

ABSTRACT FRACTIONAL INEQUALITIES OVER A LINE SEGMENT OF A BANACH SPACE

GEORGE A. ANASTASSIOU

ABSTRACT. Here we present first a complete fractional calculus between a pair of Banach spaces. That is regular and sequential fractionality. Based on these we give a collection of left and right related fractional inequalities relied on a line segment of a Banach space. We include also the case of connected line segments. We treat as well the case of sequential inequalities. Our results include Ostrowski type inequalities, Poincaré and Sobolev type inequalities, Opial type inequalities and Hilbert-Pachpatte type inequalities.

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DEPARTMENT OF MATHEMATICAL SCIENCES, UNIVERSITY OF MEMPHIS, MEMPHIS, TN 38152, U.S.A.
Email address: ganastss@memphis.edu

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