NYC SEMINAR AND CONFERENCE CENTER, NEW YORK CITY

WOMEN IN QUANTITATIVE FINANCE AMERICAS CONFERENCE

APRIL 10 & 11, 2019

PRESENTERS

Keynote: Helyette Geman, PhD, PhD: Professor of Mathematical Finance, **Birkbeck - University of London & Johns Hopkins University**

Peter Carr: Professor and Dept. Chair of FRE Tandon, **New York University**

Sharon Sputz: Executive Director of Strategic Programs, Data Science Institute, **Columbia University**

Edith Mandel: Principal, **Greenwich Street Advisors, LLC**

Ioana Boier: Quantitative Researcher, **Citadel LLC (To be confirmed)**

Roza Galeeva: Research Professor, **New York University, Tandon School of Engineering,** Commodity Derivatives, Risk Management

Natalie Basiratpour: Director, **Octavius Finance**

Miquel Noguer Alonso: Co–Founder and Chief Science Officer, **Artificial Intelligence Finance Institute (AIFI)**

Jonathan Regenstein: Director of Financial Services Practice, **RStudio, Inc.**

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MLI Machine Learning Institute Certificate

AIFI ARTIFICIAL INTELLIGENCE FINANCE INSTITUTE

CONFERENCE OVERVIEW

Due to the sell out and huge success of WQF London we are delighted to announce a brand new event for 2019; Women in Quantitative Finance Americas Conference (WQF).

This conference will showcase the female talent within the existing quants community, discuss opportunities for the next generation and the current challenges for women in quantitative finance. Whilst focusing on the hottest topic in QF at present Machine Learning.

Please note this is not a female only conference.

LOCATION:

NYC Seminar and Conference Center
71 West 23rd Street
New York, NY 10010
USA
Tel: +1 646 336 4455
www.nycseminarcenter.com

WEDNESDAY APRIL 10, 2019
PRE-CONFERENCE WORKSHOP DAY:
REPRODUCIBLE FINANCE WITH R: AN INTRODUCTION TO R AND DATA VISUALIZATION FOR QUANTS

THURSDAY APRIL 11, 2019
MAIN CONFERENCE STREAM:
WOMEN IN QUANTITATIVE FINANCE AMERICAS CONFERENCE

IMPORTANT NOTES:

The presentation files will be made available for download via a password protected website before the event. Please print out each presentation if you wish to have hard copies before the conference and bring them with you.

Also, Wi-Fi access will be available at the venue to view presentations on laptops and mobile devices.

PRE-CONFERENCE WORKSHOP: WEDNESDAY APRIL 10

DAY SCHEDULE: 8:00 – 5:00
REGISTRATION: 8.00 / START TIME: 8:30 / BREAK: 10:30 – 11:00 / LUNCH: 12:30 – 1:30 / BREAK: 3:15 – 3:30

REPRODUCIBLE FINANCE WITH R: AN INTRODUCTION TO R AND DATA VISUALIZATION FOR QUANTS
BY JONATHAN REGENSTEIN: DIRECTOR OF FINANCIAL SERVICES PRACTICE, RSTUDIO, INC.

OVERVIEW:

This workshop will introduce the R toolchain with a hands-on example of importing market data, wrangling it into a tidy format, visualizing it, modeling it and then building an interactive dashboard with Shiny. We will cover a lot of code but participants will tackle a real world project using a bottom-to-top R workflow. Taught by RStudio!

HIGHLIGHTS:

- Learn to import data from databases, csv and excel
- Explore tools for cleaning and wrangling data
- Delve into R's data visualization capabilities
- Build interactive dashboards for data exploration with Shiny

WHO SHOULD ATTEND:

- The course is aimed at people with financial industry knowledge or experience who want to learn R
- Excel users
- Portfolio managers
- Market researchers
- Quants and aspiring quants
- Forecasters and economic analysts

PREREQUISITES:

No coding experience is necessary, but a desire to spend a day learning and digging into R code is necessary.

COURSE TUTOR:

Jonathan leads the financial services practice at RStudio and works with data science teams at a variety of financial institutions. He studied International Relations as an undergraduate at Harvard, worked in finance at JP Morgan and then did graduate work in Political Economy at Emory University before joining RStudio.

He is the author of the book *Reproducible Finance with R: Code Flows and Shiny Apps for Portfolio Analysis* (CRC Press, 2018) www.reproduciblefinance.com
He is also a regular to contributor to Rviews (rviews.rstudio.com/categories/reproducible-finance).

