

Indian Journal of Mathematics

Volume 42, No. 1, 2000

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George E. Andrews

THREE-QUADRANT FERRERS GRAPHS

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Abstract: F. C. Aubuck and H. N. V. Temperley extended the idea of Ferrers graph from a geometric set in one quadrant to that in two quadrants. In this paper we examine the extension of Ferrers graphs to three quadrants.

M. S. P. Eastham

ON THE CONVEXITY OF THE STURM-LIOUVILLE SPECTRAL FUNCTION
WITH SLOWLY DECAYING POTENTIAL

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Jesús Ferrer

ON ROLLE'S THEOREM IN SPACES OF INFINITE DIMENSION

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Abstract: We show that Rolle's theorem does not hold in general for real Banach spaces of infinite dimension. For this purpose we give an explicit counterexample to this result in any infinite-dimensional Hilbert space. Also we give a non-trivial version of the theorem for reflexive spaces that extends the classical result.

A. Feza Güvenilir and A. Okay Çelebi

A NOTE ON ASYMPTOTIC STABILITY OF A CLASS OF FUNCTIONAL
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Abstract: In this note, we discuss the asymptotic stability of a class of functional differential equations if unique global solutions exist.

K. C. Gupta, M. Garg and Mridula Purohit

A STUDY OF DOUBLE AND n -FOLD CONVOLUTION INTEGRAL EQUATIONS

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Abstract: In this paper, we first give an outline for the solution of a general n -fold convolution integral equation. During the course of study we also develop a formula for the n -dimensional Laplace transform of $\frac{\partial^{m_1+\dots+m_n}}{\partial x_1^{m_1}\dots\partial x_n^{m_n}} f(x_1, \dots, x_n)$ which is of interest by itself. Next, we solve a double convolution integral equation involving the product of the multivariable H -function and a generalized polynomial set as its kernel. Since both the functions involved here are quite general in nature, this latter result can also act as a key formula and we can obtain from it solutions of a large number of new and known double and single convolution integral equations involving the products of several useful and simpler functions and polynomials as their kernels. The known results obtained earlier by Srivastava and Buschman [16], Srivastava et al. [20] and Buschman et al. [5] also follow as special cases of the double convolution

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Wieslaw Krawcewicz and Paola Vivi

EQUIVARIANT DEGREE AND NORMAL BIFURCATIONS

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Abstract: We show that normal bifurcation maps are generic and we use the equivariant degree to state the branching results for local and global bifurcation with symmetries. The equivariant degree method is used to detect the orbit types of the generic bifurcation (including submaximal orbit types).

Ivor J. Maddox

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Abstract: Slow oscillation of sequences is examined in an abstract setting and a new concept of uniform slow oscillation is introduced.

L. K. Patel and H. M. Patel

ANISOTROPIC FLUID SPHERES IN GENERAL RELATIVITY

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Abstract: Interior solutions of Einstein field equations for anisotropic fluid spheres with uniform and variable density are obtained. The physical plausibility of the solutions is discussed by studying numerical estimates of various parameters occurring in the solutions. These anisotropic fluid spheres solutions match smoothly to the Schwarzschild exterior solution across the boundary and have physically reasonable behaviour in the interior of the sphere.

T. Pati

GENERALIZATION OF A THEOREM OF KOGBETLIANTZ ON ABSOLUTE
SUMMABILITY

87-106

Abstract: In this paper the author studies, under the assumption that $\sum a_n$ is summable $[R^*, \lambda_n, 1]$, the interrelation between the bounded variation of $\{s_n/\lambda_{n+1}\}$, where $\{s_n\}$ is the sequence of partial sums of $\sum a_n$ and the absolute convergence of $\sum a_n/\lambda_{n+1}$. Corollaries of the theorems obtained include a theorem of Kogbetliantz, a result due to Mohanty and the absolute summability analogue of a result proved by Mohanty and Ray.

M. Sitaramayya and S. Subbulakshmi

BENNEY'S SYSTEM AS AN INFINITE DIMENSIONAL HAMILTONIAN SYSTEM

107-118

Abstract: The Benney's system [1] is discussed as the quasiclassical limit of the KP system or the generalized KdV equations in the classical case, whereas in the supersymmetric case of the Benney's system, though semi-integrable, the super Poisson bracket is realized as part of the commutator resulting from an associated product $F \circ G$ extended by $D_{\neq}s$.
