

# APARM Special Session IX

## Special Session Basic Information:

<b>Session Title</b>	Stochastic Models for Software Reliability and Network
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## Introduction and topics

With the rapid advancement of artificial intelligence and data-driven technologies, developing highly reliable software has become increasingly important for modern society. Ensuring software reliability is critical, particularly during testing processes aimed at detecting and removing software faults before deployment. This special session invites research contributions that advance stochastic modeling, analytical methods for software reliability, and network-related problems. Particular attention is given to parameter estimation methods for software reliability models, dynamic testing policies for identifying aging-related bugs, and stochastic optimization approaches for network flow problems. By exploring both theoretical foundations and practical modeling approaches, this session seeks to enhance accurate reliability assessment and decision-making for diverse and complex software systems in contemporary applications.

## Special Session Chair(s):

	<b>Name</b>	Shuhei Ota
	<b>Prefix</b>	Assistant Professor
	<b>Department</b>	Industrial Engineering and Management
	<b>Organization</b>	Kanagawa University
	<b>City/Region</b>	Kanagawa, Japan

## Organizer's Brief Biography

**Shuhei Ota** received a Ph.D. degree in Engineering from Hosei University, Tokyo, Japan. He is currently an Assistant Professor at Kanagawa University. His research interests include dependent failure analysis, copula modeling, and stochastic modeling. His research results have been published in various SCI journals such as Reliability Engineering & System Safety, IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences, Japanese Journal of Statistics and Data Science, and PLoS ONE. He received the Outstanding Young Scientist Award of IEEE Reliability Society Japan Joint Chapter 2016.

	<b>Name</b>	Nakamura Taishin
	<b>Prefix</b>	Junior Associate Professor
	<b>Department</b>	Applied Computer Engineering
	<b>Organization</b>	Tokai University
	<b>City/Region</b>	Kanagawa, Japan

## Organizer's Brief Biography

**Taishin Nakamura** received a Ph.D. degree in Engineering from Tokyo Metropolitan University, Tokyo, Japan. He is currently a Junior Associate Professor at Tokai University. His research interests include system reliability evaluation and mathematical optimization. His research results have been published in various SCI journals, including IEEE Transactions on Reliability, IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences, and Quality and Reliability Engineering International. He received the Best Paper Award at the 7th Asia-Pacific International Symposium on Advanced Reliability and Maintenance Modeling in August 2016.