



Department of Electrical and Electronics Engineering

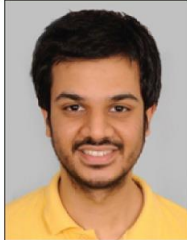


Organizes

National Level Workshop on Modeling and Simulation of Electrical Networks using Scilab

📅 Online (Microsoft Teams)

📍 15 June 2024, Saturday | IST 10:00 AM – 11:30 AM



Resource Person

Mr. Sumukh Surya

Senior Engineer

Bosch Global Software Technologies Pvt. Limited,
Bengaluru

Registration Link

<https://tinyurl.com/Scilab-workshop>

Last Date of Registration: 14 June 2024

Free Registration, E – Certificates will be provided

Organizing Committee

Mr. D. Satish Kumar

Sr. Assistant Professor, EEE
Coordinator

Dr. Vinoth Kumar K

Professor, EEE
Advisor – IEEE IES NHCE SBC

Dr. Sakthivel Aruchamy

HoD - EEE

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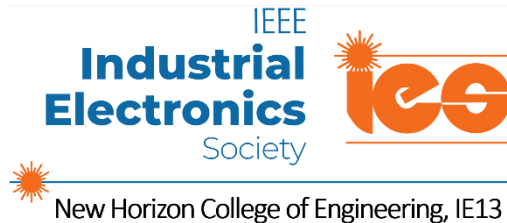


NEW HORIZON COLLEGE OF ENGINEERING

Department of Electrical and Electronics Engineering

IEEE Industrial Electronics Society Student Branch Chapter

Geo-Code: SBC66131B



New Horizon College of Engineering, IE13

Title	National level workshop on “Modeling and Simulation of Electrical Networks using Scilab”	
Department	Electrical and Electronics Engineering	
Date	From: 15.06.2024	To: 15.06.2024
Time	From: 10:00 AM	To: 11:30 AM
Brief Description (4-5 Lines Max)	<p>The IEEE IES NHCE Student Branch Chapter from Department of Electrical and Electronics Engineering, New Horizon College of Engineering, Bengaluru had organized the National level workshop on “Modeling and Simulation of Electrical Networks using Scilab” 15th June 2024, Saturday, between 10:00 AM to 11:30 AM in association with IEEE Industrial Electronics Society Bangalore Chapter at NHCE Bengaluru.</p> <p>This workshop attracted participants from various institutions and industries, emphasizing the growing importance of simulation tools in engineering. The workshop was an enlightening experience, offering deep insights into the practical applications of Scilab in industrial settings. Participants were introduced to the extensive capabilities of Scilab and its advantages and limitations compared to other software like MATLAB. The session was conducted by Mr. Sumukh Surya, an expert in the field of computational mathematics and simulation tools. His extensive knowledge and engaging presentation made the workshop highly informative.</p> <p>Overall, the workshop on "Modeling and Simulation of Electrical Networks using Scilab" was a resounding success. It provided valuable knowledge and practical skills that are crucial for both students and professionals in the field of electrical and electronics engineering. The session was fascinating and informative, offering a clear understanding of how intelligence in the form of computational tools like Scilab works in solving real-world engineering problems.</p>	

Images

Accuracy of solvers

Type of Solver	RMSE in t_k	RMSE in V_k	Step Size
ODE 45	0.004847	0.0096	$1e^{-6}$
ODE 23s	0.0477784	0.0947	
ODE 113	0.0065039	0.14768469	
ODE 15s	0.0371177	0.03711768	

ODE45 is almost 10 times more accurate than ODE23s however ODE 23s is quicker as the equations become stiff when step size reduces

Solvers

- **Fixed Type & Variable Type**
- In **fixed type solver**, model is simulated using the same step size from the beginning to the end of the simulation
- The user can specify the step size or let the solver choose it (auto)
- Generally, decreasing the step size increases the accuracy of the results and the time required to simulate the system
- In **variable type solver**, the step size is varied during the simulation
- These solvers reduce the step size to speed up the solution and hence unnecessary steps are not considered

People

- MOHAN KUMAR M
- Adarsh V (Unverified)
- Anusha L (Unverified)
- Anusha L (Unverified)
- Adhwin (Unverified)
- Gowri (Unverified)
- nevan (Unverified)
- Karthheek nihar@newhorizon...
- Kanya Srinivasan (Unverified)
- KRUTHIKA B J
- MAHIMA HARADU VADAV
- R GAGANA (Unverified)