

**AUTO CLUB Activity Report AY 2023-24**

**Coordinator:** Prof Kiran C H

Asst Professor, Department of Mechanical Engineering

**Event:** Rider Training, Organized by FAME FKDC S7, Hyderabad

**Date:** 25<sup>th</sup> Sept 2023



From Autoclub, **MrManoj Kumar Karnam** & **MrFrison Nikhil Martis** of Department of Mechanical Engineering participated in the Rider Training Program for Go-Kart organized by FMAE [Fraternity Of Mechanical And Automotive Engineers], FKDC [Formula Kart Design Challenge], proved to be a resounding success in promoting skill development, safety awareness, and a deeper understanding of go-kart racing among participants. The program's holistic approach, combining theoretical knowledge with practical application, ensured that participants left with enhanced capabilities and a heightened passion for go-karting. FAME, through initiatives like these, continues to play a pivotal role in nurturing and promoting motorsports enthusiasts, contributing to the growth and development of the motorsports community.



**Event : FAME-FKDC event season 7**

**Date: 30<sup>th</sup> Oct 2023 to 05<sup>th</sup> Nov 2023, Kumaraguru college of Engineering & Kari Motor  
Speedway Racetrack, Coimbatore**



FKDC, or Formula Kart Design Challenge, organized by FMAE (Fraternity of Mechanical and Automotive Engineers), is India's biggest go-kart championship for students. The goal of FKDC is to provide engineering undergraduates with a platform to showcase their technical and managerial skills by designing and fabricating a go-kart within the rules and regulations of FKDC. The Alvas Motorsport team from Alva's Institute of Engineering and Technology participated in the FKDC S7 event. The team took part in Technical Events, Static Events (Design Evaluation, Sales Presentation, Fuel Economy), and Dynamic Events (Acceleration, Skidpad). Achieving 12th rank, the team outperformed 24 other teams out of the total 36 that participated..

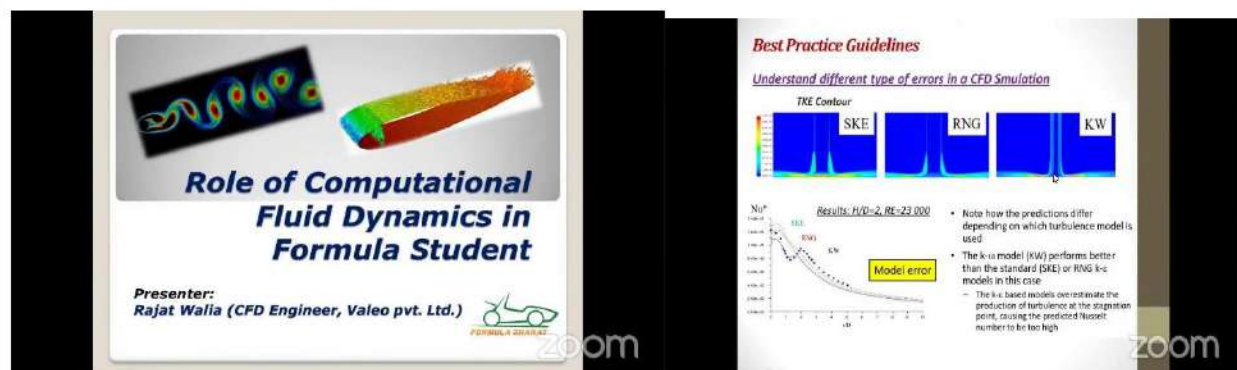
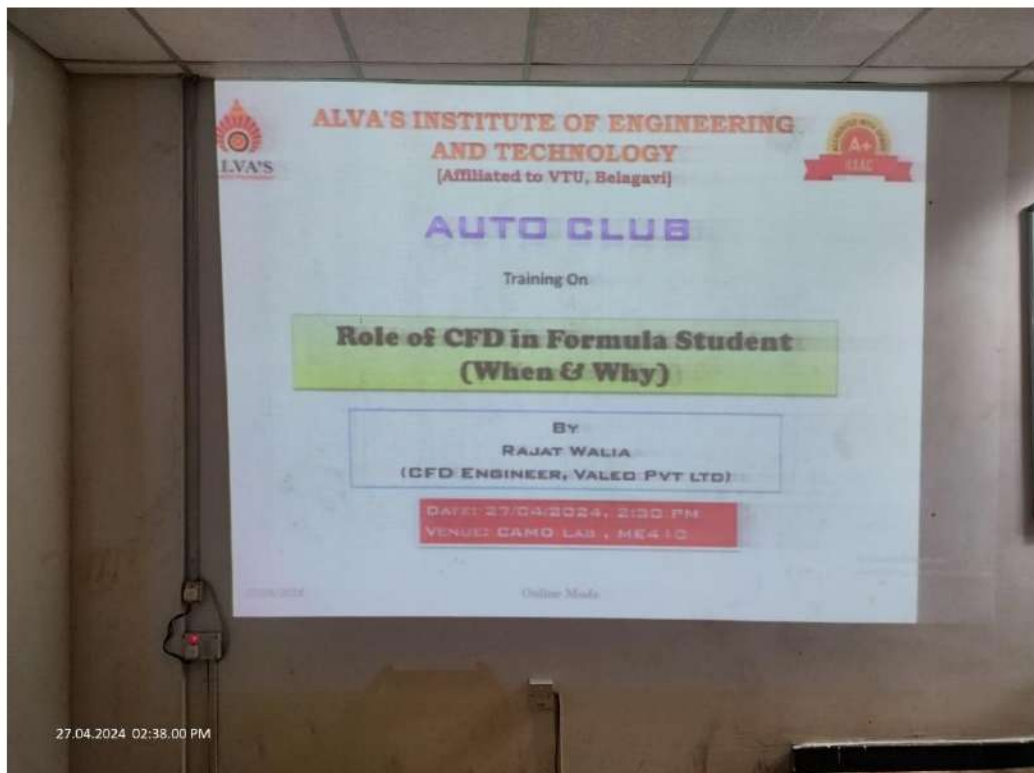
**"Role of CFD in Formula Students (When & Why)"**

