1. Proposed Special Session Title: 'Study of Cam-less Actuation Technology'

2. Session Organizers:
i.) Abhishek Nair; ii.) Allen Reji Oommeniii.) Jemima Kyra Jonathan; Affiliation: Mechanical Engineering Students at New Horizon College of Engineering.

3. Title & Abstract of Invited Talk by Session Organizers
Title: 'Study of Cam-less Actuation Technology'
Abstract: Modern automobile engines, whether they use gasoline or diesel fuel, depend on a set of valves to let the air or charge into the combustion chamber and exhaust gases to exit the engine after combustion. Since the invention of the internal combustion engine, the cam has been a crucial component. The drawback with cam shafts is that considerable amounts of power is lost when the parts of the valve train accelerate and decelerate. Additionally, friction from camshafts, springs, cam belts/chains and other components deprives the engine of valuable power and decreases fuel efficiency, in addition to causing wear and tear. Introducing an electromagnetic actuator to open the valves instead of the cam system would significantly take load off the engine and provide a high level of fidelity and control over the engine's valve timings.

4. Session Abstract

The session will include a comprehensive approach to the set-up of a cam-less actuated engine, the components used and the working of the model. A detailed discussion on why an electromagnetic actuator was used and the properties and characteristics of the same. Further, the properties of the valve and valve spring will be covered to gain an insight on applicable forces involved on the valve-train. To conclude, the advantages of the Study will be elaborated and questions can be entertained on the whole session.

Please let us know if we are required to furnish you with any more details regarding the Session and the aforementioned paper. Looking forward to hearing from you. Thank you in advance.