

# Yaacov Kopeliovich Ph.D.

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## EDUCATION

### **University of California, Berkeley**

Haas School of Business

Master of Financial Engineering, March 2004

### **Hebrew University, Jerusalem, Israel**

Ph.D., Mathematics, Magna cum Laude, 1994

M.S., B.S., Mathematics 1990, 1987

### **EDHEC Business School, France**

Ph.D. in Finance, November 2014

## PROFESSIONAL EXPERIENCE

University of Connecticut Storrs CT

Assistant Professor in Residence Department of Finance

08/23/2015- present

**Rixtrema Corporation**, New York, NY

Risk Management Vendor

*Director of Research*

1/31/2013- 05/31/2015

- Developed a derivative engine for clients and incorporated the engine with the Rixtrema risk model:
  - Standardized T&C and holdings files. Created a database of positions and security master files for various company clients.
  - Implemented valuation processes for various fixed income derivatives and integrated with Rixtrema's fundamental risk engine.
  - Utilized FINCAD and Matlab to accelerate risk calculation metrics for fixed income securities within a space of structured credit
- Developed hedging strategies for pension plans using equities, fixed income and derivative products
- Performed theoretical research on risk models used by Rixtrema.

**MEAG New York Corporation**, New York, NY

Munich Re US & Canadian Asset Manager

*Senior Quantitative Analyst*

6/2006-01/31/2013

- Developed cumulative loss projection approach for subprime pools on ABX series – senior management used the model to design strategies to cope with the subprime crisis. These moves saved 300 million to the parent company.
- Applied the model to value structured book of defunct insurance entities as part of a broader merger and acquisition activity of the parent company
- Developed algorithms to generate replicating portfolios of various fixed income benchmarks (Lehman MBS, Lehman IG, and Lehman HY). Used by Portfolio Managers as initial inputs for overall portfolio construction of the assets, and was developed in SQL and VBA. Initial input based on Point's partial durations.
- Developed a loss budget model for the buy and hold portfolios. The loss budget metric is an important parameter to assess the possible losses in the portfolio that result from default, impairments and downgrades
- Formulated a mathematical approach for performance metric based on trading in continuous time and success rate of beating a fixed income benchmark

**CUNY Queens College**, New York, NY  
Computer Science Department  
*Adjunct Assistant Professor*

6/2006-01/31/2013

- Teaching course in computer science and department of mathematics:
  - Introduction to Excel spreadsheets
  - Numerical Analysis
  - Non-Euclidean Geometry
  - Introduction to Utility theory and financial economics

**Bank of America (Countrywide)**, Calabasas CA  
*Senior Software Consultant*

11/2005- 06/2006

- Support quantitative financial application for MBS securitization
- Generated Rate Sheets to negotiate prices for subprime mortgage pools with Countrywide trading counter-parties
- Upgraded a loss coverage model application used in rating and mortgage pools and subprime bonds
- Enhanced the securitization model used by Countrywide capital markets to generate bond sizes and subprime bond attachments and detachments point

**Standard & Poor Corporate Value Consulting**, San Francisco CA  
*Valuation Consultant*

11/2004-11/2005

- Evaluated Capital Structure and Merger Acquisition for financial reporting
- Priced Bond Portfolios using tree implementation of Hull White interest rate models
- Estimated Contingent Notes Valuation using binomial, trinomial trees and finite differences
- Appraised employee stock options using simulation techniques
- Applied option based methods to value power contracts
- Invented and applied a binomial tree approach to Capital Structure valuation

**Irise, Inc.**, El Segundo, CA  
*Senior Software Engineer*

2/2002 - 3/2003

- Designed and maintained a desktop/web application that provided prototype generation and CRM solutions using APACHE tomcat server, IBM Visual Age development environment, GUI with Java Swing components, ANT, and wizard framework.

**Webango, Inc.**, Santa Clara, CA  
*Senior Software Engineer*

6/2000 – 11/2001

- Regularly applied Java, JSP, Together Soft, EJB, DHTML, HTML, JavaScript, XML, and GUI and Servlet development to create automated Request for Proposal (RFP) and contracting solutions.

**Unigraphics Solutions, Inc.**, Cypress, CA  
*Software Engineer*

5/1999 - 6/2000

- Created UI tools, including a solid to solid intersection UI module and its applications for a mechanical CAD product using C/C++, UNIX, SGI, and Java.

**Parametric Technology Corp.**, Waltham, MA  
*Software Engineer, Geometry Department*

6/1998 – 5/1999

- Produced geometric modeling features of Pro/Engineer, a mechanical CAD product and supported and enhanced Surface/Surface and Curve/Surface intersections. Used Sun Solaris, C, UNIX.

## **TEACHING EXPERIENCE**

**Florida State University**, Tallahassee

1996 - 1998

*Visiting Assistant Professor, Math Department*

- Taught Calculus, Engineering Math and Discrete Math.

**University of California**, Irvine, CA

1994 - 1996

*Visiting Assistant Professor, Math Department*

- Taught Calculus, Group Theory and Linear Algebra.

## **SKILLS**

- Programming Languages and systems: C#, C++, Java, R, Excel and Bloomberg add ins, Lehman Point, BRS Green package
- Spoken Languages: Fluent in English , Hebrew, Russian
- Published numerous papers on complex analysis and mathematical concepts – available upon request.
- Papers on asset pricing as part of my thesis in Finance - available upon request.
- Guest speaker at various mathematical and financial conferences – available upon request