

CCT VENUES PLUS - BANK STREET, CANARY WHARF, LONDON

THE 9TH XVA CONFERENCE

18TH - 19TH MARCH 2020

SPEAKERS

- Matthias Arnsdorf: Global Head of Counterparty Credit Risk Quantitative Research, J.P. Morgan
- Sarah B Tremel: Global Head of Analytics – Product Control, HSBC
- Gonzalo Garcia-Kenny: Managing Director, Head of Portfolio Optimisation Desk, Citi
- Andrew Green: Managing Director and XVA Lead Quant, Scotiabank
- Jon Gregory: Independent xVA Expert
- Ivan Zhdankin: Associate, Quantitative Analyst, J.P. Morgan Chase & Co
- Youssef Elouerkhauui, Managing Director, Head of Credit Derivatives, CITI
- Christoph Burgard: Head of Risk Analytics For Global Markets, Bank of America Merrill Lynch
- Ignacio Ruiz: Founder & CEO, MoCaX Intelligence
- Chris Kenyon: Director: Head of XVA Quant Modelling, MUFG Securities EMEA Plc
- Alberto Elices: Head of XVA Model Validation, Santander
- Mats Kjaer: Head of Quant XVA Analytics Bloomberg LP
- Stéphane Crépey: Professor of Mathematics, University Of Evry
- Matteo Rolle: Senior Director, Head of In Business Risk, Capital and Collateral, Lloyds Banking Group
- Justin Chan: Quantitative Strategy, Adaptiv, FIS
- Mariano Zeron: Head of Research and Development, MoCaX Intelligence

EARLY BIRD DISCOUNT

15% UNTIL 6TH MARCH 2020

SPECIAL OFFER:

WHEN 2 COLLEAGUES ATTEND
THE 3RD GOES FREE!



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CONFERENCE OVERVIEW

LOCATION:

CCT Venues Plus - Bank Street, Canary Wharf
Level 32
40 Bank Street
London
E14 5NR

Tel: +44 (0)20 3588 3700 | Website: www.cctvenues.co.uk/venues/canary-wharf-bank-street

WEDNESDAY 18TH MARCH:

CONFERENCE, DAY ONE

The 9th XVA Conference

THURSDAY 19TH MARCH:

CONFERENCE, DAY TWO

The 9th XVA Conference

CONFERENCE BOOKINGS - DISCOUNT STRUCTURE:

- Super Early Bird Discount: 25% until 7th February
- Early Bird Discount: 15% until 6th March
- SPECIAL OFFER: When 2 colleagues attend the 3rd goes free!
- 70% Academic Discount (FULL-TIME Students Only)

CPD CERTIFICATION



You will be able to receive up to **11.5 CPD points (11 hours and 30 minutes of structured CPD)** for attending this event

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IMPORTANT NOTES:

The conference 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.

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

CONFERENCE DAY ONE: THURSDAY 18TH MARCH

08:00 – 09:00 REGISTRATION AND MORNING WELCOME COFFEE

MACHINE LEARNING APPROACHES TO XVA

09:00 – 09:45 REINFORCEMENT LEARNING FOR XVA HEDGING

Presenter: Ivan Zhdankin: Associate, Quantitative Analyst, JPMorgan Chase & Co

09:45 – 10:30 MARGINAL KVA VIA MATHEMATICAL PROGRAMMING AND REINFORCEMENT LEARNING

Presenter: Chris Kenyon: Director: Head of XVA Quant Modelling, MUFG Securities EMEA Plc

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

11:00 - 11:45 TOPIC TO BE CONFIRMED

Presenter: Sarah B Tremel: Global Head of Analytics – Product Control, HSBC

11:45 - 12:30 CHEBYSHEV TENSORS AND MACHINE LEARNING IN DIM CALCULATIONS

In this presentation we see how Chebyshev Tensors and Machine Learning techniques can be used in the calculation of Dynamic Initial Margin (DIM). We start by giving an overview of the main mathematical properties behind Chebyshev Tensors. Then we see how these can be used to approximate pricing functions within risk calculations to alleviate the huge computational burden associated with them. Finally we explain how Chebyshev Tensors can be used in the calculation of DIM and present DIM calculations obtained Chebyshev Tensors, Deep Neural Networks and other regression types.

