

*College of Science & Engineering*  
*Distinguished Scientists and Engineers*  
*from Underrepresented Groups*  
*Speakers Program*

**4 p.m. Wednesday, Feb. 18, 2015, 401/402 Walter Library  
or online at <https://umconnect.umn.edu/csespeakers/>**

**Professor Anna Krylov**

University of Southern California, Los Angeles

***Who Holds Us Back?  
A Personal Account of Cultural  
and Societal Obstacles Facing Women  
Pursuing Careers in Science***

The progress toward gender equality in high-profile careers has been slow—women are still under-represented in the workforce and, in particular, in science, technology, engineering and math (STEM) fields. Moreover, the distribution of women in industry and academe is uneven: there are fewer women in top positions. Even when holding the same position, women are not equally compensated and their achievements often do not receive the recognition they deserve. Different aspects of gender inequality in science will be discussed; the issues will be illustrated with quantitative examples. Issues such as gender schemas, stereotypes, and biases continue to pose obstacles for advancement of women in science. The societal pressures that still exist even in developed countries contribute to the problem of leaky pipeline. Better understanding of the problem is the first step toward a solution.

**Anna Krylov** was born in Donetsk, Ukraine. She is a professor of chemistry at the University of Southern California (USC), working in the area of theoretical and computational quantum chemistry. She received her master's degree in chemistry from the Moscow State University and her doctorate from the Hebrew University of Jerusalem. As a post-doctoral associate, she worked with Professor Martin Head-Gordon's group at the University of California, Berkeley, and became involved in electronic structure theory and method development targeting bond-breaking and excited states. She joined the USC Department of Chemistry in 1998.

The main focus of her research is in electronic structure theory and ab initio methodology. She is one of the leading experts in quantum chemical description of open-shell and electronically excited species. Her vision is to develop and devise accurate computational tools for treatment of complicated open-shell electronic structures ranging from bound and unbound excited states to complicated polyradical species in the gas phase and in complex environments like solutions, molecular solids, and proteins.

Krylov has co-authored more than 150 publications and has delivered more than 170 invited lectures. She has received numerous prizes, including the World Association of Theoretical and Computational Chemists 2007 Dirac Medal for her outstanding research on new methods in electronic structure theory for the description of bond-breaking, in conjunction with the spin-flip method. She also received the 2012 Theoretical Chemistry Award from the Physical Chemistry Division of the American Chemical Society. She has been elected a Fellow of American Physical Society in 2011 and of the American Association of Advancement of Science in 2012. Professor Krylov has served on several editorial boards, and on the Board of Directors of Q-Chem Inc, one the world's leading ab initio quantum chemistry programs.



**Department of Chemistry**  
**Host: Professor Christopher Cramer**  
**Refreshments will be served prior to the seminar.**

Initiated in 2002, this lecture series creates greater visibility for distinguished women in their respective fields. In bringing these accomplished professionals to campus—each woman an outstanding example of achievement and success in science and engineering—the program offers encouragement to our female students, post-doctoral associates, and faculty.