



Durga Rao Karanki

PSAM12 Speaker Bio

Uncertainty Propagation in Dynamic Event Trees - Initial Results for a Modified Tank Problem

Short Statement: first author and speaker (430), co-author (435).

BIOGRAPHY

Dr. Durga Rao Karanki has been working as a Scientist at Paul Scherrer Institute, Switzerland since Feb 2009. His current research focuses on integrated deterministic and probabilistic safety analysis (Dynamic PSA) using Dynamic Event Tree (DET) methodology and uncertainty propagation in DETs. He contributed to the development of the DET tool ADS-TRACE and its application to accident scenarios of NPP. He is currently working in a project on 'Assessment of Plant Safety Margins' funded by Swiss Nuclear.



He has actively been involved in PSA and risk informed decision-making research on nuclear reactors for the last 10 years. His research resulted in more than 50 publications including 2 books, 12 first author journal papers, and several international conferences. He is on the editorial board of three international journals in the area of reliability and risk analysis. He received two awards (2009, 2012) for research Excellency from Society for Reliability Engineering, Quality and Operations Management (SREQOM), New Delhi.

Prior to joining PSI, he worked as a Scientific Officer (2002-2009) in PSA Section of Bhabha Atomic Research Centre (Mumbai, India), where he conducted research on Dynamic Fault Tree Analysis, Uncertainty Analysis, and Risk Informed Decision Making. He graduated in Electrical and Electronics Engineering from the Nagarjuna University, India, and holds M.Tech. (Reliability Engineering) from the Indian Institute of Technology (IIT) Kharagpur and Ph.D. (Engineering) from the IIT Bombay, India.