
CONSTRUCTION ON PERMAFROST



**RUSSIAN SOCIETY FOR SOIL MECHANICS,
GEOTECHNICS AND FOUNDATION ENGINEERING**



**SOIL MECHANICS AND
FOUNDATION ENGINEERING**

GERSEVANOV MEMORIAL LECTURE SERIES

From the Editorial Board

V. N. Razbegin

Editor-in-Chief, Soil Mechanics and Foundation Engineering.

In March 2015, the Russian Society for Soil Mechanics, Geotechnics, and Foundation Engineering (RSSMGFE) organized a "Gersevanov Memorial Lecture Series," with information support from the journal *Soil Mechanics and Foundation Engineering*. The subject of the lecture series was "Implementing the Results of Scientific Research in the Design, Construction, and Operation of Buildings on Permafrost" (directed by Prof. V. N. Ivanov), the timeliness of which has grown rapidly in connection with the expanded scope of construction in Northern regions and the development of the Arctic shelf.

Contributions touched on several mainstream areas: the improvement of methods for analyzing subgrade stress-strain and temperature-humidity states, with consideration of their mutual influence; methods of goal-directed generation and regulation of temperature patterns in structure subgrades; experimental determination of design characteristics of thawing and freezing soil; trends for change in soil temperature conditions in connection with global climate change and their consideration in engineering practice; environmental safety and engineering methods for dealing with heaving, flooding, and other unfavorable processes in frozen earth.

Discussions led to recommendations for the development of standards documents to govern methods for controlling and analyzing subgrade temperature-humidity conditions, with due regard for the need to more actively develop methods to stabilize and reduce soil temperature using heat stabilizers of various design; to develop, without fail, designs for engineering protection against hazardous freeze-and-thaw processes and flooding, as well as the establishment of services to monitor temperature-humidity conditions in the subgrade of operating buildings and built-up areas, and the condition of foundation structures.

This issue of the journal contains materials from the "Gersevanov Memorial Lecture Series" that have been prepared for publication.