By

**MrRajatWalia**

**CFD Engineer, ValeoPvt Ltd**

**Date: 27/04/2023 , 2:30 PM**



Auto club members participated in an online talk titled "Role of CFD for Formula Students" by Mr. RajatWalia, CFD Engineer at ValeoPvt Ltd. The session highlighted the crucial role of Computational Fluid Dynamics (CFD) in enhancing aerodynamic performance and vehicle design for Formula Student competitions. Mr. Walia shared insights into CFD simulation techniques, optimization strategies, and their application in achieving competitive advantage. The talk equipped members with valuable knowledge to integrate advanced engineering principles into their Formula Student projects, fostering innovation and performance excellence in automotive engineering.



Training on Finite Element Analysis for AUTOCLUB members

**“Stress Analysis on Suspension :Ansys Tools ”**

Date: 18/05/2024, 02:00 PM



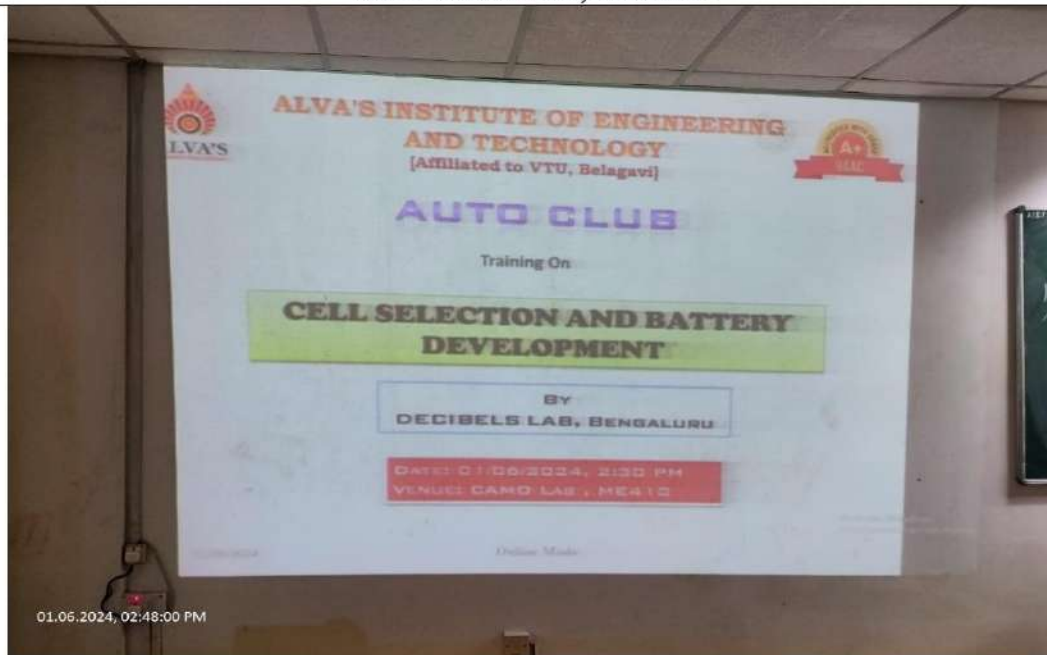
Auto club members engaged in talk titled "Stress Analysis on Suspension: Ansys Tools" by Prof.Kiran C H from the Department of Mechanical Engineering. The session focused on utilizing Ansys tools to analyze and optimize suspension systems for structural integrity and performance. Prof.Kiran C H provided insights into stress distribution, deformation analysis, and safety factor assessments critical for enhancing vehicle stability and ride comfort. Members gained practical knowledge in applying advanced simulation techniques to improve suspension design, emphasizing real-world applications in automotive engineering.

