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CONTENTS

Abstract: We present here conformable fractional self-adjoint operator comparison, Poincaré, Sobolev, Ostrowski and Opial type inequalities. At first we give right and left conformable fractional representation formulae in the self-adjoint operator sense. Operator inequalities are based in the self-adjoint operator order over a Hilbert space.

Abstract: This paper include two sections, in the first section we give introduction to Pell's equation and Hurwitz complex continued fraction. In the second section, we determine Hurwitz complex continued fraction (HCCF) of $\sqrt{D}$, when D is integer of the type $-(k^2 \pm 1), -(k^2 \pm 2), -(k^2 \pm k)$ and $-((mk)^2 \pm k), k$ and m are positive integers. Then we find all solutions (in Gaussian integers) of the Pell's equation $x^2 - Dy^2 = 1$ and how these solutions are related to each other.

Abstract: In this paper, we introduce a new μ-set contraction condition using control function F and establishe some new generalization of Darbo fixed point theorem associated with measures of noncompactness that generalizes Darbo's fixed point in a different way than the existing results in the literature. Further we establish the existence of solution of a system of nonlinear equation, and a set of triple system of functional equations involving condensing operators in Banach spaces, followed by two supportive examples.

Abstract: Let $R = \bigoplus_{\alpha \in \Gamma} R_\alpha$ be a commutative ring with unity graded by an arbitrary grading commutative monoid Γ. We say that R is a graded-coherent ring if every finitely generated homogeneous ideal of R is finitely presented. In this paper, we generalize several results on coherent rings to graded-coherent rings.

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