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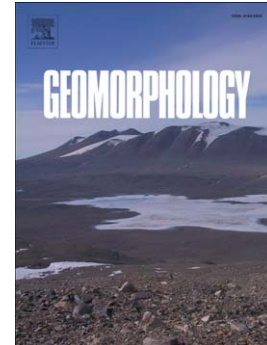
System-morphological approach: Another look at morphology research and geomorphological mapping

Alexander A. Lastochkin, Andrey I. Zhirov, Sergei F. Boltramovich

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System-morphological approach: another look at morphology research and  
geomorphological mapping

Alexander A. Lastochkin <sup>a</sup>, Andrey I. Zhirov (*zhirov84@mail.ru*) <sup>a</sup>, Sergei F. Boltramovich <sup>a</sup>

<sup>a</sup> *Department of Geomorphology, Saint-Petersburg State University, V.O., 10<sup>th</sup> Line, 33/35, RU  
199178, St. Petersburg, Russian Federation*

**Abstract**

A large number of studies require a clear and unambiguous morphological basis. For over thirty years, Russian scientists have been applying a system-morphological approach for the Arctic and Antarctic research, ocean floor investigation, for various infrastructure construction projects (oil and gas, sports, etc.), in landscape and environmental studies. This article is a review aimed to introduce this methodological approach to the international scientific community. The details of the methods and techniques can be found in a series of earlier papers published in the Russian language in 1987-2016. The proposed system-morphological approach includes: 1) partitioning of the Earth surface, i.e. precise identification of linear, point, and areal elements of topography considered as a two-dimensional surface without any geological substance; 2) further identification of larger formations: geomorphological systems and regions; 3) analysis of structural relations and symmetry of topography; and 4) various dynamic (litho- and glaciodynamic, tectonic, etc.) interpretations of the observed morphology. This method can be used to study the morphology of the surface topography as well as less accessible interfaces such as submarine and subglacial ones.

**Keywords:** geomorphology, system-morphological approach, morphology research, geomorphological mapping.

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