Qeios

Peer Review

Review of: "On a Certain Inequality for the Sum of Norms and Reverse Uncertainty Relations"

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\documentclass[10pt,reqno,11pt]{amsart}%

\usepackage{mathrsfs}

\usepackage{amsfonts}

\usepackage{amssymb}

\usepackage{amsmath}

\usepackage{amsthm}

\usepackage{color}

\usepackage{color,graphics,srcltx}

\usepackage[mathscr]{eucal}

\usepackage{graphicx}%

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%TCIDATA{LastRevised=Tuesday, September 28, 2010 17:33:45}

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%TCIDATA{BibliographyScheme=Manual}

%TCIDATA{Language=American English}

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doi.org/10.32388/P7CE8A

%EndMSIPreambleData

\oddsidemargin 0pt \evensidemargin 0pt \textwidth 160mm \textheight

220mm

\newtheorem{theorem}{Theorem}[section]

\newtheorem{corollary}[theorem]{Corollary}

\newtheorem{lemma}[theorem]{Lemma}

\newtheorem{proposition}[theorem]{Proposition}

\newtheorem{axiom}{Axiom}

\newtheorem{definition}{Definition}[section]

\newtheorem{remark}{Remark}[section]

\newtheorem{algorithm}[theorem]{Algorithm}

\newtheorem{notation}{Notation}

\renewcommand{\thenotation}{}

\theoremstyle{definition}

\theoremstyle{remark}

\numberwithin{equation}{section}

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\newcommand{\secref}[1]{\S ???}

\newcommand{\lemref}[1]{Lemma~???}

\renewcommand{\baselinestretch}{1.2}

\newtheorem{example}{Example}[section]

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\begin{document}

\begin{center}

{\LARGE \textbf{Referee's report on ``On a Certain Inequality for the Sum of

Norms and Reverse Uncertainty Relations'' by Krzysztof Urbanowski}}{\normalsize

}

\bigskip

\bigskip

\end{center}

\vspace{0.1in}

\moveleft.5\hoffset\leftline{Title: On a Certain Inequality for the Sum of

Norms and Reverse Uncertainty Relations}

\moveleft.5\hoffset\leftline{Authors: Krzysztof Urbanowski}

\moveleft.5\hoffset\leftline{Qeios}

\vspace{0.3in}

This paper presents a novel inequality for the sum of squares of norms of two vectors in an inner product space.

Building on this result, the author applies it to derive a ``reverse uncertainty relation'' in quantum mechanics and analyzes its properties.

The paper is well-structured, with clear and rigorous mathematical derivations.

The proofs are sound, and the transition from mathematical inequality to physical application is logically coherent.

The discussion of limitations adds depth to the analysis.

Moreover, the results demonstrate remarkable simplicity, effectively circumventing the complexity and limitations inherent in using the Dunkl-Williams inequality.

\begin{flushright} Reviewer: Junjian Yang \end{flushright}

\end{document}

Attachments: available at https://doi.org/10.32388/P7CE8A

Declarations

Potential competing interests: No potential competing interests to declare.