- Pricing problem in risk calculations
- DIM, its challenges and different ways to compute it: Machine Learning, Chebyshev Tensors
- Chebyshev mathematical framework
- How to use Chebyshev Tensors in risk calculations
- Chebyshev Tensors applied to DIM
- DIM results using Chebyshev Tensors, regressions and Deep Neural Nets

Presenter: Mariano Zeron: Head of Research and Development: MoCaX Intelligence

12:30 - 13:30 LUNCH

CONFERENCE DAY ONE: THURSDAY 18TH MARCH

13:30 – 14:15 BAYESIAN AND MACHINE LEARNING APPROACHES TO XVA INTEGRATION

Presenter: Andrew Green: Managing Director and XVA Lead Quant, Scotiabank

14:15 – 15:00 DERIVATIVES PRICING WITH A DEEP LEARNING APPROACH

Presenter: Youssef Elouerkaoui, Managing Director, Head of Credit Derivatives, CITI

15:00 – 15:30 AFTERNOON BREAK AND NETWORKING OPPORTUNITIES

15:30 - 16:15 BALANCE SHEET XVA BY DEEP LEARNING AND GPU

Presenter: Stéphane Crépey: Professor of Mathematics, University Of Evry

CONFERENCE DAY ONE: THURSDAY 18TH MARCH

16:15 - 17:00 THE IMPACT OF INITIAL MARGIN ON DERIVATIVES PRICING WITH AN APPLICATION OF MACHINE LEARNING

Presenter: To be confirmed

17:00 – 17:45 PANEL: XVA, FRTB & MACHINE LEARNING

MODERATOR:

- Ivan Zhdankin: Associate, Quantitative Analyst, JPMorgan Chase & Co

PANELLISTS:

- Jon Gregory: Independent xVA Expert
- Sarah B Tremel: Global Head of Analytics – Product Control, HSBC
- Andrew Green: Managing Director and XVA Lead Quant, Scotiabank
- Christoph Burgard: Head of Risk Analytics For Global Markets, Bank of America Merrill Lynch
- Ignacio Ruiz: Founder & CEO, MoCaX Intelligence

TOPICS:

XVA & Initial Margin

- Initial Margin, a push for more model standardization? Good or bad?
- How do you interpret the regulatory requirements to validate and monitor SIMM, and how would a firm best go about meeting those requirements?
- SIMM relies on counterparts calculating their own sensitivities. Do the panelists foresee that causing any problems meeting requirements or additional costs?
- Discuss Implementing SIMM for Non Cleared Initial Margin Rules
- Discuss the role of technology to increase the knowledge base from XVA calculations

Machine Learning

- Discuss the existing applications of machine learning in XVA
- Discuss the potential new applications of machine learning in XVA going forward
- How important is machine learning in calculation of XVAs?
- Best practices to incorporate machine learning across XVAs
- Is machine learning necessary for XVA?

Discuss the Impact of FRTB on XVA's

- How will the latest proposed regulations impact CVA calculations
- Review what are the most important factors to take into account when calculating the new CVA
- Calculating & Implementing FRTB CVA. How will it affect banks' internal modelling for counterparty risk and risk management?

CONFERENCE DAY TWO: FRIDAY 19TH MARCH

08:30 – 09:00 MORNING WELCOME COFFEE

CURRENT TECHNIQUES, TIMELINES & FUTURE TRENDS ON XVA

09:00 – 09:45 FUTURE TRENDS WITH MVA: ASSESSING THE TIMELINE AND THE ROLE OF CCPS

- Examine the timeline for the implementation of the initial margin regulations
- Explore the potential for increased CCP usage following the regulation and the role of bilateral trades
- Analyse the disparity of effects upon smaller and larger banks:
 - How will the regulation affect these institutions?
- Consider the possibility of increased vendor usage as a response to the requirements of MVA

Presenter: Gonzalo Garcia-Kenny: Managing Director, Head of Portfolio Optimisation Desk, Citi

09:45 – 10:30 FUNDING VALUE ADJUSTMENT: ACCOUNTING VERSUS ECONOMIC MANAGEMENT PERSPECTIVES

- Review of Balance Sheet financing management.
- Interaction of Credit, Debit and Funding Value Adjustments.
- Funding Value Adjustment: accounting versus economic management perspectives.

Presenter: Alberto Elices: Head of XVA Model Validation, Santander

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

11:00 - 11:45 KVA UNDER IMM AND ADVANCED APPROACHES

The two largest components of Capital Valuation Adjustment (KVA) are the costs of Counterparty Credit Risk (CCR) and CVA capital. For a bank using the most advanced capital models – Internal Models Method for CCR and the incoming SA-CVA capital – an accurate KVA involves forward simulating expected exposures (EE) over the lifetime of the portfolio – potentially a Monte Carlo in a Monte Carlo. We present a practical regression-based solution.

