

“Practical applications of System Dynamics: An Engineering Perspective”

Juan Martín Garcia

Director of the System Dynamics Chair, La Salle, Ramon Llull University, Barcelona, Spain

Abstract of Conference

After almost 50 years of its invention within the engineering profession, system dynamics has become a very useful tool to the engineer. Illustrative examples of practical applications of system dynamics will be presented. The relevance of system dynamics will be discussed within the context of sustainable development.

Topics Covered in Workshop

System Thinking: The workshop offers the participant an introduction to system thinking as a tool for problem identification, analysis of causes and possible solutions and the identification of the best options, within the context of complex and changing environments. Its content is particularly relevant to those responsible of strategic planning, management of human resources, marketing, sector studies, environmental impact studies, and in general to those in charge of decision making within organizations.

Building Simulations Model with System Dynamics: The workshop is centered in the construction of simulation models as tools of strategic planning with the system dynamics methodology. These models allow for a more effective management based on the simulation of the impact of different decisions and the sensibility of results to changes in the parameters of the system. The workshop will offer the essential background for the construction of models that integrate economic, social, and environmental variables.