



14TH December 2016

**learn@AP EXTERNAL SPEAKER SERIES
NEW MATHEMATICAL CONCEPTS FOR
ACTUARIAL & RISK MANAGEMENT**

There are an increasing number of new statistical and mathematical techniques around that are not covered in the standard actuarial syllabus. New ways of using well established tools have also been developed. This course gives an introduction to these new topics. The emphasis is on:

- (i) understanding where and why the new tools are needed;
- (ii) how the mathematics is used and potentially misused; and
- (iii) the strengths and weaknesses of the methods.

The course is an initiation to the concepts – formulas are eschewed in favour of understanding. Hands on computer exercises can be undertaken throughout the day.

The topics covered include Copulas, Extreme Value Theory, Volatility Modelling, Stochastic Calculus, Stochastic Bootstrapping Methods and Monte Carlo Simulation. These techniques will also come in handy as we head towards RBC2.

Spreadsheets will be distributed with user modifiable applications of all topics. These spreadsheets will allow participants to experiment with applications during the workshop and afterwards. The spreadsheets will not be adapted for speed, but to allow participants to gain maximum insight into how techniques are implemented, and the strengths and weaknesses of the processes.



**Led by Dr Frank Ashe,
experienced ERM
practitioner and
course leader**

Practical & relevant

**Hands on,
interactive & fun**

CPD opportunity

**Networking
opportunity with
fellow professionals**

Who should attend?

Actuarial & risk management professionals wanting an introduction to these new mathematical concepts.

Suitable also for managers of quantitative staff, risk committee members, auditors and regulators.

COURSE SCHEDULE

| | |
|--------|--|
| 830am | Registration |
| 900am | Introduction Copulas <ul style="list-style-type: none">How do we move beyond correlation to describe relationships. |
| 1030am | Coffee Break |
| 1100am | Extreme Value Theory <ul style="list-style-type: none">What goes on in the tails of the distribution? Modelling Volatility <ul style="list-style-type: none">GARCH processes, asymmetrical volatility, illiquid assets. |
| 1230am | Lunch |
| 130am | Stochastic Calculus <ul style="list-style-type: none">Ito's lemma and its use in product pricing. Stochastic Bootstrap Methods <ul style="list-style-type: none">Estimation of parameters and distribution of actuarial values. |
| 300pm | Tea Break |
| 330pm | Monte Carlo Simulation <ul style="list-style-type: none">How do we use the above methods in Dynamic Financial Analysis Wrap Up |
| 500pm | End |

COURSE LEADER

DR FRANK ASHE

OWNER

QUANTITATIVE STRATEGIES
PTY LTD



Dr Frank Ashe has a consulting practice specialising in risk management, investments and behavioural finance. Risk management covers the gamut from technical matters in option risk, to strategy, to comparative corporate governance and risk culture. He maintains a part-time Associate Professorship at the Macquarie University Applied Finance Centre where he spent 2002 to 2006 as a full-time Associate Professor.

Dr Ashe has worked in consultancies, insurers, investment management firms, bond dealers, and financial software houses in Australia and Canada. His 30+ years of practical experience have been predominantly in the measurement and management of financial risk and return, with an emphasis on asset-liability management and developing risk measurement and management tools for novel situations.

Dr Ashe has been presenting the 2-day course required for CERA qualification by the Actuaries Institute (Australia) since 2010. He is a regular presenter at industry seminars and colloquia through Asia, teaches financial risk management in East Asia and was President of the Australian Q-Group from 2002 to 2011.

Dr Ashe obtained his PhD in Operations Research from the University of New South Wales.

Venue:

Scoop Café, 8th Floor Menara Dion
27 Jalan Sultan Ismail, 50250 Kuala Lumpur
Coordinate: 3.1516255, 101.7095835
+603 2742 7750

Workshop Fees:

The fees for the workshop is MYR 2200 per participant, with an additional 6% GST applicable. Lunch and refreshments are included.

Enquiries:

Nicholas Yeo, FIA, FASM, FSA
Chief | learn@AP
Nicholas.yeo@actuarialpartners.com
+6012 502 3566

REGISTRATION FORM

Return the completed form via email to
learn@actuarialpartners.com
before the closing registration date **7th December 2016**

Participant Details:

Name:

Organisation:

Job Title:

Email Address:

Telephone Contact:

Address:

Payment Method:

- Telegraphic / Wire Transfer to:
Actuarial Partners Consulting Sdn Bhd
Standard Chartered Bank Malaysia Berhad
No. 30 Jalan Sultan Ismail
50250 Kuala Lumpur Malaysia
Account No: 312-1-0088332-8
Swift Code: SCBLMYKXXXX
- Cheque Payment to:
Actuarial Partners Consulting Sdn Bhd
Suite 17.02 Kenanga International
Jalan Sultan Ismail
50250 Kuala Lumpur Malaysia

Any special dietary or other requirements:

- Vegetarian meals
- Others, please specify. We will try our best to meet your request.

Registration is on a first come first serve basis, the capacity of this workshop is 24 participants. We will issue an invoice upon receipt of your registration form and payment shall be due before the workshop. We shall reserve the rights to decline entry for registered but unpaid participants. Should the workshop be cancelled for any unforeseen circumstances, we shall endeavor to reschedule the workshop or refund the workshop fees.

For cancellation in writing made at least 5 working days before the closing registration date, the workshop fees may be refunded or the entire amount may be used as credit for any future learn@AP events. Substitutes may be nominated.