



Pacific Institute *for the*
Mathematical Sciences

PIMS - DISTINGUISHED VISITOR LECTURE DR. SANJIV R. DAS

Friday, November 15, 2019
Lecture: 9:00 am

Room: E2-165 EITC
University of Manitoba

GOALS-BASED WEALTH MANAGEMENT



Dr. Sanjiv Das

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Biography

Dr. Das has held faculty appointments as Associate Professor at Harvard Business School and UC Berkeley. He holds post-graduate degrees in Finance, Computer Science, an MBA from the Indian Institute of Management, B.Com in Accounting & Economics, and is also a Cost and Works Accountant. He is a senior editor of The Journal of Investment Management and co-editor of The Journal of Derivatives.

Prior to being an academic, he worked in the Asia-Pacific region as a Vice-President at Citibank. His current research interests include: the modeling of default risk, machine learning, social networks, derivatives pricing models, portfolio theory, and venture capital. He has published over eighty articles in academic journals, has won numerous awards for research and teaching, and wrote the book "Derivatives: Principles and Practice." He currently also serves as a Senior Fellow at the FDIC Center for Financial Research.

Abstract

We develop a dynamic programming methodology that seeks to maximize investor outcomes over multiple, potentially competing goals, even when financial resources are limited. Unlike Monte Carlo approaches currently in wide use in the wealth management industry, our approach uses investor preferences to dynamically make the optimal determination for fulfilling or not fulfilling each goal and for selecting the investor's investment portfolio. This can be computed quickly, even for numerous investor goals spread over different or concurrent time periods, where each goal may allow for partial fulfillment or be all-or-nothing. The probabilities of attaining each goal under the optimal scenario are also computed, so the investor can ensure the algorithm accurately reflects their preference for the relative importance of each of their goals. We also show how an alternate approach using Reinforcement Learning is able to solve this problem.

MORE DETAILS: [HTTPS://WWW.PIMS.MATH.CA/SCIENTIFIC-EVENT/191115-PUDVLSD](https://www.pims.math.ca/scientific-event/191115-pudvlsd)



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