Undergraduate Research Program in Actuarial Science
Department of Mathematics, University of Illinois at Urbana-Champaign

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Project: Pricing insurance product via principle of equivalent utility

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Abstract: Pioneered in Borch (1961), the principle of equivalent utility is one of the leading approaches to price insurance risks in a static setting. Motivated by the theory of indifference pricing in Hodges and Neuberger (1989) and Davis et al. (1993) in mathematical finance, the principle of equivalent utility in static setting was extended to price dynamic insurance risks in Ludkovski and Young (2008), Moore and Young (2003), Young (2003), and Young and Zariphopoulou (2002). The extension essentially allows an insured or an insurance company investing in the financial market before the realization of the insurance risk. This project aims to apply the principle of equivalent utility in dynamic setting to price different insurance products available in the market.

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