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Summaries of Papers Appearing in this Issue

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(These summaries may be reproduced)

Jiří GREGOR, Praha: *On the decomposition of a positive real function into positive real summands.* Apl. mat. 14 (1969), 429—441. (Original paper.)

Analytic functions of one variable with positive real part in the right half-plane, assuming real values on the real positive half-axis, are called positive real functions. In the paper necessary and sufficient conditions for a positive real function to be a sum of two positive real functions are given. Further the structure of any positive real function f is shown when written in the form $f = f_0 + g + h$ where f_0, g, h are positive real functions and f_0 has all the pure imaginary poles of the function f .

JAROSLAV MORÁVEK, Praha: *On the complexity of discrete programming problems.* Apl. Mat. 14 (1969), 442—474. (Original paper.)

The paper is a contribution to the general theory of problems of discrete programming. Particularly, the difficulties of such problems are investigated by theoretical means.

MIROSLAV HLAVÁČEK, Praha: *Linear viscoelasticity with couple-stresses.* Apl. mat. 14 (1969), 475—496. (Original paper.)

In the paper the linear isothermal quasi-static theory of homogeneous and isotropic viscoelastic bodies with couple-stresses is established. The general representations of the linear hereditary laws both in an integral and differential form are given. Uniqueness of the mixed boundary-value problems is proved. The generalization of Betti's reciprocal theorem and that of Galerkin and Papkovitch stress functions are obtained.

VÁCLAV DOLEŽAL, Praha: *O nelineárních zpětnovazebních systémech.* (On nonlinear feedback systems.) Apl. mat. 14 (1969), 497—515. (Survey paper.)

The paper gives a survey of some recent results on the stability and boundedness of the nonlinear feedback systems of the input-output type attained by the methods of abstract spaces.