

# 学术报告

## 结构地震响应与风振响应的主动控制 Active Control of Seismic and Wind Induced Vibration

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时 间: 2019年12月26日上午9:30 地 点: 风洞实验室会议室 (201室)

### Outline

- Seismic response control of single/connected building
- Controllers – Static output feedback; LQG
- Magnetorheological damper, (Recurrent NN) Voltage Laws
- Flutter Control of cable-supported bridges
- Wind induced vibration control of benchmark building
- Variable stiffness TMD
- Linearized control law
- Variable length pendulum damper

### Short Bio of Professor Naresh K. Chandiramani

Prof. Chandiramani completed his BTech in Civil Engineering from IIT Delhi, India, and MS and PhD from Virginia Tech., USA, in Engineering Mechanics. He was a faculty in Mechanical Engineering at IIT Guwahati (1995-2005), and is presently a faculty in Civil Engineering at IIT Bombay since 2005. His area of research is computational mechanics, and dynamics & control. His research has been on nonlinear dynamics of fluttering composite panels and cutting tool chatter; piezo aided mechano-thermal induced vibration control of rotating composite beams; hunting stability of railcars, and friction wedge damping for railway freight cars; optimal controller design using Magnetorheological dampers for seismically excited buildings, and variable stiffness/pendulum devices for wind excited buildings. Presently he works on wind induced vibration control of cable supported bridges and study of bridge aeroelasticity as a fluid-structure interaction problem. He has around 30 publications in peer reviewed international journals and a comparable number in international conferences.

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