Editorial Announcement

Jonathan T. H. Wu · Hoe I. Ling

Published online: 1 May 2014
© Springer New York 2014

With this issue we launch a new journal, *Transportation Infrastructure Geotechnology*, a peer-reviewed scholarly journal focusing on advancement of geotechnology in transportation infrastructure.

Transportation infrastructure, including bridges, retaining walls, roads, highways, railways, tunnels, seaports, airports, subways, canals, and pipelines, and related installations, in many parts of the world are in dire need of repair and reconstruction. The need is fast approaching a state of crisis. The crisis is caused in part by decades of inadequate investments and poor maintenance of infrastructure and exacerbated by the seemingly more frequent occurrence of devastating natural disasters such as hurricanes, floods, earthquakes, tsunami, and so forth. Failure to provide sound transportation infrastructure will threaten services essential to enable, sustain, or enhance human societal living conditions.

Over the past two decades, most new development and innovation in transportation infrastructure have arguably been in the area of geotechnology. Most notably, new construction materials (such as geosynthetics, chemical treated soil, and recycled materials) have been employed with increasing frequency in earthwork construction, new construction techniques (including the use of new ground improvement methods) and new geotechnology (such as closely spaced geosynthetic reinforced soil) have been developed, and much attention has been paid to sustainability of these geosystems.

Geo-professionals are also faced with the challenge of having to *do more with less*. For example, in the United States alone, there are about 600,000 highway bridges of which more than 12 % are structurally deficient, and 15 % are functionally obsolete; yet the budgets can hardly meet the demand.

Transportation Infrastructure Geotechnology aims at providing an up-to-date reference and an expeditious dissemination of new developments in transportation-related geotechnology to researchers and practitioners engaged in empirical investigation and applications of geotechnical engineering as related to transportation infrastructures. The theme of this Journal very much emphasizes the “technology” in geotechnical

J. T. H. Wu (✉)
University of Colorado Denver, Denver, CO, USA
e-mail: Jonathan.Wu@ucdenver.edu

H. I. Ling
Columbia University, New York, NY, USA

engineering and research as applied to transportation infrastructure, and, as such, is not limited to geomechanics. The Journal covers the broad areas of transportation-related geotechnology, including:

- case histories in transportation infrastructure geotechnology
- geotechnical design and analysis of transportation infrastructure
- construction, repairs, rehabilitation of transportation infrastructure
- geosynthetics and applications
- ground improvement techniques
- geomaterials and recycled materials
- earthwork and performance evaluation of transportation facilities
- sustainability, risk assessment, and environmental issues
- geotechnics for pavements
- smart infrastructure

Also, in honor of Professor Fumio Tatsuoka's contribution to transportation infrastructure geotechnology, the *Tatsuoka Best Paper Award* will be given annually to the author(s) of a paper of exceptional merit and contribution.

It is our hope that you will make this Journal a platform for exchange of ideas and knowledge for the advancement of transportation infrastructure geotechnology.