RStudio

MAIN CONFERENCE: THURSDAY APRIL 11

8:00 – 8:50 **REGISTRATION AND MORNING WELCOME COFFEE**

8:50 – 9:00 **WOMEN IN QUANTITATIVE FINANCE INTRODUCTION BY CHAIR:**
To be confirmed

9:00 – 9:45 **KEYNOTE SPEECH**

by Helyette Geman, PhD, PhD:
Professor of Mathematical Finance, **Birkbeck - University of London & Johns Hopkins University**

'From Changes of Numeraire and Changes of Measure to Bitcoins and Blockchains'

Abstract:

The first part of the talk will review the way the economic assumption of No Arbitrage combined to powerful results established in probability theory in a fairly recent past lead to a number of beautiful results in Quantitative Finance, in particular i) the existence of 'pricing measures' under which the prices of primitive securities – in the right numeraire – are martingales; ii) remaining under the physical measure P – the one under which big data are accumulated –, No Arbitrage implies that normality of asset returns can be recovered through a stochastic time change where the clock is driven by the order flow.
The second part of the talk will discuss some key features of cryptocurrencies observed so far, and which methodology can be proposed to analyze this particular asset class stored in a new type of inventory called Blockchain.

9:45 – 10:30 **QUANTUM MACHINE LEARNING**

- Training strong classifiers with quantum annealing
- Quantum Boltzmann Machine

Presenter: To be confirmed

10:30 – 11:00 **MORNING BREAK AND NETWORKING OPPORTUNITIES**

MAIN CONFERENCE: THURSDAY APRIL 11

11:00 – 12:00 TALENT ATTRACTION & RETENTION PANEL

MODERATOR:

- **Helyette Geman, PhD, PhD:**
  Professor of Mathematical Finance, **Birkbeck - University of London & Johns Hopkins University**

PANELLISTS:

- **Edith Mandel:** Principal, **Greenwich Street Advisors, LLC**
- **Peter Carr:** Professor and Dept. Chair of FRE Tandon, **New York University**
- **Roza Galeeva:** Research Professor, **New York University Tandon School of Engineering**,
  Commodity Derivatives, Risk Management,
- Other panellists to be confirmed

TOPICS:

- What are QR Financial Services currently doing and what should they be doing to attract more female talent?
- What can Universities and Recruitment companies do to help?
- What strategies are financial companies using at present if any?
- What are QR Financial Services currently doing and what should they be doing to retain female talent?
- What top positions besides Asset Management can QF- profiled women occupy?
- For each position open, the percentage of female CVs submitted is very small (if not none). Why is this happening and how can universities/headhunters/companies work together to improve the numbers?
- At more senior levels the number of women is even lower than at entry level which means that the female population retention rate is low or/and women are not being promoted. Discuss.
- Mentoring programmes that could specifically help Diversity & Inclusion.
- Are quantitative positions too specialised which prevents women (and men) to move horizontally to different (and possibly more senior) roles?

12:00 – 12:45 USING ARTIFICIAL INTELLIGENCE TO MEASURE SUSTAINABLE DEVELOPMENT GOALS

Presenter: To be confirmed

12:45 – 1:45 LUNCH

1:45 – 2:30 IDENTIFICATION AND FORECAST OF MARKET REGIMES USING MACHINE LEARNING

- Applying Hidden Markov Models (HMM) to identify market regimes (bull/bear/range etc)
- Specification and estimation of HMMs using Unsupervised Learning
- Forecasting of likelihoods of regimes at different horizons
- Applications to systematic trading strategies

Presenter: To be confirmed

MAIN CONFERENCE: THURSDAY APRIL 11

2:30 – 3:15 MACHINE LEARNING, AI & QUANTUM COMPUTING IN QUANTITATIVE FINANCE PANEL

MODERATOR:

- To be confirmed

PANELLISTS:

- **Ioana Boier: Quantitative Researcher, Citadel LLC** (To be confirmed)
- **Miquel Noguer Alonso**: Co–Founder and Chief Science Officer, **Artificial Intelligence Finance Institute (AIFI)**
- Other panellists to be confirmed

TOPICS:

- What is the current state of utilisation of machine learning in finance?
- What are the distinct features of machine learning problems in finance compared to other industries?
- What are the best practices to overcome these difficulties?
- What's the evolution of a team using machine learning in terms of day to day operations?
- What is a typical front office 'Quant' skillset going to look like in three to five years time?
- How do we deal with model risk in machine learning case?
- How is machine learning expected to be regulated?
- What applications can you list among its successes?
- How much value is it adding over and above the "classical" techniques such as linear regression, convex optimisation, etc.?
- Do you see high-performance computing (HPC) as a major enabler of machine learning?
- What advances in HPC have caused the most progress?
- What do you see as the most important machine learning techniques for the future?
- What are the main pitfalls of using Machine Learning currently in trading strategies?
- What new insights can Machine Learning offer into the analysis of financial time series?
- Discuss the potential of Deep Learning in algorithmic trading?
- Do you think machine learning and HPC will transform finance 5-10 years from now?
- If so, how do you envisage this transformation?
- Can you anticipate any pitfalls that we should watch out for.
- Discuss quantum computing in quant finance:
    - Breakthroughs
    - Applications
    - Future uses

3:15 – 3:45 AFTERNOON BREAK AND NETWORKING OPPORTUNITIES

3:45 – 4:30 MACHINE LEARNING FOR TRADE STRATEGIES

- Finding alpha – value investing
- Factor investment
- Reinforcement Learning
- AI for ESG
- Sentiment Analysis

Presenter: To be confirmed

MAIN CONFERENCE: THURSDAY APRIL 11

4:30 – 5:00 CAN MACHINE LEARNING PREDICT REALIZED VARIANCE?

