

UCT hosts Financial Mathematics Team Challenge and wins

The fourth annual Financial Mathematics Team Challenge (FMTC), held at the University of Cape Town, brought students from across the world to participate in the highlight of the academic financial mathematics calendar.



From left: Professor Rodrigo Targino (FGV Brazil), Yann Guguen (UCL), Danielle Crawford (UCT), Cian Cullinan (UCT), Ralph Rudd (UCT)

The UCT-led team won the challenge, which attracted students and mentors in financial and insurance mathematics from University College London, the University of Technology Sydney, ETH Zürich, the University of Vienna, McMaster University and the Universidade Federal do Rio de Janeiro. They were divided into teams, presented with problems and judged on their solution at the end of July 2017.

The winning team, led by PhD student Ralph Rudd from the University of Cape Town and mentored by Adjunct Professor Rodrigo Targino from FGV institution in Brazil, was announced at the end of an intense 10 days of work on real-world financial modelling problems.

"The first challenge was held in 2014 and was a success," says Professor David Taylor, who heads up the African Institute of Financial Markets and Risk Management (AIFMRM) and the African Collaboration for Quantitative Finance and Risk Research (ACQuFRR) in the Faculty of Commerce at UCT. ACQuFRR and University College London (UCL) jointly host the annual challenge.

"This is an annual event, held during the June/July break and there is talk of having a similar South American version," says Professor Taylor. "Apart from students and academics getting to know each other and collaborating on financial mathematics problems, the challenge also prepares students for corporate scenarios they will encounter in industry once they enter the business world."

The 2017 winning team came up with a solution on risk parity, with a real application for investment firms building portfolios for investors, in which risk is allocated in a different way and presents investors with new opportunities to offer to their clients.

"The judging was narrow," says Rudd. "There was such a high level of competition but I like to think that what gave us the edge was that our presentation was very polished and solid."

Professor Taylor says the challenge mimics the environment that industry professionals face every day. "One of the things we have noticed over the past two years is that employers are starting to look for employees who have participated in the team challenge. The kind of environment the challenge mimics is close to real life, where there is also often not a lot of time to solve difficult problems."

Glen Point Capital LLP, a London-based hedge fund, contributed one of the research problems as well as partial sponsorship of the 2017 challenge.

"The world is becoming more and more mathematical. Initiatives like the challenge not only help to develop links with international postgraduate students and academics in the field, but also allow students and prospective professionals to flex their mathematical and financial muscles," concludes Professor Taylor.

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