- Simulating EE: from regulatory stressed real-world measure to market implied measure
- A comparative study of regression vs brute force nested Monte Carlo
- SA-CVA: extending from simulating forward EE to simulating forward CVA sensitivities

Presenter: Justin Chan: Quantitative Strategy, Adaptiv, FIS

11:45 - 12:30 KVA IS INCOMPLETE

Presenter: Matthias Arnsdorf: Global head of Counterparty Credit Risk Quantitative Research, J.P. Morgan

12:30 - 13:30 LUNCH

CONFERENCE DAY TWO: FRIDAY 19TH MARCH

13:30 – 14:15 IN THE BALANCE REDUX

Presenter: Mats Kjaer: Head of Quant XVA Analytics Bloomberg LP

14:15 – 15:00 THE FINAL STAGES OF THE INITIAL MARGIN REGULATION AND ITS FUTURE IMPACT ON THE XVA DESK

- An overview of the requirements of the final initial margin regulation and the impact on the XVA desk
- Consider the impact on the market the scope of the final regulation will pose
- Assess the difficulties with a lack of industry standard
- Explore the need to optimise systems in order to effectively account for MVA
- Investigate methodologies for pricing MVA into current derivative trades

Presenter: Matteo Rolle: Senior Director, Head of In Business Risk, Capital and Collateral, Lloyds Banking Group

15:00 – 15:15 QUICK AFTERNOON BREAK

15:15 - 16:00 CLOSING TALK: REVIEWING THE FUTURE IMPACT OF FRTB & CVA FOR THE DERIVATIVES MARKET

Presenter: To be confirmed

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MoCaX Intelligence is a new-to-the-market algorithm that accelerates existing Risk Engines without the need for complex systems development or expensive hardware upgrades. MoCaX removes the pricing step bottle-neck that often uses over 90% of computational effort in existing engines and increases capabilities by several orders of magnitude with no loss of accuracy.

MoCaX builds on the new Algorithmic Pricer Acceleration (APA) and Algorithmic Greeks Acceleration (AGA) methods. APA synthesises your existing pricers and creates an accelerated version of them. Even your very slowest and complex pricer, passed through MoCaX, will return the same results (down to 10-15 precision) ultra-fast (up to a few nanoseconds). For example, this enables highly accurate Monte Carlo within Monte Carlo in an instant.

AGA is a further enhancement, creating also an ultra-accurate, ultra-fast function of the Greeks of your pricers, even when you do not have an expression for them. This enables for example exact MVA and MVA sensitivity calculations.

APA and AGA work for any pricing function: analytical, tree or MC based; and with any asset class.

With one million accurate Price or Greek values in a few milliseconds, MoCaX delivers:

- massive acceleration of your current simulations
- previously-impossible simulations, e.g. accurate and ultra-fast MVA via real Dynamic SIMM
- potential for trades that had been too slow to simulate, e.g. non-linear products, barriers, bermudans
- enhanced regulatory approval, because MoCaX delivers perfect pricing and widens IMM product scope

MoCaX Intelligence: the next step forward.

Please ask for a free version of MoCaX so you can test it for yourself.

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FIS Adaptiv provides solutions for enterprise-wide risk management solutions, spanning trade capture to operations management. Adaptiv Analytics is a state-of-the-art calculation engine that offers marketleading performance for market risk, counterparty credit risk, and regulatory calculations. AAD-enabled Analytics software is the latest exciting development from FIS Adaptiv. This will add to the suite of performant technologies upon which Analytics is built, which includes vectorization and GPU support, and will enable real-time calculation of exact XVA sensitivities for effective risk reporting, credit limit monitoring, and position management.

Through the depth and breadth of our solutions portfolio, global capabilities and domain expertise, FIS serves more than 20,000 clients in over 130 countries. Headquartered in Jacksonville, Fla., FIS employs more than 55,000 people worldwide and holds leadership positions in enterprise risk management, payment processing, financial software and banking solutions. Providing software, services and outsourcing of the technology that empowers the financial world, FIS is a Fortune 500 company and is a member of Standard & Poor's 500® Index.

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The Numerical Algorithms Group (NAG) are experts in numerical algorithms, software engineering and high-performance computing. They have served the finance industry with numerical software and consulting services for over four decades because of their outstanding product quality and technical support. Specifically, relevant to the finance industry, NAG pioneer in the provision of the NAG Library – numerical, machine learning and statistical components ideal for building Quant Libraries, Risk Applications and the like.

NAG also provides best-in-class C++ operator-overloading AD tools for CPU and GPU called dco (derivative computation through overloading) and dco/map (dco meta adjoint programming). The NAG Library and AD tools are used by many of the largest Investment Banks where they are embedded in Quant Libraries and XVA applications. As a not-for-profit company, NAG reinvests surpluses into the research and development of its products, services, staff and its collaborations.

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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.

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CONFERENCE FEE STRUCTURE

	Super Early Bird Discount: 25% until 7th February	Early Bird Discount: 15% until 6th March	Regular Event Fee
<input type="checkbox"/> Conference Fee:	£1499.25 + UK VAT	£1699.15 + UK VAT	£1999.00 + UK VAT

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SIGNATURE:

sales@wbstraining.com

FLIGHT DETAILS:

All delegates flying into London on the morning of the event are reminded that they should arrive 30 minutes before the workshop starts for registration. The venue's location is approximately 1 hour from all 3 main London airports, Heathrow, Gatwick and City. Returning flights should equally allow for the events finishing time.

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