

Cherry Bud Workshop 2005

The 21st Century COE Program at Keio

**Integrative Mathematical
Sciences**



The 21st Century COE Program at Keio

❖ 2002 - 2006

❖ Bioscience, Chemistry, Electronics, Psychology, Interdisciplinary (Next Generation Media)

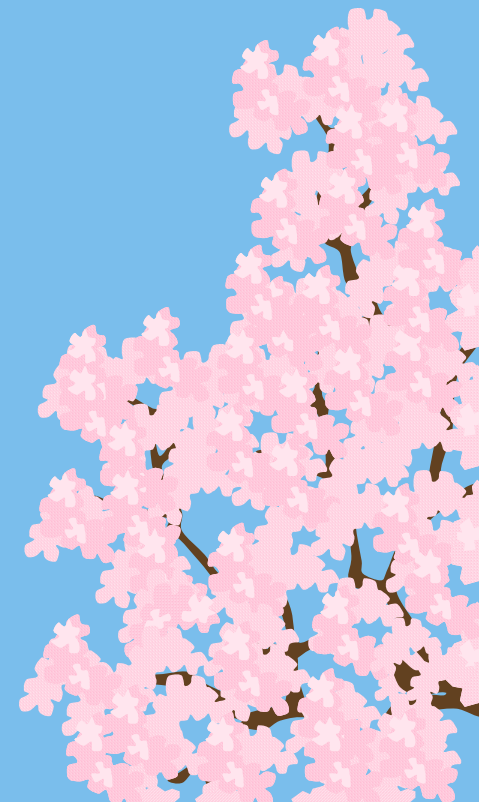
❖ 2003 - 2007

❖ Medical Sciences (Cancer, Stem Cell), Mathematical Sciences, Mechanics, Social Sciences (Market Quality, Politics, Human Security)



Integrative Mathematical Sciences: Progress In Mathematics Motivated by Natural and Social Phenomena

- ❖ Key Words
 - ❖ Non-Commutative
 - ❖ Non-Commutative Geometry
 - ❖ Mathematical Modeling
 - ❖ Data Science



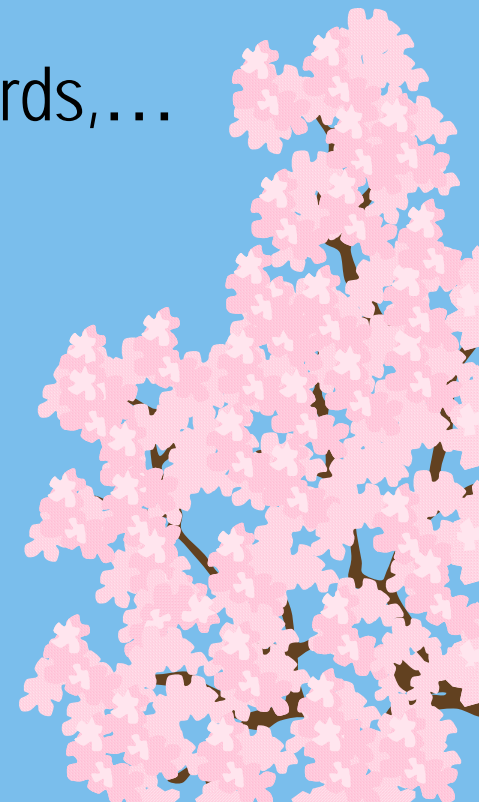
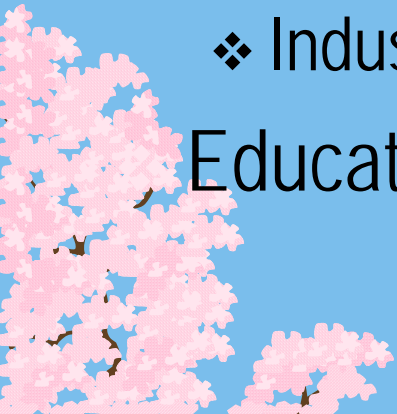
Cherry Bud Workshop

- ❖ Cherry Bud Workshop
 - ❖ 21-23, March 2004
 - ❖ Analysis of Natural and Social Phenomena: Data Science and System Reduction
- ❖ Cherry Bud Workshop 2005
 - ❖ 23-26, February 2005
 - ❖ Quantitative Risk Management: Theory and Practice



