

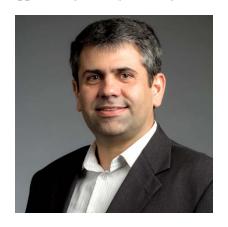
## The Lynne and William Frankel Center for Computer Science Department of Computer Science Ben Gurion University of the Negev



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## **Distinguished Lecturer Series**

Supported by Jeffrey & Holly Ullman



## Dr. Marco Carvalho

Florida Institute of Technology, Melbourne, FL-USA Harris Institute for Assured Information School of Computing

## **Resilient Cyber Systems and Operations**

Abstract: The resilience of both natural and engineered systems is generally related to their ability to resist, recover, and adapt to failures, disturbances, or attacks.

Over the last several years a number of resilience concepts and principles have been proposed, formulated and applied to the development of important and promising new approaches for resilience engineering. More recently, an increasing number of studies and research efforts have started to explore the application of these new concepts and principles for the design of resilient cyber systems and infrastructures, currently an active and promising area of research.

In this talk I will introduce some of the motivations, requirements, and challenges associated with the design of resilient systems and infrastructures for cyber operations. The focus of the discussion will be on the requirements for defensive cyber operations, and will include a brief overview of the current research in the field, as well as the introduction and discussion of some of the current and future challenges in this important domain.

Bio: Marco M. Carvalho is an Associate Professor at the Florida Institute of Technology, in Melbourne, FL/USA. He graduated in Mechanical Engineering at the University Brasilia (UnB Brazil), where he also completed his M.Sc. in Mechanical Engineering with specialization in dynamic systems. Dr. Carvalho also holds a M.Sc. in Computer Science from the University of West Florida and a Ph.D. in Computer Science from Tulane University, with specialization in Machine Learning and Data Mining. At Florida Tech, Dr. Carvalho is the Dean of the School of Computing, and the Executive Director of the Harris Institute for Assured Information, and the associate head of the Department of Computer Sciences and Cybersecurity. Dr. Carvalho is also the Director of the Intelligent Communication and Information Systems Laboratory, and the Principal Investigator of several research projects in the areas of cyber security, information management, distributed coordination systems, and tactical communication systems. Dr. Carvalho can be contacted at mcarvalho@fit.edu.