

## INFORMATION ON NEW CONTRIBUTIONS OF DOCTORAL THESIS

Thesis topic: "*Research on the effects of bus vibrations on seated passengers*"

Major: Mechanical Engineering Code: 9520116

Full name of PhD student: Le Duy Long Course: 8

Instructor 's name:

1. Associate Professor, Dr. Nguyen Thanh Quang
2. Associate Professor, Dr. Le Hong Quan

Name of training institution: Hanoi University of Industry

### NEW CONTRIBUTIONS OF THE THESIS

- 1) Building a survey model of Vehicle - Seat - Occupant oscillation.
- 2) Combining the Seat-Occupant Oscillation Survey Model and the Survey Model spatial fluctuations of 29-seat passenger bus.
- 3) Using a combination of specialized software Matlab Simulink and Ansys Workbench in simulation to determine the impact of passenger bus vibration on passengers in three body parts: Head, Chest, and Body.
- 4) Develop an experimental research method to determine the effects of different road surface profiles and different operating conditions at different vehicle speeds. The research results allow to propose some solutions to reduce oscillations during design, gradually perfecting the research methodology for designing vehicle body shells in a modern direction as used in advanced countries.