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S. S. Dragomir, Pranesh Kumar and S. P. Singh

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Abstract: In this note we consider the second fundamental form b of a spacetime embedded into E_5 . It is shown that the characteristic polynomial of b allows to obtain an identity which relates b with the intrinsic geometry of the R_4 under analysis.

Norihito Murakoshi, Kouei Sekigawa and Akira Yamada

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Takashi Noiri

REGULAR SET-CONNECTED FUNCTIONS

331-338

Abstract: Dontchev et al. [9] have introduced the notion of regular set-connected functions. In this paper, we obtain several properties of regular set-connected functions and investigate the relationship among regular set-connected functions and some related functions.

H. N. Núñez-Yépez, J. López-Bonilla and A. L. Salas-Brito

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Abstract: It is shown that any Einstein-Maxwell spacetime of class one embedded into E_5 should have a nonvanishing trace for the second fundamental form.

Virgil Pescar and Shigeyoshi Owa

SUFFICIENT CONDITIONS FOR UNIVALENCE OF CERTAIN INTEGRAL OPERATORS

347-351

Abstract: In this work considering the class of univalent functions defined by the conditions $\left| \frac{z^2 f'(z)}{f^2(z)} - 1 \right| < 1, |z| < 1$, where $f(z) = z + a_2 z^2 + \dots$ is analytic in the unit disc $U = \{z : |z| < 1\}$, we obtain some results for the univalence of certain integral operators.

R. M. Shortt

A BASE SPACE APPROACH TO WEAK TOPOLOGIES AND SEQUENTIAL COMPACTNESS FOR SPACES OF VECTOR MEASURES

353-362

Abstract: Extending earlier work, we offer a general framework for the construction and analysis of weak topologies for spaces of Banach space-valued Borel measures on a Polish space. Emphasis is placed on connections between these weak vectorial topologies and the topology of the underlying space. For a certain class of Banach spaces, a reasonable characterization of sequentially compact sets of measures is obtained.

S. M. Yahya

ON PURITY OF A PAIR OF ABELIAN GROUPS

363-377

Abstract: The following two problems are discussed in this paper:

Given two homomorphisms of abelian groups, $\phi : A' \rightarrow A, \Psi : B' \rightarrow B$, under what conditions is the kernel of the induced map $\phi \otimes \Psi : A' \otimes B' \rightarrow A \otimes B$ generated by monomials? And assuming ϕ and Ψ to be monic, under what conditions is the map $\phi \otimes \Psi$ monic?

Taddesse Zegeye, S. C. Arora and M. P. Singh

ON SLANT TOEPLITZ OPERATORS

379-385

Abstract: A slant Toeplitz operator A_φ with symbol φ in $L^\infty(\partial D)$ is an operator whose representing matrix $M = (a_{ij})$ is given by $a_{ij} = \langle \varphi, z^{2i-j} \rangle$ where $\langle \cdot, \cdot \rangle$ is the usual inner product on $L^2(\partial D)$. In addition to other algebraic properties, it is proved that a non-zero hyponormal operator cannot be a slant Toeplitz operator.
