Lavrent’ev, M. A.

This Dover edition is an unabridged, slightly corrected republication of the authorized English version first published in 1963 (Zbl 0121.067). In the Dover edition an Index is added. The work is concerned with variational principles in the theory of conformal and quasiconformal mappings, which are applied to hydrodynamic problems given in terms of linear or quasilinear, strongly elliptic systems of differential equations in two variables. For details and comments see the review of the Russian original (1962; Zbl 0121.066).

Reviewer: W. Velte (Würzburg)

MSC:
35J20 Variational methods for second-order elliptic equations
35J65 Nonlinear boundary value problems for linear elliptic equations
35-02 Research exposition (monographs, survey articles) pertaining to partial differential equations
35J55 Systems of elliptic equations, boundary value problems (MSC2000)
49S05 Variational principles of physics
30C20 Conformal mappings of special domains
30C62 Quasiconformal mappings in the complex plane
76B99 Incompressible inviscid fluids

Keywords:
variational principles in the theory of conformal and quasiconformal mappings; linear or quasilinear strongly elliptic systems; differential equations in two variables