



SOCIETY OF ACTUARIES

Article from:

# Risk Management

July 2006 – Issue 8

# Actuary in the News...

## The SunGard/IAFE Financial Engineer of 2005: Dr. Phelim P. Boyle

by Ken Seng Tan

**A**nd the award goes to Dr. Phelim Boyle... It was announced on Dec. 5, 2005 that Dr. Boyle was named as the “2005 SunGard/IAFE Financial Engineer of the Year”—an award which is so prestigious that it may be regarded as the Nobel Prize in Finance. In fact, two of the past recipients were also Nobel Laureates (see shaded box on page 21). This award acknowledges Dr. Boyle’s lifetime contributions and accomplishments in the field of financial engineering. Not only is Dr. Boyle a financial engineer and a professor at the University of Waterloo, he is also an actuary—FIA, FCIA, Hon. FSAI. While Dr. Boyle is best known for pioneering the Monte Carlo methods in quantitative finance, he has

also made significant contributions in other areas including actuarial science and insurance.

His research is creative, groundbreaking and always ahead of his time. For example, he was one of the first actuaries to advocate the use of the stochastic interest rate models in insurance modeling, and the use of financing engineering tools in actuarial science in pricing and risk management of complex long-term embedded options in insurance contracts. In 1977, his paper on “Rate of Return as Random Variables” received the Best Paper Award for the papers published in the *Journal of Risk and Insurance*. His research paper entitled “Immunization under Stochastic Models of the Term Structure” won the inaugural Halmsted Prize (1978). A partial list of Dr. Boyle’s actuarial-related awards and achievements includes:

- 1989: INA (Istituto Nazionale delle Assicurazioni) Award, awarded by the Italian Academy of Science for distinguished research in the insurance field.
- 1995: Centennial Gold Medal for Outstanding Scientific Achievements within the Actuarial Profession, awarded by the International Actuarial Association.
- 1996-97 F.M. Redington Prize: for the paper on “Quasi-Monte Carlo Methods in Numerical Finance,” co-authored with Corwin Joy and Ken Seng Tan. This paper was also selected as one of the seven most important contributions in investment research in the last 50 years, as judged by the SOA Investment Council.



*The photograph above was taken on Feb. 2, 2006 (United Nations, New York City) at the award ceremony dinner hosted by the SunGard and International Association of Financial Engineers (IAFE).*

**Left to right:** Dr. David Li, Dr. Phelim Boyle, Dr. Dawei Li, Dr. Robert Merton

## Past Winners of the Financial Engineer of the Year Award (and Affiliation)

1993	Dr. Robert Merton - Harvard University
1994	Dr. Fischer Black (deceased)
1995	Dr. Mark Rubenstein – University of California
1996	Dr. Stephen Ross – MIT
1997	Dr. Robert Jarrow – Cornell University
1998	Dr. John Cox – MIT
1999	Dr. John Hull – University of Toronto
2000	Dr. Emanuel Derman – Columbia University
2001	Dr. Andrew Lo – MIT
2002	Dr. Jonathan Ingersoll – Yale University
2003	Dr. Darrell Duffie – Stanford University
2004	Dr. Oldrich Alfons Vasicek – Moody's KMV

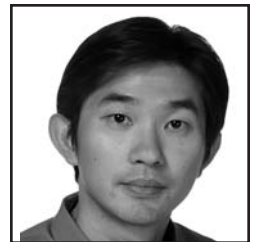
### Lifetime Achievement

– Dr. Myron Scholes – Oak Hill Platinum Partners

- The Annual Prize for the best paper published in *NAAJ*:
  - 1997 on “Optimal Portfolio Selection with Transaction Costs,” co-authored with Sheldon Lin.
  - 2001 on “Valuation of the Reset Options Embedded in Some Equity-Linked Insurance Products,” co-authored with Adam Kolkiewicz and Ken Seng Tan.
  - 2004: Bob Alting von Geusau Prize for the best paper in *ASTIN Bulletin* “Guaranteed Annuity Options,” co-authored with Mary Hardy.

For more information on Dr. Boyle’s Financial Engineer of the Year award see the *Financial Engineering News* March/April 2006, issue 48 ([http://www.fenews.com/fen48/one\\_time\\_articles/sungard-iafe/sungard-feoy.html](http://www.fenews.com/fen48/one_time_articles/sungard-iafe/sungard-feoy.html) and [http://www.fenews.com/fen48/one\\_on\\_one/on\\_e\\_on\\_one.html](http://www.fenews.com/fen48/one_on_one/on_e_on_one.html)), *The Actuary* April/May 2006, volume 3, issue 2 (<http://www.soa.org/ccm/content/about-soa-member-directory/the-actuary-newsletter/april-2006/pioneers-an-interview-with-dr-phelim-boyle/>) or his acceptance speech from <http://www.iqfi.uwaterloo.ca/news.shtml>. ♦

In a speech in Dublin on March 22, 2006 when he was made the 7th Honorary Fellow of the Society of Actuaries in Ireland, Dr. Boyle stated, “Financial engineers are very strong on mathematical techniques but actuaries – the oldest risk management profession in the world - have some advantages in terms of quality control in technical competencies, professionalism and discipline. The question is how can we combine the best of both worlds?”



Ken Seng Tan, ASA, is Canada Research Chair professor of University of Waterloo, Canada, and Cheung Kong Scholar of China Institute for Actuarial Science, Central University of Finance and Economics, Beijing, China. He can be reached at [kstan@uwaterloo.ca](mailto:kstan@uwaterloo.ca).