A RESULT CONCERNING BEST PROXIMITY POINT FROM THE PERSPECTIVE OF G-METRIC SPACES USING CONTROL FUNCTIONS WITH AN APPLICATION

Samriddhi Ghosh

Department of Mathematics, Amity University,
Kolkata, West Bengal, 700135, India.
(E-mail: ritha98@gmail.com)

Ramakant Bhardwaj

Department of Mathematics, Amity University,
Kolkata, West Bengal, 700135, India.
(E-mail: rkbhardwaj100@gmail.com)

Satyendra Narayan

Applied Computing department, Sheridan Institute of Technology,
Oakville, Ontario, L6H 2L1, Canada.
(E-mail: narayan.satyendra@gmail.com)

and

Deb Sarkar*

Department of Mathematics, Amity University,
Kolkata, West Bengal, 700135, India.
(E-mail: debsarkar1996@gmail.com)

Abstract. Using the concepts, methodology and iteration process of functional analysis, in this manuscript a new best proximity point result has been established for a new type of inequality satisfying a α proximal contractive mapping. We have also developed an example for the result. Along with all these, some corollaries are also established as special cases of the previously established result. For establishing our purpose, some basic concepts of control functions have also been used. An application of the theorem hence deduced, has also been given for integral equations.