A Report on

MSC Nast ran, Pat ran and Adams Software in CAD Lab

One-week workshop organised by

Academic Staff College

in association with

Department of Mechanical Engineering, KLEF

10.12.2018 to 15.12.2018

Academic Staff College in association with Department of Mechanical Engineering organised a One-Week Training-cum-Workshop on MSC Nast ran, Pat ran and Adams Software in CAD Lab,2ndFloor, ME Block. Trainers from ALTEM,the Channel distributor of MSCconducted the workshop from 10.12.2018 to 15.12.2018.

The resource persons explained the importance of MSC Software, a leading global provider of simulation software and services, three of MSC Software's products, Pat ran, Adams and MSC Nast ran are integral in the vehicle design studies. This involves modelling and simulation of nonlinear mechanical behaviour of vehicle systems and components under dynamic loading using the FEA and Multi-Body dynamics capabilities of the MSC products. The goal of this software is to construct representative 3D finite element models to analyze the design and dynamic reaction of various conventional and experimental vehicles.

They elucidated these models are constructed in three dimensional modelling software used for undergraduate and graduate design courses. They also explained how these can be imported into MSC products and analyzed using the computational capabilities of MSC Nast ran and Adams.

The resource persons also explained the ability to model the mechanical responses of various vehicle systems is essential to create the most efficient and effective vehicles. The main mechanical structures are the frame, suspension systems and components of steering, power train that affect vehicle behaviour and the ability to predict the mechanical behaviour in response to applied loads.Models simulate natural and extreme loading conditions. The MSC software uses image processing and 3D modelling for structural analysis. Materials properties are input and the output is compared to experimental data.

Dr.A.Srinath, HOD, Dept.ME appreciated the resource persons and the participants for the successful completion of the programme.