

Rose M. Ray, Ph.D.
Principal Scientist

Professional Profile

Dr. Rose Ray is a Principal Scientist with extensive experience in data analysis and the application of statistical epidemiological methods to business environments. Her work covers issues related to the evaluation of passenger vehicle field performance, demographic analysis of labor markets, analysis of survey data, development of stochastic models, multivariate analysis, survival analysis, nonparametric statistics, design of experiments, and risk assessment.

Dr. Ray has an extensive background in academics, research, and consulting. She has been on staff at the University of California at Berkeley, the University of Florida, and Northwestern University and has performed analyses for a variety of industrial and commercial companies. Prior to joining Exponent, Dr. Ray was responsible for statistical labor force planning for Pacific Gas and Electric Company.

Academic Credentials and Professional Honors

Ph.D., Statistics, University of California, Berkeley, 1972
B.A., Psychology, University of California, Berkeley, 1965

Sigma Xi; Evelyn Fix Award for Biostatistics

Publications

Ray R. Comparative risk assessment. *World Finance* 2010, February.

Shields LE, Staskal D, Ray R, Birnbaum L, Schelbe RR. Evaluation of risk trade-offs in passenger compartment fire retardant usage—A case study. *Society of Automotive Engineers 2009 World Congress*, April 2009.

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Cher D, Deubner D, Chapman S, Kelsh M, Ray R. Assessment of the Beryllium Lymphocyte Proliferation Test using statistical process control. *Inhalation Toxicology* 2006; 18(11):901–910.

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Ray R, Tarter M, Locke M. Mixing parameter regression applied to groundwater contaminant flow. 23rd Annual Symposium on the Interface: Computer Science and Statistics, April 1991.

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Books

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Book Chapters

Ray R. Comparative risk assessment. In: *Encyclopedia of Quantitative Risk Analysis and Assessment*. Melnick EL, Everitt BS (eds), ISBN: 978-0-470-03549-8, September 2008.

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Ray R. Hazard and hazard ratio. In: *Encyclopedia of Quantitative Risk Analysis and Assessment*. Melnick EL, Everitt BS (eds), ISBN: 978-0-470-03549-8, September 2008.

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Reports

Lange R, Padmanaban J, Ray R. An assessment of the accident experience of front seat outboard occupants in 1987–1989 motor vehicles equipped with automatic seat belt systems. Failure Analysis Associates, Inc., Report, October 1990.

Ray R. Note on the consistency of $C(\alpha)$ Tests. University of Florida Technical Report No. 75, 1975.

Presentations

Ray R. Effectiveness of side airbags and FMVSS 214 in injury prevention. International Traffic Medicine Association, Budapest Hungary, September 2003.

Ray R. Driver and passenger safety: Role of occupant protection systems, passenger vehicle mix and occupant safety. International Traffic Medicine Association, Budapest Hungary, September 2003.

Professional Affiliations

- Society for Risk Analysis
- American Statistical Association (Risk Analysis Nominating Committee)
- American Statistical Association (member; President San Francisco Bay Chapter, 1994–1995)
- Biometric Society (member)
- American Association for the Advancement of Sciences (member)
- National Fire Protection Association (member)
- Society of Automotive Engineers (member)