

Dr. Juan M. Huerta-Tolis
juan.huerta@usa.net

Dr. Huerta is an experienced systems and control engineer who for over 30 years has studied the dynamics of economic, social, political and environmental systems. During his career he has developed methods to design sustainable policies for ecosystems, populations, natural resources, and energy and pollution control. He has built the following models:

- **FORECASTS**, is a world Systems Dynamics (SD) model developed for the Joint Chiefs of Staff, US Department of Defense to examine long-term, world-wide problems of national relevance for the US.
- **Prospective Mexico (ProMex®)** is a SD model of Mexico created to analyze long-term policies of population, education and labor force. **ProMex** was utilized to generate four scenarios of Mexico's future, for the study **Mexico 20/20**, published by the Reforma newspaper. A 2015 analysis has shown that the scenarios of this study created more than 12 years ago resemble with high accuracy the evolving reality of the country.
- **ProEstado-MAUA®** is a pioneer SD application to model Integrated Water Resources and their Management (also known as IWRM) in watersheds. A version of **ProEstado-MAUA®** for the State of Guanajuato has been used to elaborate its 30-year long water program.

Dr. Huerta has been a consultant to the Joint Chiefs of Staff, the U.S. Department of Defense; U.S. Department of Agriculture; OPEC; UNESCO; the Offices of the Governors of the States of Guanajuato and Aguascalientes; the Water Resources Commission of Guanajuato; the Federal Water Commission of Mexico and the Mexican Institute of Water Technology.

He has lectured in the Department of Electrical and Computer Sciences at Northeastern University, Boston and in the graduate program of the School of Engineering at the Instituto Tecnológico de Monterrey, México.