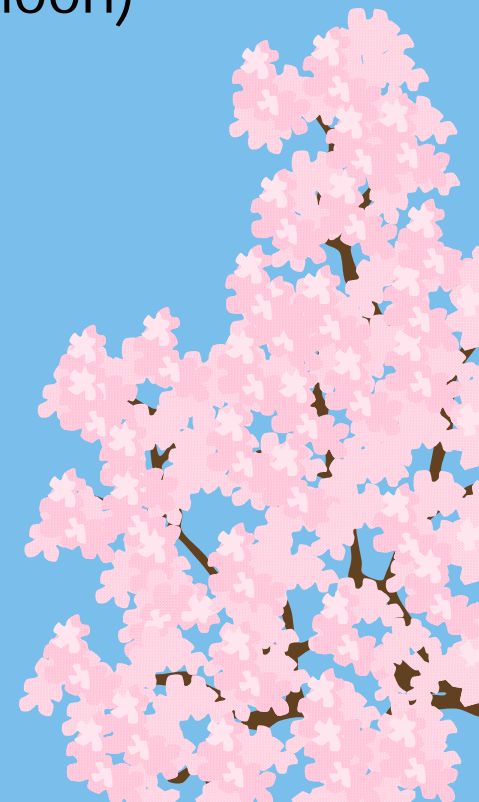
The aim of this workshop

- ❖ New Horizon: *Quantitative* Risk Management
 - ❖ Probability Theory
 - ❖ Data Science (Data Driven Modeling)
 - ❖ Insurance, Finance, Banking, Natural Hazards,...
- ❖ Stronger links
 - ❖ International Community of Academia
 - ❖ Industry
 - ❖ Education



Organization of This Workshop

- ❖ Lectures by Paul Embrechts (23-24 February)
 - ❖ Welcome Party (23 February)
 - ❖ Excursion to Kamakura (24 February Afternoon)
- ❖ Workshop (25-26 February)
 - ❖ 16 invited talks
 - ❖ Workshop Dinner (25 February)



Lectures by Paul

- ❖ 9.00 - 9.30 : Registration
- ❖ 9.30 -10.00: Opening
- ❖ 10.30 -11.00: Coffee/tea Break
- ❖ Lectures by Paul Embrechts
- ❖ 11.00 -12.30: “Quantitative Risk Management. Concepts, Techniques and Tools”
- ❖ 12.30 - 13:30: Lunch Time
- ❖ 13.30 -15.00: “Quantitative Risk Management . Concepts, Techniques and Tools”
(Continuation)
- ❖ 15.00 – 15.30: Coffee/tea Break
- ❖ 15:30 – 17:00: “Dynamic Dependence Structures for Multivariate High-Frequency Data in Finance”
- ❖ 18.00-20.00 Welcome Party (Hotel The Ellycy)
- ❖ 9.00 - 10.00: “Multivariate Extremes and Market Risk Senarios”
- ❖ 10.00-10.30: Coffee/tea Break
- ❖ 10.30-11.30: “Quantifying Regulatory Capital for Operational Risk: Utopia or Not?”
- ❖ 11.30- : Half Day Excursion to Kamakura

Workshop 1

- ❖ 25 February
- ❖ 9:00-9:45 “Weather Extremes and Climate Risk: Stochastic Modeling of Hurricane Damage” Rick Katz (National Center for Atmospheric Research , USA)
- ❖ 9.45-10.30 “Risk Forecasting Models for New Zealand Hydro catchment Inflows” David Harte(SRA, New Zealand), Mark Pickup(Electricity Commission, New Zealand) and Peter Thomson (SRA, New Zealand)
- ❖ 10.30-11.00: Coffee/tea Break
- ❖ 11.00-11.45: “Quantification of Earthquake Risk and Application for Insurance Portfolio Management” Yoshiaki Ogane and Shumpei Okada (Tokio Marine & Nichido Fire Insurance Co., Ltd.)
- ❖ 11.45-12.30: “Insurance Risk Management for Catastrophic Events” Dietmar Pfeifer (University of Oldenburg, Germany)
- ❖ 12.30-13.30: Lunch
- ❖ 13.30-14.15: “Comparative Risk Assessment for Earthquakes and Other Hazards” Warwick Smith (Institute of Geological & Nuclear Sciences, New Zealand)
- ❖ 14.15-15.00: “Quantitative Risk Management, Practice of Japanese Non-life Insurance Company” Yasuhiro Sadayuki and Yasuro Ohtani (Sompo Japan Insurance Inc.)
- ❖ 15.00-15.30: Coffee/tea Break
- ❖ 15.30-16.15: “Robustness Aspects in Risk Management” Elvezio Ronchetti (University of Geneva, Switzerland)
- ❖ 16.15-17.00: “Financial Risk Control: Theory and Practice” Toshifumi Ikemori and Daisuke Nakazato (Mizuho-DL Financial Technology and Waseda Univ. Graduate School of Finance, Accounting & Law)
- ❖ 18.00-20.00: Workshop Dinner (Hotel The Ellcy)

