Stanford

Ronald Howard

Professor of Management Science and Engineering, Emeritus

CONTACT INFORMATION

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Bio

BIO

Ronald A. Howard has been Professor in the Department of Engineering-Economic Systems (now the Department of Management Science and Engineering) in the School of Engineering of Stanford University since 1965. Professor Howard is one of the founders of the decision analysis discipline. His books on probabilistic modeling, decision analysis, dynamic programming, and Markov processes serve as major references for courses and research in these fields.

Professor Howard directs teaching and research in the Decision Analysis Program of the Department of Management Science and Engineering. He also is the Director of the Decisions and Ethics Center, which examines the efficacy and ethics of social arrangements. Professor Howard defined the profession of decision analysis in 1964 and has since supervised several doctoral theses in decision analysis every year. His experience includes dozens of decision analysis projects that range over virtually all fields of application, from investment planning to research strategy, and from hurricane seeding to nuclear waste isolation. He has been a consultant to several companies and was a founding Director and Chairman of Strategic Decisions Group. He is President of the Decision Education Foundation, which he and colleagues founded to teach decision skills to young people.

He has written four books, dozens of technical papers, and provided editorial service to seven technical journals. He was founding Editor of the Journal of the Society for Scientific Exploration. He has lectured in decision analysis at universities in several foreign countries, including the former Soviet Union and the People's Republic of China. His national society affiliations have included the Operations Research Society of America; the Operational Research Society (U. K.); the Institute of Electrical and Electronics Engineers (Fellow); the Institute of Management Science, which he served as President, and INFORMS, The Institute for Operations Research and the Management Sciences, (Fellow). Current research interests are improving the quality of decisions, life-and-death decision making, and the creation of a coercion-free society.

In 1986 he received the Operations Research Society of America's Frank P. Ramsey Medal "for Distinguished Contributions in Decision Analysis. In 1998 he received from INFORMS the first award for the Teaching of Operations Research/Management Science Practice. In 1999, this organization invited him to give the Omega Rho Distinguished Plenary Lecture at the Cincinnati National Meeting. In the same year, he was elected to the National Academy of Engineering and received the Dean's Award for Academic Excellence.

Professor Howard earned his Sc.D. in Electrical Engineering from MIT in 1958. He was Associate Professor of Electrical Engineering, Associate Professor of Industrial Management, and Associate Director of the Operations Research Center at MIT when he joined the Stanford faculty as Professor in 1965.

ACADEMIC APPOINTMENTS

- Emeritus Faculty, Acad Council, Management Science and Engineering

HONORS AND AWARDS

- Fellow, IEEE (2013)
- Fellow, INFORMS (2013)
- Frank P. Ramsey Medal, Decison Analysis Society (2013)
- Award for the Teaching of Operations Research/Management Science Practice, INFORMS (2013)
- Fellow, Society of Decision Professionals (2013)
- Dean's Award for Academic Excellence, Stanford University (2013)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, Omega Rho (2013 - present)
- Member, National Academy of Engineering (2013 - present)

PROFESSIONAL EDUCATION

- ScD, MIT (1958)

LINKS

- https://web.stanford.edu/dept/MSandE/people/faculty/howard/index.html: https://web.stanford.edu/dept/MSandE/people/faculty/howard/index.html

Publications

PUBLICATIONS

- **A Hippocratic Oath for Technologists** *NEXT-GENERATION ETHICS: ENGINEERING A BETTER SOCIETY*
  Abbas, A. E., Senges, M., Howard, R. A., Abbas, A. E.
  2020: 71–80

- **Ethical Distinctions for Building Your Ethical Code** *NEXT-GENERATION ETHICS: ENGINEERING A BETTER SOCIETY*
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  2020: 7–15

- **Analysis of National Strategies to Counter a Country's Nuclear Weapons Program** *DECISION ANALYSIS*
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- **Ethics for the Real World: Creating a Personal Code to Guide Decisions in Work and Life**
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  Harvard Business School Press, Boston.2008

- **Dynamic Probabilistic Systems, Markov Models**
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- **Dynamic Probabilistic Systems, Semi-Markov and Decision Processes**
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- **The Foundations of Decision Analysis Revisited** *Advances in Decision Analysis: From Foundations to Applications*
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- **Teaching Decision Skills to Troubled Teens** *ORMS Today*
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- **Comment on Influence Diagram Retrospective** *Decision Analysis*
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  Howard, Ronald, A.
  2005

- **Influence Diagrams** *Decision Analysis*
  Howard, Ronald, A., Matheson, James, E.
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- **Attribute Dominance Utility** *Decision Analysis*
  Abbas, Ali, E., Howard, Ronald, A.
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- **Speaking of Decisions: Precise Decision Language** *Decision Analysis*
  Howard, Ronald, A.
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- **Comments on the origin and application of Markov decision processes (Reprinted 1978)** *OPERATIONS RESEARCH*
  Howard, R. A.
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- **The ethical OR/MS professional** *INTERFACES*
  Howard, R. A.
  2001; 31 (6): 69-82

- **Decision Analysis and Law** *Cardozo Law Review*
  Howard, Ronald, A.
  2001; 22 (5-6): 1595-1603

- **Decisions in the Face of Uncertainty** *Visions of Risk.*
  Howard, Ronald, A.
  edited by Alexander, C.
  London: Pearson Education Limited.2000: 1

- **Life and Death Decisions for Individuals and Couples** *in Decision Science and Technology: Reflections on the Contributions of Ward Edwards.*
  Howard, Ronald, A.
  edited by Shanteau, J., Mellers, B., Schum, D.
  Boston: Kluwer Academic Publishers.1999: 1

- **Options** *Wise Choices: Decisions ,Games and Negotiations.*
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- **HEATHENS, HERETICS, AND CULTS - THE RELIGIOUS SPECTRUM OF DECISION AIDING** *INTERFACES*
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- **In Praise of the Old Time Religion** *Utility Theories: Measurements and Applications*
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- **From Influence to Relevance to Knowledge** *Influence Diagrams, Belief Nets and Decision Analysis*
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- **Microrisks for Medical Decision Analysis** *International Journal of Technology Assessment in Health Care*
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- **DECISION-ANALYSIS - PRACTICE AND PROMISE** *MANAGEMENT SCIENCE*
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- **UNCERTAINTY ABOUT PROBABILITY - A DECISION-ANALYSIS PERSPECTIVE** *RISK ANALYSIS*
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- **ON FATES COMPARABLE TO DEATH** *MANAGEMENT SCIENCE*
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- **The Evolution of Decision Analysis** *READINGS on the Principles and Applications of Decision Analysis*
  Howard, Ronald, A.
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- **Decision Analysis for Forest Product Tactical and Strategic Decisions", Forest-to-Mill, Challenges of the Future**
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- **The Risks of Benefit-Cost-Risk Analysis** *Risk/Benefit Analysis in Water Resources Planning and Management*
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- **ASSESSMENT OF DECISION-ANALYSIS** *OPERATIONS RESEARCH*
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- **On Making Life and Death Decisions** *Societal Risk Assessment, How Safe Is Safe Enough?*

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- **The Value of Life and Nuclear Design**

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- **Comments on the Origin and Application of Markov Decision Processes** *Dynamic Programming and Its Applications*

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