**“Cell Selection and Battery Development”**

By

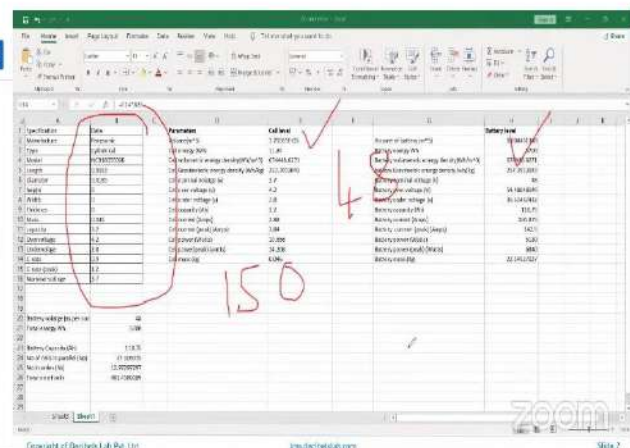
**Decibel Lab, Bengaluru**

**Date: 01/06/2024, 2:30 PM**



**Cell level Calculations**

Cell Current ( $C_{cu}$ ) in Amps	Battery Current ( $B_{cu}$ ) in Amps
$C_{cu} = C - rate * C_c$	$B_{cu} = C - rate * B_c$
Cell capacity - $C_c$	Battery capacity - $B_c$
Cell power in watts ✓	Battery power in watts ✓
$C_{power} = C_v * C_{cu}$	$B_{power} = B_v * B_{cu}$
Cell voltage - $C_v$	Battery voltage - $B_v$
Cell current - $C_{cu}$	Battery current - $B_{cu}$



Auto club members attended an online talk on "Cell Selection and Battery Development" by Decibel Labs Pvt Ltd. The session delved into critical aspects of battery technology, including cell selection criteria and advancements in battery development. Members gained insights into optimizing battery performance, enhancing efficiency, and extending lifespan, vital for electric vehicles and automotive applications. The talk provided valuable knowledge and updates in the

rapidly evolving field of energy storage, facilitating informed decisions and innovations within the auto industry.

### **CATIA V5 Training for Autoparts Design”**

By

MrKiran C H,

Asst Professor, AIET

Date: 29/04/2024, 1:40 PM [Every Monday, 3 hrs]







The Auto Club initiated a weekly 3-hour training session on CATIA V5 for autoparts design, scheduled as per the class timetable. Led by Prof. Kiran C H, the Auto Club Coordinator, this training focuses on enhancing members' skills in 3D modeling, design, and simulation of automotive components. The sessions provide hands-on experience with advanced tools and techniques in CATIA V5, fostering proficiency and innovation. This structured training aims to bridge the gap between academic knowledge and industry demands, empowering members with the expertise needed for future automotive design challenges.



KIRAN C H



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