

2008**INFORMS IMPACT PRIZE***Awarded to***Thomas L. Saaty**

The Analytic Hierarchy Process is a methodology for helping decision makers to make complex, multi-criteria decisions. Professor Thomas L. Saaty developed the Analytic Hierarchy Process (AHP) based on his work at the U. S. State Department's Arms Control and Disarmament Agency during the Kennedy and Johnson administrations.

Professor Saaty recognized that then current techniques for resolving complex decision problems were deficient in both their mathematical rigor and their relevance to real-world decision-making. Professor Saaty's early AHP research dealt with how multi-criteria, decision-making problems could be structured as goal seeking hierarchies. He developed key mathematical theories dealing with eigenvalues and eigenvectors and showed how to use pairwise comparisons to determine ratio-scale weights to prioritize the criteria and the alternatives in an intuitively elegant manner. These final weights allow the alternatives to be compared and ranked.

In 1977, Professor Saaty published his paper that developed a scaling method for priorities in hierarchical structures; in 1977 he also published in *Interfaces* the first reported application for ranking infrastructure projects in the Sudan. Since then there have been countless publications and applications of AHP. In 2003 the journal *Computers and Operations Research* celebrated 25 years of the AHP with a special issue dedicated to the applications and pedagogical aspects of the AHP. The tenth international symposium the AHP is to be held in summer 2009.

The AHP has revolutionized how we resolve complex decision problems. The publication of his textbook titled *The Analytic Hierarchy Process* in 1980 and the release of the PC-based software titled *Expert Choice* in 1983 has led to widespread dissemination of the process. The AHP has been applied worldwide to help decision makers in every conceivable decision context across both the public and private sectors, with literally thousands of reported applications.

The AHP is now an established methodology that is part of the OR curriculum for multi-criteria decision-making in business and engineering schools. Software for its implementation is readily available. The International Society on Multiple Criteria Decision Making awarded the MDCM Gold Medal to Professor Saaty in 2000 "...for the development of the Analytic Hierarchy Process (AHP) and the impact of his lifelong research contributions on several disciplines." Professor Saaty received the 2007 Akao Prize for excellence in Quality Function Deployment (QFD) from the QFD Institute.

For his seminal work on the Analytic Hierarchy Process, and for its deployment and extraordinary impact, INFORMS is delighted to award the 2008 Impact Prize to Professor Thomas Saaty.


Stephen C. Graves, Committee Chair
Cynthia Barnhart, President

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