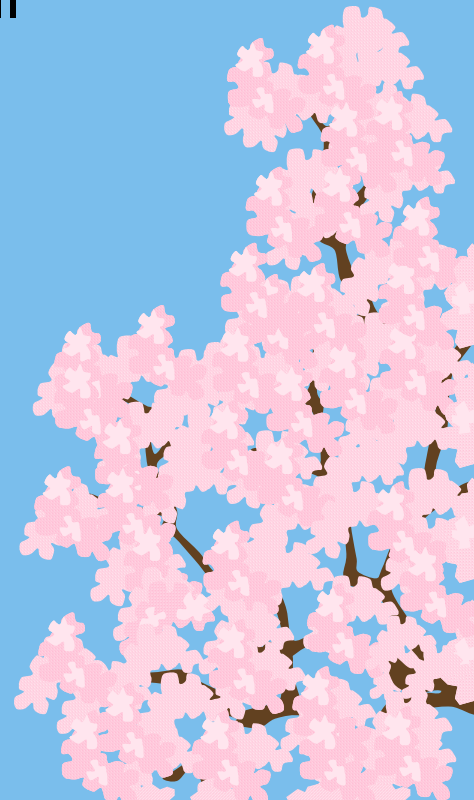
Workshop 2

26 February 2005

- ❖ 9.00-9.45: “Correlation and Dependence” Kunihiro Baba (Keio University)
- ❖ 9.45-10.30: “An Approach to the Extreme Value Distribution of Non-stationary Process” Hang Choi (University of Tokyo)
- ❖ 10.30-11.00: Coffee/tea Break
- ❖ 11.00-11.45 “Dependence Order of Multivariate Extreme Value Distributions and its Applications” Masaaki Sibuya (Takachiho University)
- ❖ 11.45-12.30: “Rare Event Simulation with Heavy Tails” Soren Asmussen (University of Aarhus, Denmark)
- ❖ 12.30-13.30: Lunch
- ❖ 13.30-14.15: “A Large Scale Basel II Compliant Application of Operational Risk” John Donnelly (CSIRO, Australia)
- ❖ 14:14-15:00 “Operational Risk Modelling and Quantification” Pavel Shevshenko (CSIRO, Australia)
- ❖ 15.00-15.30: Coffee/tea Break
- ❖ 15.30-16.15: “Discussion on Structural Default Risk Modeling for Implementation” Hidetoshi Nakagawa(Tokyo Institute of Technology)
- ❖ 16.15-17.00: “Models for Dependent Credit Risks and Their Calibration” Uwe Schmock (Technical University of Vienna, Austria)
- 17.00-17.30: Closing

Proceedings

- ❖ Presentation files are accessible through the web page; <http://coe.math.keio.ac.jp>
- ❖ Printed Proceedings will be shipped to all participants with the CD



Organising Committee

- ❖ Ritei Shibata (Convenor) Keio University, Japan, and Member of the COE programme.
- ❖ Paul Embrechts Department of Mathematics, ETH Zurich, Switzerland, and Member of the COE Advisory Board.
- ❖ Makoto Maejima Keio University, Japan, and Member of the COE programme.
- ❖ Peter Thomson Statistics Research Associates Ltd, New Zealand, and Member of the COE Advisory Board.

miscellaneous

Coffee/tea will be served in the morning and in the afternoon at the cafeteria La Poire on the ground floor of the building.

You may enjoy a nice view, including Mt Fuji which is the highest mountain in Japan if it is fine, from the Forum on the 7th floor of the main building on the opposite side of the entrance foyer. This room is normally open for everybody.

You can connect your machine through the jack provided for each seat in the room

- ❖ 14-203 on the opposite side of the Workshop room. Please make sure that your machine is clean of viruses and an effective anti virus software is installed and active. We also provide 2 machines for your convenience just outside the room.

A half day excursion to Kamakura starts from the Workshop venue just after the morning session around 11.30 on Thursday. We recommend that you wear walking shoes since we will walk on a hill for one hour and half.

You will need to buy your own lunch at the cafeteria or one of the local restaurants.