

## THIS IS TO CERTIFY THAT

# **HAODONG WU**

### HAS SUCCESSFULLY COMPLETED THE COURSE:

## **MULTIPHYSICS SIMULATION OF MEMS**

#### CONTENTS OF THE COURSE:

Structural Mechanics: Linear elastic, geometric nonlinear, static and dynamic analysis.

Damping and Losses: Mechanical damping, dielectric loss, etc.

Electromechanics: The coupling of electrostatics and solid mechanics to compute the deformation of electrostatically actuated structures.

Piezoelectric Devices: Devices that deform structurally under an applied electric field. Multiphysics in MEMS devices: piezoresistivity, joule heating, fluid-structure interaction, etc.

> Guang Chen , Instructor May 10, 2019

Guang Chen