

Management Science & Engineering Seminar



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Monday, May 19 at 3:00pm
Terman 217

Title: Some Asset Pricing Methods

Abstract: This partially tutorial talk will first present the important capital asset pricing method (CAPM), and then show how the projection theorem and its dual can modify it so that it is more reliable and more practical. For instance, it will be shown that this new method includes a rigorous version of the common procedure of pricing an asset by looking at closely comparable assets. Then it will be shown how this enhanced formulation can be used to establish prices in dynamic cases. For simplicity a binomial lattice approach will be used. The connection to optimal hedging will be presented together with a simple procedure for determining the resulting error variance. An example will illustrate the logic, the power, and yet the simplicity of this methodology.

Biography

David G. Luenberger received the B.S. degree from the California Institute of Technology and the M.S. and Ph.D. degrees from Stanford University, all in Electrical Engineering. Since 1963 he has been on the faculty of Stanford University. He helped found the Department of Engineering-Economic Systems, now merged to become the Department of Management Science and Engineering, where he is currently a professor. He served as department chairman, 1980-1991. He is author of six major textbooks covering optimization, economics, systems, investment theory, and information science, and has authored or co-authored over 80 technical papers. In 1971-2 he was technical assistant to the President's Science Advisor in Washington DC. Professor Luenberger is a Fellow of the Institute of Electric and Electronic Engineers and a member of the National Academy of Engineers. He was awarded the Bode Prize of the IEEE, the Oldenburger Medal of the ASME, and the Expository Writing Award of INFORMS. He has been a visiting professor at M.I.T. and at the Technical University of Denmark. Currently his research is focused in the area of Investment Science.

<http://www.stanford.edu/dept/MSandE//research/colloquium.html>