**Dynamic analysis of plate under moving load on variable dynamic foundation**

Trong Phuoc Nguyen1,\*, The Tuan Nguyen1

*1* *Faculty of Civil Engineering, Ho Chi Minh City Open University, Vietnam*

*\*Corresponding author: phuoc.nguyen@ou.edu.vn*

**Abstract.** This paper presents the analysis of the dynamic behavior of the thin plate on the dynamic foundation subjected to moving loads. The stiffness of the dynamic foundation is considered variable. The dynamic response of the system including load, plate and foundation using the finite element method is applied to analyze the time-dependent dynamic equation of the plate. The numerical results describe the weakened foundation cases in practice and compare the difference between the dynamic and viscoelastic foundations.

**Keywords:** variabledynamic foundation, thin plate, moving load, finite element method.