Workshop Registration 12:45-1:15  
Welcome 1:15-1:30 PM - Laurie Derechin and Rina Ashkenazi

**Session 1: Risk Taxonomy  1:30-3:00 PM**  
*Instructors: Bob Mark, Gary Hatfield, Denis Guenthner, Carmel Nadav*  

An Introduction to the Main Categories of Risk in Banking and Insurance  
*catching the next crisis – from risk taxonomy & challenges to ERM & data applications – Bob Mark, Carmel Nadav*  

- Credit Risk, Operational Risk, Business Risk, Reputational Risk, Systemic Risk (Post Crisis), Liquidity Risk (Trading and Funding), Strategic Risk and Data Analytics  

**Coffee Break 3:00-3:30 PM**

**Session 2: Modeling Challenges in Regulation 3:30-5:00 PM**  
*Instructors: Lourenco Miranda and Emily Carlson*  

**Banking: From Basel I to Basel II to Basel III**  
In 1988, in response to an increasing number of corporate defaults, the Basel Committee of Banking Supervision introduced a capital measurement system commonly referred to as the Basel Capital Accord (Basel I). In June 1999, the Committee proposed a revised Capital Adequacy Framework that consists of three pillars: minimum capital requirements; supervisory review of an institution's internal assessment process and capital adequacy; and effective use of disclosure to strengthen market discipline as a complement to supervisory efforts. This Framework was established in 2006 in its final form, popularly known as Basel II. In response to the financial crisis of 2008, the Committee has developed a reform program to address both firm-specific and broader, systemic risks that has been referred to as Basel III. During this session we will investigate the story behind the accords and how they changed the profile of the Banking System for good.

**Insurance: Solvency II and ORSA** - In 2012, the National Association of Insurance Commissioners (NAIC) passed the Own Risk and Solvency Assessment Model Act (ORSA), which will be a major change for US Insurance Regulation. This session will (a) explain the requirements of ORSA, including how the new requirements differ from current Statutory Risk Based Capital (RBC), and (b) share some feedback from the NAIC's ORSA Pilot in 2012. The session will also include perspectives on increasing Rating Agency focus on Enterprise Risk Management (ERM) for insurers.

**Session 3: Mock Risk Committee Overview and Assignments 5:00-6:00PM**  
*Advisors: Bob Mark, Koffi Anato, Paul Meier, Carmel Nadav*  
5:00-5:30 - The Advisors will give an overview of the Case and Outline the Assignment for Sunday's Mock Risk Committee Activity  
5:30-6:00 Assigned Teams will do a brief team introduction and select team leader/presenters

**Reception in the Mississippi Room at Coffman Union 6:15-9:00PM**  
Keynote Speaker – Leslie Chapman, Chief Risk Officer, Securian Financial Group  
Appetizers and Dessert
Saturday 7/20/13

Session 1: Value-at-Risk and Other Modeling Challenges in Banking and Insurance  9:00-10:30 AM
Instructors: Sandra Paterlini, David Sandberg
Value-at-Risk is the key risk-measure identified by regulators in banking and insurance. However, this measure has been criticized as it can destabilize an economy and induce crashes. Other risk measures, such as Expected Shortfall, have been proposed to address the issue with Value-at-Risk. Pros and cons will then be discussed:
- VaR Definition, Subadditivity, Estimation, Properties and Pitfalls
- Alternative risk measures: Expected Shortfall, CoVaR & Others
- Model Validation and Stress Testing

Coffee Break 10:30 -11:00 AM

Session 2: Financial Risk (Market & Credit Risk) and the Nature of Financial Risk  11:00-12:30 PM
Instructors: Lourenco Miranda, Gary Nan Tie
Main methodological challenges and practical implications
- Market Risk and Counterparty Credit Risk – Banking (Lourenco Miranda)
  - The relevance of Over the Counter (OTC) derivatives during the financial crisis of 2008 has put Counterparty Credit Risk (CCR) in the spotlight. In this session we will set the stage that will enable us to investigate the causes, the measurement framework and how to put a price tag to CCR and the implications that this price tag may bring.
- Financial Risk: Metaphors, Models, and Theories-Banking and Insurance Decision making in the face of uncertainty. (Gary Nan Tie)

Lunch – 12:30-1:30 PM

Session 3: Insurance Risk  1:30-3:00 PM
Instructors: Gary Hatfield, Denis Guenthner
Risk Capital in Life Insurance
- Economic Capital Modeling and Long Term Projections: US life insurers need to track and manage risk capital from multiple perspectives: US Statutory RBC, Rating Agency Capital & Internal Economic Capital models. We will describe these as well the kind of modeling required to calculate them.

Risk and Enterprise Risk Management (ERM) in Property Casualty Insurance
- After a brief review of major risks facing P/C insurance companies, we’ll discuss different risk metrics that reflect company risk appetite and tolerance. We’ll discuss ERM concepts and basic approaches to model risk correlation and/or diversification, with an example of asset and liability cash flow (liquidity) risk.

Coffee Break  3:00-3:30 PM

Session 4: Industry Panel  3:30-5:00 PM Moderators Bob Mark and Sandra Paterlini
The Impact of New Regulation on Business – Challenges & Open Issues
- Suzette Huovinen Second VP and ERM Actuary, Securian Financial Group
- David Sandberg – VP/Corporate Actuary, Allianz Past President, American Academy Actuaries
- Denis Guenthner – VP/Actuary- Enterprise Risk Management, Travelers
- Lourenco Miranda – VP Quantitative Analytics, US Bank Treasury Department

Dinner – Math Lounge and Outside Patio 5:30-7:00 PM
Sunday 7/21/13

**Session 1: Quantitative Modeling of Operational Risk: 9:00-10:30 AM**  
**Instructors: Sandra Paterlini and Lourenco Miranda**  
Operational risk has attracted increasing attention from regulators, practitioners and researchers, as operational losses indicate there might be related systemic impact. Quantitative modeling of Operational risk is extremely challenging due to the scarce and small dataset available, the presence of heterogeneous and extreme losses and the lack of a convincing modeling framework. Such aspects and the main modeling challenges will be discussed including:

- Where do we stand?
- Operational Risk Modeling Challenges
  - Zero inflation, Extreme Losses - Robust Estimation
  - Dependence Modeling and Tail Dependence
- Data Sharing, data aggregation and the need of collaborative "joint" efforts

**Coffee Break 10:30 – 11:00 AM**

**Session 2: The View from Both Sides – Credit Risk and Stress Testing  11:00 AM-12:00 PM**  
**Instructor – Mike Szwejbka**

- Stress Testing vs. Economic Capital vs. Regulatory Capital
- Stress Testing models (a) Federal Reserve Models (b)Individual Banks’ Models
- Review of published results from the Federal Reserve’s last Comprehensive Capital Analysis Review (CCAR) and the Dodd Frank Act Stress Test (DFAST)

**Lunch 12:00-1:00 PM**

**Session 3: Mock Risk Committee 1:00-3:15PM**  
**Mock Committee Members: Bob Mark, Koffi Anato, Paul Meier, Carmel Nadav**

1:00-2:00 PM  Symposium break out teams will spend an hour finalizing their presentations to the Mock Risk Committee which were assigned on Friday afternoon 7/19. The assignment is based on the Harvard Business School Case LTCM Ltd which was sent to all registered attendees.

2:00-3:15 PM  Teams present to Risk Committee

**Evaluations and Send Off 3:15-3:30PM**  
**Rina Ashkenazi and Laurie Derechin**