

GIAN COURSE ON ADAPTRONICS
FEBRUARY 04-09, 2019
IIT MANDI

GIAN sponsored short term course on Adaptronics (shape control, vibration control, noise reduction and structural health monitoring) at IIT Mandi.

A GIAN sponsored short term course on Adaptronics (Active Shape Control, Active Vibration Control, Active noise Reduction and Structural Health Monitoring) is being organized at IIT Mandi during February 4-9, 2019. The course is being offered by Prof. Michael Sinapius, Member of the Directorate of German Aerospace Centre at Braunschweig Germany; and also Professor and Head of the Institute of Adaptronics and Functions Integration at the Technical University of Braunschweig. Dr. Naser Al Natsheh, Lecturer at the Technical University of Braunschweig Germany will be conducting the Lab. Sessions.

The course involves 12 lecture and 6 lab. sessions during 5 days followed by exam/evaluation on the 6th day. Students of Ph.D., M.Tech. M.S., M.Sc., and B.Tech. from different parts of India as well as from IIT Mandi are participating in this.

Lectures

Aims of Adaptronics, Elements of Adaptronics, Smart Materials, Piezoceramics as Electro-mechanical Converters, Electroactive Polymers, Piezocomposites, Structural Integration of Smart Materials, Actuator Stroke amplification/Shape Control and Morphing, Structure borne sound and interference, Active Vibration Control, Structural Health Monitoring with Integrated Sensors, Active Control of Sound.

Lab Sessions

Piezoelectric effect – butterfly hysteresis, Piezoelectric actuators - working diagram, Placement of actuators and observability, Shape control, Acoustic control with electric networks, Vibration control