StormCollins | Curriculum Vitae

Contact Information

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Work Experience

Consulting & Audit

Deloitte, Financial Services Advisory, Valuations, Senior Manager (May 2019 - Present)

- BAU management of junior staff members, managing client relationships with regards to delivery, reporting & explaining results, strategy for the team, proposals for new business,
- Derivative pricing in both IFRS 2 & IFRS 13 standards, wide spectrum of instruments from employee share schemes, BEE options, to CVA, DVA, FVA, & KVA,
- Instrumental in spearheading a revamp of their existing limited C# library for derivative pricing as well as educating junior members,

Investment Banking

Counterparty Credit Risk Analyst at Standard Bank CIB (April 2014 - May 2019)

- Developed a framework, in C#, for performing stress testing analysis of counterparty credit risk which integrated with Adaptiv to calculate relevant metrics such as PFE, EPE, & Economic Capital for various stressed economic scenarios.
- Fielded wrong way risk queries from credit managers with regards to the exposure generated by the conditional default model.
- Involved with vetting the consistency of exposures & methodology in numerous trading system migrations & Adaptiv upgrades.
- Performed relevant analysis for how to best accommodate exotic type instruments that can't be accurately captured in Adaptiv.
- Performed bespoke PFE calculations for instruments not catered for by Adaptiv.
- Fielded queries from model validation with regards to reviews of stochastic processes used in Monte Carlo simulations.
- Helped with the analysis & implementation of back testing stochastic process parameters & models via a framework developed in Python & C#.
- Assisted with upgrading C# code for calibrating stochastic process parameters.
- Fielded queries about collateral algorithm.
- Assisted Asset Control in implementing revised market data specifications required for Adaptiv exposure calculations.

Independent Valuations and Model Controller at ABSA Capital (February 2012 - March 2014)

- Price and bid offer testing of Equity Derivative and Prime Services desks using observable/liquid market data.
- Performed FVA, CVA, and CCRA calculations attributing moves in counterparty credit and funding exposure.
- Reviewed new product approvals and structured trade reviews in equities, prime services and credit.
- Performed observability analysis of market data.
- Investigated valuation issues resulting from the application of OIS discounting, CVA, DVA and FVA to derivatives pricing.
- Investigated & kept up to speed with relevant pricing methodologies for equity derivatives.

Junior Quantitative Analyst at ABSA Capital (February 2010 - January 2012)

- Implemented/researched various pricing and hedging methodologies for various asset classes (mainly credit and fixed income).
- Aided in implementation of multi-curve system for FVA calculations.
- Aided in development of standard Excel pricing platform via C# and C++.
- Performed various statistical analyses of market data for trading desks.

Tertiary Education

Georgia Institute of Technology, Atlanta, Georgia

Masters of Computer Science, *In Progress*,

- Dissertation Topic: *Multi-Trace Operators and the Gauge-Gravity Correspondence*
- Supervisor: Professor Robert S. de Mello Koch
- Area of Study: String Theory (AdS/CFT Correspondence)

University of the Witwatersrand, Johannesburg

Masters of Science, Physics, 2008, *with distinction*

- Dissertation Topic: *Multi-Trace Operators and the Gauge-Gravity Correspondence*
- Supervisor: Professor Robert S. de Mello Koch
- Area of Study: String Theory (AdS/CFT Correspondence)

Bachelor of Science (Honours), Advanced Mathematics of Finance, 2009, *with distinction*

- Honours Project, *A Low-Dimensional LIBOR Market Model*

Bachelor of Science (Honours), Physics, 2007, *with distinction*

- Honours Project, *Quantum Statistics of Anyons*

Publications

Restricted Schur Polynomials and Finite N Counting. Storm Collins, Physical Review **D 79**, 026002 (2009), http://arxiv.org/pdf/0810.4217.pdf

Exact Multi-Matrix Correlators. R. Bhattacharyya, S. Collins and R. de Mello Koch, Journal of High Energy Physics JHEP**03**(2008)044, http://arxiv.org/pdf/0801.2061.pdf

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University Awards

- Standard Bank Award for Honours in Advanced Mathematics of Finance (2009)
- CH Leon bursary (2009)
- South African Institute of Physics (SAIP) award for best Masters talk in theoretical physics (2008)
- Merck achievement award for best interdisciplinary third year BSc student (2006)
- Diamond research laboratory award for top third year physics student (2006)
- Frank Nabarro summer essay prize for Physics III (2006)
- Diamond research laboratory award for top second year physics student (2005)

Computer Skills

Programming Languages

- **Advanced:** C#, Matlab, Python (including Numpy & Scipy).
- **Intermediate:** C\C++
- **Basic:** Java, SQL

Applications

- **Advanced:** *MS Excel* - Proficient in extending functionality via VBA UDFs, C# xlls and Excel-DNA, FIS/Sungard Adaptiv (Counterparty Credit Exposure management system).
- **Intermediate:** *Front Arena* (Trading system) - Proficient in coding python scripts & SQL for pricing, risking & data queries.
