

Kristin Shrader-Frechette, Biographical Sketch

Kristin Shrader-Frechette has held senior professorships at the University of California and the University of Florida. She is now O'Neill Family Professor Emerita, Department of Biological Sciences and Program in Philosophy of Science, Department of Philosophy, at the University of Notre Dame, where she directed the Center for Environmental Justice and Children's Health. (Along with Dr. Shrader-Frechette, the center recently relocated to Los Angeles.) Kristin studied physics at Xavier University and graduated summa cum laude, with an undergraduate major in mathematics from Edgecliff College, Xavier University. She received her PhD in philosophy of science, with a dissertation on information-theoretic modeling, from University of Notre Dame and then did US National Science Foundation-funded postdoctoral work for 3, 1, and 2 years, respectively, in biology, economics, and hydrogeology. She has held Woodrow Wilson, National Science Foundation, and Carnegie Fellowships in philosophy of science and has held offices/served on committees in the US National Academy of Sciences, the Risk Assessment and Policy Association, and the Philosophy of Science Association. Shrader-Frechette has been a member of many boards and committees of the International Commission on Radiological Protection, US Environmental Protection Agency, National Council on Radiation Protection and Measurement, and the US National Academy of Sciences, including its Board on Environmental Studies and Toxicology, its Committee on Risk Characterization, and its Committee on Zinc-Cadmium-Sulfide Dispersions.

In 2004 Shrader-Frechette became only the third American to win the World Technology Award in Ethics. Earlier a Harvard professor won for work in biomedical ethics, and a Princeton professor won for work in development ethics. She won for her work in public-health and environmental ethics. In 2007, Catholic Digest named her one of 12 "Heroes for the US and the World" because of her pro-bono environmental-justice (EJ) work to protect minority and poor communities from deadly pollution. In 2011, Tufts University gave her the Jean Mayer Global Citizenship Award for her pro-bono public-health and pollution work.

Associate Editor of BioScience until 2002, Shrader-Frechette is Editor-in-Chief of the Oxford University Press monograph series on Environmental Ethics and Science Policy and spent two terms on the US EPA Science Advisory Board. She also serves on the editorial boards of 23 professional journals. Past-President of the Society for Philosophy and Technology, the Risk Assessment and Policy Association, and the International Society for Environmental Ethics, Shrader-Frechette was the first woman president of all three international organizations (SPT, RAPA, ISEE). She has served as Principal Investigator (PI) for grants from the US National Science Foundation, National Endowment for the Humanities, and Department of Energy. NSF has funded her highly competitive research for 28 years. Recently she finished research as PI on a \$224,000 NSF grant on ethical/policy issues associated with worker exposure to ionizing radiation and also as a member of the project team for a \$ 3-million NSF grant, "Global Linkages of Biology, Environment, Society." She also recently finished work as PI on another NSF grant, one examining methodological problems in epidemiological statistics.

Most of Shrader-Frechette's research analyzes mathematical, biological, or ethical problems in risk assessment, public health, toxic-waste cleanup, or environmental justice -- especially those related to radiological, ecological, and energy-related risks. An enthusiastic teacher as well as a researcher, she also has won the annual university-wide award for "Outstanding Teacher." Shrader-Frechette has published more than 400 refereed professional articles and 17 books/monographs: Nuclear Power and Public Policy (1980, 1983); Environmental Ethics (1981, 1991); Four Methodological Assumptions in Cost-Benefit Analysis (1983); Science Policy, Ethics, and Economic Methodology (1984); Risk Analysis and Scientific Method (1985); Nuclear Energy and Ethics (1991); Risk and Rationality (1991); Policy for Land (1992); Burying Uncertainty: Risk and the Case Against Geological Disposal of Nuclear Waste (1993); Method in Ecology (1993); The Ethics of Scientific Research (1994), Technology and Human Values (1996), Environmental Justice: Creating Equality, Reclaiming Democracy (2002), Taking Action, Saving Lives: Our Duties to Protect Environmental and Public Health (2007), What Will Work: Fighting Climate Change with Renewable Energy, Not Nuclear Power (2011), and Tainted: How Philosophy of Science Can Expose Bad Science (2014). Her theoretical essays have appeared in philosophical journals such as Ethics, Journal of Philosophy, Philosophy of Science, and Synthese, as well as in science journals such as Science, BioScience, Health Physics, Conservation Biology, Quarterly Review of Biology, OIKOS, and Trends in Ecology and Evolution. She has also published in more applied journals such as Environmental Professional, Modern Energy Review, Energy Policy Studies, IEEE Spectrum, and IEEE Technology and Society. Her books and articles have been translated into 13 languages--Chinese, Czech, Dutch, French, German, Hungarian, Italian, Japanese, Korean, Norwegian, Russian, and Spanish. Shrader-Frechette is currently working on two new volumes: Risks of Risk Assessment and Tackling Toxic Waste. Because of her many books, scientific articles, and federal research grants on toxic/hazardous wastes she has advised many nations, including the US, on hazardous-waste-site cleanup.

Widely requested as a lecturer by university, government, and industrial groups in the Americas, Europe, China, India, Africa, and Russia, Shrader-Frechette has been invited to address the National Academies of Science in three countries. She has served as an advisor to numerous governments and international organizations, including the United Nations and the World Health Organization. She and her husband Maurice, a PhD mathematician, have two children, Danielle and Eric, both US National Merit Scholarship winners, both honors graduates of Princeton University. Danielle is a 2012 Northwestern University law graduate, practicing law in Los Angeles, and Eric is a University of California MD/PhD who is practicing neurology in Los Angeles County, California. The family spends free time scuba diving, mountain hiking, ice skating, and doing volunteer work. Kristin continues scientific research and pro-bono EJ work in Los Angeles.

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