MATHEMATICS COLLOQUIUM

Department of Mathematics
Faculty of Science
University of Peradeniya

Index-based Insurance for Risk Management

Abstract

The insurance policies should be modified to endure increasingly volatile catastrophic weather events. We propose a natural disasters index (NDI) to forecast the degree of future risk and validate it through option pricing, risk budgeting, and stress testing. These financial instruments for hedging the intrinsic risk could forewarn the insurers and corporations to transfer insurance risk to capital market investors. Following the financial management principles in the NDI, we construct index-based insurance for crime in the United States and provide a basis for the securitization of insurance risk from certain crimes. Our index-based insurances intend to help investors envision risk exposure in our indices, gauge investment risk based on their desired risk level, and hedge strategies.

Dr. Thilini Vasana Mahanama
B.Sc.(Kelaniya), M.Sc., Ph.D. (Texas Tech, USA)

Dr. Thilini Mahanama is a lecturer at the Department of Industrial Management at the University of Kelaniya. She completed her Ph.D. in mathematics in 2021 at the Texas Tech University, USA under the supervision of Prof. Dimitri Vlochenkov and Prof. Zari Rachev. She has won numerous fellowships and research awards during her graduate studies, including Student and Early Career Funding Award and Women in Statistics and Science Scholarship. Her research interests are in Risk Analysis, Indexed-based Insurance, and Data Science.

Date: Thursday, 22nd of September 2022
Time: 12.00 noon – 1.00 p.m.
Venue: Mathematics Lecture Theatre

TO JOIN VIRTUALLY
Click here

Contacts: Dr. A.M.C.U.M. Athapattu | chathurikaa@sci.pdn.ac.lk | 077 9226491
Dr. K.M.N.M. Chathuranga | chathuranga.mudalige@sci.pdn.ac.lk | 071 9887144