Sarah P. Otto

GRFP Recipient: 1988

Undergraduate Institution:
B.S. 1988, Stanford University

Graduate Institution:
Ph.D. 1992, Stanford University

Graduate Field of Study: Biology

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Current Position:
Professor of Zoology and Director, Centre for Biodiversity Research, University of British Columbia

RESEARCH INTERESTS //

Sarah P. Otto specializes in the development of population-genetic models using analytical and numerical techniques to infer what evolutionary changes are possible and under what conditions. Otto's recent research focuses on why some species reproduce sexually and why some species carry more than one copy of each gene. The goal of her work is to identify when or if particular evolutionary transitions are possible by producing specific predictions that can be tested either experimentally or by comparing the expected and observed distributions of a trait. Otto's scientific articles have appeared in such journals as *Science, Nature, PNAS* and *Evolution*.

A FOND MEMORY FROM MY EXPERIENCE AS A FELLOW //

"Working at the junction between two fields – biology and math – required extra time to develop skills in both areas, taking math courses and summer workshops, while also learning about the theoretical and experimental underpinnings of evolutionary biology. GRFP support freed me up financially to devote the time that I needed to develop a double skill set. It also gave me confidence at this early critical juncture in my career."

AWARDS/ HONORS //

- Elected fellow, Royal Society of Canada (2006)

- Co-author (with Troy Day) of "A Biologist's Guide to Mathematical Modeling in Ecology and Evolution" (2007)

- Steacie Prize (2007)

- MacArthur fellowship (2011)

- Guggenheim Fellowship in Natural Sciences (2011)

POSITION PROFILE //

1992-1994 - Miller post-doctoral fellow, University of California, Berkeley

1994-1995 - SERC post-doctoral fellow, University of Edinburgh

1999 - Distinguished professor, Peter Wall Institute, University of British Columbia

2009 - Canada Research Chair, Tier 1