Dr. Juliana Pacheco Duarte

Bio:
Prof. Juliana Pacheco Duarte, Ph.D., is an Assistant Professor in the Nuclear Engineering and Engineering Physics Department at the University of Wisconsin-Madison working on safety analysis, thermal-hydraulics, and risk assessment of advanced nuclear systems. Prior to joining UW-Madison, Prof. Duarte was an assistant professor in the Mechanical Engineering Department at Virginia Tech. She received her B.Sc. degrees in Physics and Nuclear Engineering and an M.Sc. degree in Electrical Engineering from top universities in Brazil. Her Ph.D. focused on the experimental study of post-critical heat flux, from the University of Wisconsin-Madison. She has experience in safety analysis, the design and performance of experiments to study two-phase heat transfer phenomena at high-pressure conditions; the computational thermal-hydraulic analysis using subchannel codes (COBRA, CTF) and system codes (TRACE); and varied practice of using statistical methods in the safety and reliability analysis. Prior to coming to the U.S., she worked at the thermal-hydraulics division at the Brazilian Navy as a graduate researcher on the design of critical heat flux experiments for a nuclear propulsion reactor. She is an author of more than fifty peer-reviewed top journals, book chapters, and conference papers, and has served as a reviewer for several indexed journals in nuclear engineering, fluid mechanics, safety science, and heat transfer.

Years Beyond PhD:
5 years

Research Area:
Safety analysis, the design and performance of experiments to study two-phase heat transfer phenomena at high-pressure conditions; the computational thermal-hydraulic analysis using subchannel codes and system codes; and varied practice of using statistical methods in the safety and reliability analysis.

School of Employment:
University of Wisconsin-Madison

Educational Background (Field of Degree):
Ph.D. University of Wisconsin-Madison, Nuclear Engineering, 2018
M.Sc. Escola Politécnica da USP, Electrical Engineering, 2014
B.Sc., Universidade Federal do Rio de Janeiro, Nuclear Engineering, 2012
B.Sc. Universidade Estadual de Campinas, Physics, 2016