a few. Higher education is her second career. Dr. Bell spent the first 17 years of her professional life in the corporate sector and holds degrees in economics, business administration, international studies with a core in American foreign policy, and political science.

**Rick Cooper** is Assistant Professor of Finance at Stuart School of Business at Illinois Tech. Throughout his academic career, Dr. Cooper has taught all aspects of financial theory, investments, and corporate finance at Wayne State University, Harvard University, and Vanderbilt University. Dr. Cooper began his professional career with State Street Global Advisors in Boston, MA, where he quickly rose from Active International Portfolio Manager, to co-founder of the Enhanced Index Group, to co-founder and Associate Director of the Advanced Research Center. He then returned to his hometown of Chicago, where he worked as Senior Partner and Director of Analytics for Harris Investment Management. In this role, he modernized the analytic systems, and led the revamping of the models with a commensurate uptick in investment performance. Dr. Cooper also spent several years as Owner and Chief Investment Officer of his own firm. He currently serves as a research consultant and Director of Risk Management for Xambala, Inc.'s proprietary high frequency trading systems. Dr. Cooper's research has been published in *The Journal of Futures Markets*, *The Financial Analyst's Journal*, *The Journal of Financial Economics*, and several other books and journals. Dr. Cooper has been a speaker at numerous conferences, and has been quoted in both the *Wall Street Journal* and *Crain's Chicago Business*.

**Matthew Dixon** is an Assistant Professor of Finance at the Stuart School of Business at Illinois Tech. His research focuses on the application of advanced computational techniques to financial modeling and data analysis especially where high performance and scalability are critical for practical application. He has taught financial econometrics, derivatives, machine learning and text mining at the University of San Francisco and held visiting appointments in CS/Math at Stanford University and UC Davis. Matthew holds a M.Sc. in Parallel and Scientific Computation (with distinction) from the University of Reading, and a Ph.D. in Applied Math from Imperial College London. He became a chartered financial risk manager in 2014.

**Maxim Gusev** is a lead investigator within a news-based trading project which he launched in 2008. Dr. Gusev obtained his MS in physics (1993) and PhD in theoretical physics with a specialization in condensed matter physics (1995), both from Moscow State University. After completing his postdoctoral research at Universidad Autónoma de Madrid, he returned to Moscow State University in 1996 to continue his research on inelastic particle-surface collisions. During 1997-1998 Dr. Gusev worked in marketing and advertising research at Procter & Gamble. In 1998 he started his own business, which he sold in 2008 to concentrate full-time on this news-based trading project.

**Dimitri Kroujiline** is a partner at LGT Capital Partners leading the alternative investments program structuring team. Dr. Kroujiline received his M.S. in physics in 1991 from Moscow State University. Thereafter, he attended Harvard University to continue his studies in geomagnetism, fluid dynamics and dynamical systems, obtaining his M.S. in applied mathematics in 1994 and Ph.D. in geophysics in 1998. He was a postdoctoral fellow at Harvard University during 1998-1999, where he worked on ocean forecasting models. Since 2000 Dr. Kroujiline has been working in the financial services industry, first with



Swiss Re and then with LGT Capital Partners. He joined this news-based trading project as a lead investigator in 2012.

**Viktor Manahov** is a professor at the University of York. After completing a B.A. in Business Studies at the Open University, he went on to receive an M.Sc. Finance and Investment Management at the University of Aberdeen. His Ph.D. dissertation at Newcastle University was entitled 'An investigation of the behavior of financial markets using agent-based computational models.' He is a Fellow of the U.K. Higher Education Academy and teaches modules related to finance and stock market trading. His research focuses on agent-based modelling and artificial stock markets, genetic programming trading algorithms, stock market forecasts and valuation of securities, high frequency trading techniques, analysis of financial markets behavior, empirical properties of asset returns, and stylized facts and statistical issues.

**Yam Peleg** is a self-employed quantitative high frequency trader for more than three years. He is also a major contributor to the python community who spoke at python conferences around the world including PyGotham and SciPy. He started his computer science degree studies at the age of 14 and throughout the years he had been using his knowledge to give services of cyber security consult, penetration testing and vulnerability researching and he stands behind the publication of some major security leaks in companies around the world. Today he is a specialized expert in the field of machine learning and he is about to speak at International Conference on Artificial Intelligence 2015.

**Jonathan Seddon** is associate professor at the Audencia Nantes School of Management, where he serves as head of the major "Digital Business and Information Technology." He holds a B.Eng. in Manufacturing Engineering and a PhD in Computer Science from Brunel University. Prior to his career in academia, he was head of EMEA Client Relationships for Charles River Development. His published research has appeared in Information Systems Management, Information & Management, and British Journal of Management.

**Benjamin E. Van Vliet** is Assistant Professor of Finance at the Stuart School of Business at Illinois Tech, where he teaches courses in C++ and C# programming for quantitative finance and automated trading system design and development. He is also the Director of the Stuart Center for Strategic Finance. He is the author/co-author of three books on algorithmic trading/investment—Quality Money Management, Modeling Financial Markets, and Building Automated Trading Systems. His academic papers on algorithmic/high frequency trading and quantitative finance have appeared in Journal of Derivatives, Quantitative Finance, Journal of Behavioral Finance, and Journal of Trading. His research on ethics in high frequency trading has been featured on Forbes. He has been quoted extensively in the national media on high frequency trading, including the Wall Street Journal, Bloomberg TV, Newsweek, BusinessWeek, IEEE Spectrum, WIRED!, Institutional Investor, Automated Trader, Reuters, and Yahoo! News.

**Tao Wu** is Associate Professor of Finance at the Stuart School of Business at Illinois Tech. Dr Wu has been awarded Best Paper Award at the Asia-Pacific Association for Derivatives Conference, Irwin/McGraw-Hill Distinguished Paper in Finance Prize, and Montreal Institute of Structured Finance and Derivatives research grant. After a competitive global selection process in 2012, Dr Wu was among the eight scholars that included chaired professors from Harvard and Princeton, to conduct research as a visiting scholar at the Banque de France. Dr Wu has presented his research at both top-tier academic meetings such as the American Finance Association Annual Meeting (twice with sole-authored papers), as well as many specialized conferences and workshops in the US, Europe, Australia and Asia. Dr. Wu has published his research in the Journal of Banking and Finance, Journal of Futures Markets, Journal of Empirical Finance, Journal of Credit Risk, and Review of Futures Markets, among many others. His work has been frequently requested and cited by top researchers in the Journal of Financial Economics and the JFQA. Prior to getting his finance Ph.D. from Wharton, he traded structured derivatives at a major investment bank in New York.



## Hotel & Travel Accommodations

Here are the names of hotels within range of the Illinois Tech Downtown Campus, including approximate distances from the conference venue.

**W Chicago - City Center**                      **3 Blocks**  
172 West Adams Street  
Chicago, Illinois 60603

**JW Marriott Chicago**                      **4 Blocks**  
151 West Adams Street  
Chicago, Illinois 60603

**Palmer House Hilton**                      **8 Blocks**  
17 East Monroe Street  
Chicago, Illinois 60603

**Hilton Chicago\***                      **10 Blocks**  
720 South Michigan Avenue  
Chicago, Illinois, 60605

**Crowne Plaza Chicago Metro**              **5 Blocks**  
733 West Madison Street  
Chicago, Illinois 60661

*\*The Hilton Chicago is the site of this year's FIA Futures and Options Expo, November 4-6.*

For directions and parking information for  
the Illinois Tech downtown campus, please visit:

<http://web.iit.edu/about/visitor-information/directions-downtown-campus>