LECTURE

«THE STATE OF THE ART OF PERIODIC WAVE BARRIERS»

by:

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Professor Zhifei Shi, School of Civil Engineering, Beijing Jiaotong University Beijing, invited by the School of Mechanical Engineering of the National Technical University of Athens, will give a speech titled «The State of the Art of Periodic Wave Barriers" on 6th November 2024.

All interested are welcome to attend the speech, at 13:00, room 204, School of Mechanical Engineering Building, NTUA Zografou.

Lecture Summary

Periodic wave barriers (PWBs) have been found wide applications in civil engineering. However, most of the achievements on the performances of PWBs are limited to the conditions of single-phase soil and saturated soil, as well as stationary loading. In this lecture, the state of the art of PWBs is reported. In the first scenario, taking the Doppler effect into account, the surface wave mitigation by PWBs under a moving load is studied both theoretically and experimentally. In the second scenario, the attention is focused on the performance of PWBs for mitigating surface waves in unsaturated soil. Some interesting results are found in both scenarios.

Short CV

Zhifei Shi received the Ph.D. degree from Harbin Engineering University in 1992. Before he joined the Beijing Jiaotong University in 1994, he was with the Harbin Institute of Technology, as a PostDoctoral Fellow, from 1992 to 1994. His research interests include smart materials and structures (with piezoelectric actuators/sensors), earthquake engineering, ambient vibration control, structural analysis, functionally graded or laminated composites, fracture and fatigue of engineering materials, variational principles, and numerical methods. He was the winner of Beijing outstanding teacher (1997, 2017) and the winner of special government allowances of the State Council (2018). He has published more than 200 journal papers and has been listed in the World's Top 2% Scientists announced by Stanford University Since 2020.