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**R. C. Sahu, Bishnukar Nayak and B. Behera**

VISCOUS AND MESONIC VISCOUS FLUID MODELS IN  
BIMETRIC THEORY OF GRAVITATION

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**Abstract:** In this paper, it is shown that the anisotropic and spatially-homogeneous Bianchi type-1 cosmological models do not exist in Rosen's [Gen. Rel. Grav., Vol. 4(1973), 435] bimetric theory of gravitation, when source of the gravitational field is governed either by viscous fluid or by mesonic viscous fluid. However, it is shown that the vacuum cosmological models of the universe exist in both the cases. Moreover, the stiff fluid model and static model of the universe are shown as particular cases. Some physical and geometrical consequences of these models are also discussed.

**J. P. King**

MANDELBROJT'S SINGULAR POINT

19-33

**Abstract:** Szolem Mandelbrojt's 1942 result [6] on the singular point of minimum argument is described. An analogous result, having a more straight-forward proof is presented. Also included are comments on the history of the classical problem of the location of singular points of functions defined by Taylor series.

**C. J. Mozzochi**

THE APPLICATION OF NEAR SETS TO GENERAL  
RELATIVITY

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**Abstract:** In this paper we show that near sets play a significant role in Hawking's generalization of General Relativity by the introduction of the path topology.

**Prasanta Malik and Manojit Maity**

ON ROUGH CONVERGENCE OF DOUBLE SEQUENCES IN  
NORMED LINEAR SPACES

89-99

**Abstract:** The idea of rough convergence was introduced by Phu (2001) and then a lot of work has been done in this area. In this paper we define and study rough convergence of double sequences, the set of  $r$ -limit points of double sequences. We also study relation between rough convergence and Pringsheim convergence of double sequences.

**George A. Anastassiou**

GENERAL GRÜSS AND OSTROWSKI TYPE INEQUALITIES  
INVOLVING  $s$ -CONVEXITY

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**Abstract:** Using the well known reopresentation formula for functions due to Fink [7], we establish a series of general Grüss and Ostrowski type inequalities involving  $s$ -convexity and  $s$ -concavity in the second sense, acting to all possible directions.

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