Mathematical
Inequalities
& Applications
Volume 23, Number 4 (2020), 1325–1341
doi:10.7153/mia-2020-23-98

BOHR PHENOMENON ON THE UNIT BALL OF A COMPLEX BANACH SPACE

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Abstract. Let $\mathbb{B}_X$ be the unit ball of a complex Banach space X. In this paper, we will generalize several results related to the Bohr radius for analytic functions or harmonic functions on the unit disc $\mathbb{U}$ in $\mathbb{C}$ to holomorphic mappings or pluriharmonic mappings on $\mathbb{B}_X$. We will establish Bohr's inequality for the class of holomorphic mappings which are subordinate to convex mappings on $\mathbb{B}_X$. Next, we will establish Bohr's inequality for pluriharmonic mappings on $\mathbb{B}_X$. We will also obtain the p-Bohr radius for bounded pluriharmonic functions on $\mathbb{B}_X$. Finally, we will determine the Bohr radius for a class of holomorphic functions on $\mathbb{B}_X$ which contains odd holomorphic functions on $\mathbb{B}_X$.

Mathematics subject classification (2010): 32A05, 32A10, 32K05.

Keywords and phrases: Bohr radius, bounded pluriharmonic mapping, homogeneous polynomial expansion, odd holomorphic functions, subordination.

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Paper MIA-23-98