

PREFACE

The Journal *Prikladnaia matematika i mekhanika* (Applied Mathematics and Mechanics) has been for over two decades one of the leading Soviet periodicals in this field. Published bi-monthly by the Institute of Mechanics, Division of Technical Sciences of the Soviet Academy of Sciences, it contains papers in applied mathematics and in both solid and fluid mechanics.

English-speaking workers in these fields felt for years the language barrier, which prevented them from becoming acquainted with significant Soviet developments. Even though translations of individual articles appeared occasionally as separate reports and memoranda, such efforts had to remain scattered and were not readily available.

It was decided then, similarly as in the case of some periodicals in other fields, to prepare a cover-to-cover translation of every issue, and to publish this English translation as a regular journal. The American Society of Mechanical Engineers, upon the initiative of its Applied Mechanics Division, secured a grant-in-aid for this purpose from the National Science Foundation. Pergamon Institute has contracted with the Society for translation and publication of this journal.

The present issue is the first of this new translation series, and a few editorial remarks may be in order.

In the translating, which will be done as far as possible by Russian-speaking scientists familiar with the field, every care will be exercised in conveying the author's original meaning and reducing the parenthetical translator's or editor's comments to a minimum. Thus, the translation should be just the opposite of an "annotated" or a "critical" edition of the original, but rather a "translation without rotation or distortion". Still, experience has shown that the reading is facilitated by using sometimes two, almost synonymous terms in translation, in place of one single term in the original, or by including a brief remark. In such cases these remarks will be placed in square brackets, while any text in parentheses should be understood as appearing in this form in the original as well. Numbers in square brackets, on the other hand, refer to the Bibliography at the end of the paper.

With regard to the style of the references, only minor changes of the original were introduced. Titles of references in Russian are both translated and transliterated; those in any language using the Latin

alphabet are simply reproduced and those in a Slavic language other than Russian are transliterated without being translated. All transliterations from the Russian are in accordance with the table included in this issue, which is almost identical with the one adopted by the Library of Congress (See p. 202).

A final word relative to referencing of articles from *Prikladnaia matematika i mekhanika*. As seen from the Table of Contents of this issue, each article is fully identified with regard to its original publication. Thus, either the original or the translated version could be referred to. However, in some instances it may be desirable to be able to make a distinction. It is suggested, therefore, that the present translated periodical be referred to as *Translation of Prikladnaia matematika i mekhanika*, or, for short, *TPMM*, while the designation for the original, for short, could remain *PMM*.

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