



For Immediate Release  
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## *Susanne M. Rafelski to Present the Sixth Thomas S. Tenforde Topical Lecture*



Dr. Susanne M. Rafelski has been selected to give the 6th Thomas S. Tenforde Topical Lecture at the 2023 Annual Meeting of the National Council on Radiation Protection and Measurements (NCRP). The Lecture, entitled “Towards Evaluating Cell Damage *via* Microscopy Imaging and Analysis of Cell Organization” will be a featured presentation at the 59th NCRP Annual Meeting to be held on March 27–28, 2023 at the Hyatt Regency Bethesda, Bethesda, Maryland. The Lecture will be given at 9:45 a.m. on March 28, 2023. The topical lecture series honors Dr. Thomas S. Tenforde, NCRP’s fourth President (2002 to 2012).

In December 2020, Dr. Rafelski became the Deputy Director at the Allen Institute for Cell Science which aims to understand the principles by which human induced pluripotent stem cells (hiPSC) establish and maintain robust dynamic localization of cellular structures, and how cells transition between states during differentiation and disease.

Prior to joining the Institute in 2016, Dr. Rafelski was an Assistant Professor in the Department of Developmental and Cell Biology, the Department of Biomedical Engineering, and the Center for Complex Biological Systems at University of California Irvine. She began imaging live cells and visualizing intracellular dynamics in three-dimensions (3D) when she was 17 and hasn’t been able to stop since. Her life-long scientific goal is to decipher the patterns and rules that transform the overwhelming complexity found inside cells into functioning units of life. She believes that to do this we must understand the organization of the structures within the cell in space and time. Susanne takes an interdisciplinary, quantitative approach to cell biology, combining live-cell image-based assays, molecular genetics, and computational methods.

Dr. Rafelski obtained her BS in Biochemistry and Molecular and Cellular Biology with an additional emphasis in Mathematics from the University of Arizona. She then completed her PhD in Biochemistry at Stanford University, followed by a postdoc at the Center for Cell Dynamics at the Friday Harbor Labs, University of Washington, where she learned computational modeling approaches. Her research focused on integrating bacterial polarity with host-cell cytoskeletal dynamics to understand *Listeria* actin-based motility. Dr. Rafelski then initiated her current research program on mitochondrial structure-function as a postdoc at University of California San Francisco, where she developed 3D microscopy and image analysis methods to quantify mitochondrial morphology and applied these to investigate mitochondrial size control regulation. As a model system for intracellular organization, the Rafelski lab extended this work to studying the size, topology, and function of mitochondrial networks in budding yeast and mammalian cells.

The theme of the 2023 NCRP Annual Meeting is “Integration of Physics, Biology and Epidemiology in Radiation Risk Assessment.” The T.S. Tenforde Lecture and other sessions of the 2023 Annual Meeting are open to everyone with an interest in radiation protection, measurements, health and science.

The National Council on  
Radiation Protection and  
Measurements

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