Dr Conrad Beyers, the current Barclays Africa chair in Actuarial Science at the University of Pretoria. He was also awarded the Actuarial Society of South Africa (ASSA) RGA best published paper for his paper, with co-authors Professor Pieter de Villiers and Dr Joel Dabrowski called Systemic Banking Crisis Early Warning Systems. Dr Conrad Beyers is also a Chartered Enterprise Risk Actuary and holds a PHD (Mathematics) degree from the University of Pretoria. As part of a multidisciplinary group of researchers and postgraduate students at the University of Pretoria, Dr Conrad Beyers conducted research on various aspects of research related to financial stability. The multidisciplinary collaboration is bringing together expertise from the fields of Actuarial Science, Banking Law, Data Science, Economics and Financial Mathematics among others. Further detail on the group’s and speaker’s work includes include research on:

- Early Warning Systems;
- Systemically important financial institutions (SIFI's) - local and international legal and regulatory framework;
- Stress testing financial systems;
- The effect of financial network structure and regulatory intervention on the robustness to shocks;
- Asymptotic results for large heterogeneous financial networks;
- Developing macroeconomic models containing explicit models for the financial sector;
- Credit ratings research.

Professor Pieter de Villiers

Prof Pieter de Villiers is a professor at the University of Pretoria. He holds a Masters in Engineering degree from the University of Pretoria as well as a PhD in Information Engineering from the University of Cambridge, United Kingdom. He co-authored the article, Systemic Banking Crisis Early Warning Systems Using Dynamic Bayesian Networks which won the ASSA RGA Prize for best published paper in 2016. He also collaborates with Dr Beyers and First National Bank on the time varying and network topological aspects of systemic risk, credit risk, fraud and money laundering and we apply data science, pattern recognition and machine learning algorithms and methods to solve these problems. His areas
of interest include Intelligent systems, Data Fusion, Pattern Recognition and Machine Learning, Statistical Signal Processing, Bayesian modelling. In 2016, he was also awarded the Established Researcher Award, DPSS, CSIR. He has a Google h-index of 11

**Dr Joel Dabrowski**

Dr Joel Dabrowski is a member of the Commonwealth Scientific and Industrial Research Organisation (CSIRO). He holds a PhD in Engineering from the University of Pretoria. Over the year of 2015, he worked as a postdoctoral fellow between the Department of Actuarial Science and the Department of Electrical, Electronic, and Computer Engineering at the University of Pretoria. During this time, he took part in the research on applications of dynamic Bayesian networks as early warning systems for systemic banking crises. This resulted in him co-authoring the article, *Systemic Banking Crisis Early Warning Systems Using Dynamic Bayesian Networks* which won the ASSA RGA Prize for best published paper in 2016. He also has interests in machine learning, Bayesian modelling and time series analysis.