

Faculty Development Program



Title: DYNAMICS BASED COMPUTATION

Date: 2025-04-11 - 2025-04-11

Time: 10:00 - 13:15

Venue: SILVER JUBILEE TOWER ROOM NO:

G07

Event Outcome

Reservoir and dynamic computation is one of the hottest areas in computer science and electronics (FPGA and VLSI domains). It can help the faculties to identify many interesting research problems as there are more nonlinear systems in nature. This will help to publish papers in high impact journals and submitting research proposals for funding



Resource Person 1 - Details

Name: Dr K Murali

Designation : Professor, Department of Physics **University/ Company :** Anna University, Chennai

Address: india, 600025.

Resource Person's Profile:

1. Profile of Dr K Murali

Dr K Murali is currently working at Department of Physics, Anna University, Chennai as Professor. He is collaborating with leading American Universities. Has filed many patents related to Chaos Theory. He is an expert in non-linear electronics. He has published nearly 165 papers in International and National journals. His H-index is 41 and has more than 5000 citations to his credit. He works on emerging areas of CSE and ECE He is a reviewer in many IEEE journals.

This talk explore dynamics based computation, an alternative to traditional computing paradigm. The author will discuss how chaotic system can be used for logic operations, including implementing "Cahogates and "p-bits". Furthermore, we will explore

using chaotic systems in reservoir computing for tasks such as time-series prediction and full adder implementation. This approach offers potential advantages in power consumption, complexity, and the development of unconventional hardware architectures.

Using online simulation tools related with nonlinear dynamics

Coordinator's: Prof. GANESAN K 10414 - Professor Higher Academic Grade - SCORE