

Roberto Ley-Borrás

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Roberto Ley-Borrás has M.Sc. and Ph.D. degrees in Engineering-Economic Systems from Stanford University (California) with concentration in Decision Analysis, a M.Sc. in Industrial Engineering from Lehigh University (Pennsylvania) with concentration in Operations Research and a B.Sc. in Industrial Engineering from Orizaba Technological Institute (Mexico). At Stanford University he coordinated during four academic terms the Decision Analysis Seminar directed by Ronald A. Howard.

He was a full professor at Orizaba Technological Institute for over 20 years and founded the Decision Analysis concentration area of their Industrial Engineering graduate program. He was a member of the National System of Researchers of Mexico and served at numerous academic committees at the national level. He has been a visiting professor at Istituto Universitario di Studi Superiori di Pavia teaching the course Decision Analysis, and taught short decision analysis courses at Argentina and Spain. In addition, he has served in a number of positions in industry and the public sector.

Dr. Ley-Borrás has made a number of scholarly contributions in the fields of decision analysis, probabilistic forecasting and modeling of uncertainty. He has published in international journals and is the author of the books *Integral Decision Analysis* (Análisis de Decisiones Integral) and *Uncertainty and Risk Analysis for Decision Making* (Análisis de Incertidumbre y Riesgo para la Toma de Decisiones), each in its second edition and being used by universities and consulting firms in Latin America and Spain.

Currently he provides training and consulting services in decision analysis to firms and institutions. He has worked with universities, private businesses, the National Petroleum Institute (Mexico), the Electric Research Institute, Petróleos Mexicanos (Pemex) and the World Bank.

RESEARCH EXPERIENCE

Instituto Tecnológico de Orizaba. Mexico 1994-2005.

Development of the Reusable Decision Models approach that provides a more efficient analysis of families of decision situations, a method for measuring the amount of relevance (probabilistic dependence) among probabilistic nodes in influence diagrams, and a streamlined decision analysis method for consultants working with small firms, that increases the quality of the consulting service while keeping its cost low, among other products.

Stanford University. United States of America 1990-1994

Development of a probabilistic method based on Markovian models for forecasting conflict outcomes. The method was first in its class and successfully empirically tested.

Instituto Tecnológico de Orizaba. Mexico 1975-1984, 1986-1990.

Development of a simplified decision analysis process for business decisions, an interactive modeling software for sequential decisions and a pilot expert system for decision modeling, among other projects.

Consultoría en Decisiones. Mexico 2006-to date

Development of an integral process for decision analysis that is efficient and comprehensive (Integral Decision Analysis), an approach for generating and selecting decision situations (a key step in decision analysis), and an approach for assessing the quality of the decision analysis process before the decision is implemented.