

Data Confessions with Minimal Torture: The Info-Metrics Way

Amos Golan

Info-Metrics Institute and Economics
American University
External Professor, Santa Fe Institute
Senior Associate, Pembroke College, Oxford

<http://info-metrics.org/>

Abstract

Info-metrics is the science of modeling, reasoning, and drawing inferences under conditions of noisy and insufficient information. It is at the intersection of information theory, statistical inference, and decision-making under uncertainty. It plays an important role in helping make informed decisions even when there is inadequate or incomplete information because it provides a framework to process available information with minimal reliance on assumptions that cannot be validated. In other words, it gets the data to confess with minimal torture under careful supervision from the judge and jury.

My talk will be based on my new book '*Foundations of Info-Metrics: Modeling, Inference, and Imperfect Information*,' <http://info-metrics.org/> that develops and examines the theoretical underpinning of info-metrics and provides extensive interdisciplinary applications. I will discuss the basic ideas via graphical representations of the model and theory, and will present a number of interdisciplinary examples.