- Volatility index (VIX) construction and Realized Variance (RV) prediction.
- Can machine learning improve the prediction of RV and thereby improve the construction of a volatility index?
- Results
- Conclusions and future research directions

Presenter: Peter Carr: Professor and Dept. Chair of FRE Tandon, **New York University**

5:00 - 6:00 CAREER PROGRESSION PANEL

MODERATOR:

- To be confirmed

PANELLISTS:

- **Natalie Basiratpour:** Director, **Octavius Finance**
- **Sharon Sputz:** Executive Director of Strategic Programs, Data Science Institute, **Columbia University**
- Other panellists to be confirmed

TOPICS:

- Do you think that being a woman is a significant factor in slowing down career progression in QR Financial Services?
  - If so, could this be avoided and how?
- Discuss the Importance and value of mentorship and sponsorship
  - What mentoring programs are available for juniors if any?
- Is it still hard to make it to the top positions, if so why and what can do done to change the situation?
- Discuss female role models in finance and significant achievements
- Tips from coaches on career progression (eg having your voice heard)
- Actively managing your career; distribution of opportunity set
- Gender diversity issues (discuss numbers, policies, how to address it)
- Maternity leave
- How important are the following:
  - Promotions/Career opportunities
  - Pay gap elimination
  - Agile/Flexible working
  - Getting the feedback you need (even if you don't really want it)
  - Supporting each other

END OF CONFERENCE

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The Artificial Intelligence Finance Institute's (AIFI) mission is to be the world's leading educator in the application of artificial intelligence to investment management, capital markets and risk. We offer one of the industry's most comprehensive and in-depth educational programs, geared towards investment professionals seeking to understand and implement cutting edge AI techniques.

Taught by a diverse staff of world leading academics and practitioners, the AIFI courses teach both the theory and practical implementation of artificial intelligence and machine learning tools in investment management. As part of the program, students will learn the mathematical and statistical theories behind modern quantitative artificial intelligence modeling. Our goal is to train investment professionals in how to use the new wave of computer driven tools and techniques that are rapidly transforming investment management, risk management and capital markets.

www.aifinanceinstitute.com

QWAFAFEW is an informal organization of quantitatively oriented professionals in various aspects of financial services, primarily investment management.

The members span the gamut from owners and senior executives of investment related organizations to recent entrants to the industry. Most attendees have some technical training beyond the M.B.A. level, and many have Ph.D.s All share a common interest in quantitative solutions to understanding investment markets.

Please visit www.qwafafew.org for more information.

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The Thalesians are a think tank of dedicated professionals with an interest in quantitative finance, economics, mathematics, physics and computer science, not necessarily in that order.

www.thalesians.com/finance/index.php/Main_Page

MLI Machine Learning Institute Certificate

Welcome to The Machine Learning Institute Certificate in Finance (MLI)

Start Date: Tuesday 23rd April 2019

Super Early Bird: 25% Discount until 22nd February 2019

Quantitative finance is moving into a new era. Traditional quant skills are no longer adequate to deal with the latest challenges in finance. The Machine Learning Institute Certificate offers candidates the chance to upgrade their skill set by combining academic rigour with practical industry insight.

The Machine Learning Institute Certificate in Finance (MLI) is a comprehensive six-month part-time course, with weekly live lectures in London or globally online. The MLI is comprised of 2 levels, 6 modules, 24 lecture weeks, lab assignments, a practical final project and a final sit down examination using our global network of examination centres.

This course has been designed to empower individuals who work in or are seeking a career in machine learning in finance. Throughout our unique MLI programme, candidates work with hands-on assignments designed to illustrate the algorithms studied and to experience first-hand the practical challenges involved in the design and successful implementation of machine learning models. The MLI is a career-enhancing professional qualification, that can be taken worldwide.

www.mlinstitute.org

WOMEN IN QUANTITATIVE FINANCE AMERICAS CONFERENCE
NYC SEMINAR AND CONFERENCE CENTER, NEW YORK CITY
APRIL 10 & 11, 2019

CONFERENCE FEE STRUCTURE	STANDARD EVENT FEE
☐ Workshop Only:	$299.00
☐ Conference Only:	$299.00
☐ Workshop & Conference:	$598.00

There are a limited number of student & academic seats at the Women in Quantitative Finance Americas Conference.
Please note there is an administration fee of $20.00.
These tickets are for students or academics in FULL TIME education only.

Register on Eventbrite.

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