

TALE 2024 Conference Workshop – 1

Teach-To-Learn-To-Teach: Leveraging AI in Engineering Education

Date & Time: Dec 10th 2024, 9 am to 12 noon

Workshop Facilitators:

- 1. Dr.Ramachandra Gambheer Ph.D., Sr.Leader, Global Technical Operations, Cisco Systems, San Jose, California, United States**
- 2. Dr.U.Sripathi Ph.D., Professor, National Institute of Technology Karnataka (NITK) Surathkal**

Workshop Overview

In an era where Artificial Intelligence (AI) is reshaping industries, its potential in transforming education cannot be overlooked. This 3-hour workshop at TALE 2024—'Teach-To-Learn-To-Teach: Leveraging AI in Engineering Education' explores the cutting-edge applications of AI, specifically ChatGPT, in enhancing teaching methodologies and learning experiences in engineering education.

The session delves into both the theoretical foundations and practical applications of AI in pedagogy, showing participants how AI can be integrated into curriculum design, interactive learning, and student assessments. Through a series of hands-on activities, attendees will learn how to personalize learning, provide real-time feedback, and boost student engagement, all while leveraging the power of AI.

Part 1: Curriculum Development Workshop – Enhancing Lesson Planning with AI

In the first practical session, participants will use ChatGPT to design curriculum materials tailored to specific engineering topics. Learn how AI can assist in generating dynamic lesson plans, crafting engaging learning content, and creating interactive exercises that capture students' attention and foster a more personalized learning experience. This session will ensure that you leave with new tools to revolutionize your lesson planning process.

Part 2: Interactive Learning Modules – Implementing AI-Driven Engagement

During this segment, participants will take part in simulated classroom settings, using ChatGPT to create interactive learning modules. Focused on real-time student interactions, this session will highlight how AI can adapt to individual learning needs, enhance engagement, and provide dynamic, on-the-fly support. You'll walk away with hands-on experience in using AI to drive adaptive learning techniques in your classroom.

Part 3: AI-Driven Assessment Tools – Providing Instant Feedback

Assessment is a critical component of education, and AI can take it to the next level. In this session, you will learn how to create and utilize AI-powered tools for assessments. From

generating instant feedback to providing personalized student evaluations, AI tools will help you enhance the learning process by offering timely insights that allow for targeted interventions and improvements.

Who Should Attend?

This workshop is designed for educators, instructional designers, curriculum developers, and academic leaders in the engineering field who are interested in integrating AI into their teaching practices. Whether you are familiar with AI or new to these tools, this workshop will equip you with actionable strategies for transforming your approach to teaching.

What Will Participants Take Home?

By the end of this workshop, participants will have hands-on experience in using ChatGPT for lesson planning, developing interactive learning modules, and creating AI-driven assessment tools. You will leave with practical skills, ready-to-implement AI-powered resources, and a deeper understanding of how to integrate AI into your teaching to create a more engaging, personalized learning environment for your students.

What Do Participants Need?

Participants are required to bring their own laptops (MacOS, Windows, or Linux) for the hands-on sessions. Just bring a willingness to explore new teaching technologies!

Don't Miss This Opportunity!

Join us at TALE 2024 and take your teaching skills to the next level by learning how to leverage the power of AI. This 3-hour workshop will equip you with the tools and knowledge to transform your curriculum, engage students in innovative ways, and improve assessments using cutting-edge AI technologies. Be part of the future of education and bring AI into your classroom!

Biography of Facilitators



Dr. Ramachandra Gambheer ([LinkedIn Profile](#)) (**Senior Member, IEEE**) is a Senior Leader in Technical Operations at Cisco Systems, Inc., with an impressive 34 years of experience—10 years as an engineering teacher at NITK Surathkal and 24 years in the industry. With 15+ years in technical leadership, he has spearheaded global initiatives in security, privacy, and sustainability. He holds a Ph.D. in IoT Systems from NITK. Dr. Gambheer is a published co-author of [“Design of Secure IoT Systems: A Practical Approach across Industries”](#) (McGraw Hill) and a recognized expert in sustainable technology development and value engineering.



Prof. U. Sripati Acharya { [LinkedIn Profile](#) } (**Senior Member, IEEE**) is a Professor in the Department of Electronics and Communication at the National Institute of Technology Karnataka. He earned his Ph.D. from the Indian Institute of Science in 2005, specializing in error control codes and their application in wireless communication. Prof. Acharya has led several funded research projects in wireless communication, free space optical communication, and professional electronics. His current research interests include error control codes, MIMO communication, underwater communication, and data storage systems. He is also a Fellow of the Institution of Engineers (India).