Research Projects in Actuarial Science
Faculty: Ying Wang

A. Project: Pricing and hedging of insurances and derivatives on art products
Participants of this project is going to have the first meeting to decide which sub-project you are going to take part in, and we will continue to investigate Project 3 once the preparation for first two projects has been completed on Oct. 16.

Total number of students: 9-15.

Project 1. ERM analysis for art products
a. Study enterprise risk management (Sep. 11-Oct. 16)
b. Study how to model each kind of risk: distributions and models (Sep. 11-Oct. 16)
c. Analyze the risk structure of art products by different classification (Oct. 17-Nov. 26)

Total number of students: 3-5.

Project 2. Modeling for art and related financial products
a. Study pricing/hedging models by Black-Scholes (Sep. 11-Oct. 16)
b. Review modeling of:
   - Pricing of art products (Sep. 11-Oct. 16)
   - Pricing of insurance on art products (Sep. 11-Oct. 16)
   - Pricing of derivatives on art products (Sep. 11-Oct. 16)
   - Hedging with derivatives on art products (Sep. 11-Oct. 16)
c. Simulation based on these models (Oct. 17-Nov. 26)

Total number of students: 3-5.

Project 3. Model new insurances and derivatives on art products
Create new products

Total number of students: 3-5.

Requirements for project 2 and 3:
 a. You may have taken Math 476
 b. Ability to write codes for simulation
 c. One of the participants can use Latex