

Article

Existence and Unique Coupled Solution in S_b -Metric Spaces by Rational Contraction with Application

Jelena Vujaković¹, Gajula Naveen Venkata Kishore² , Konduru Pandu Ranga Rao³,
Stojan Radenović^{4,*} and Shaik Sadik⁵

¹ Faculty of Sciences and Mathematics, University of Priština, Lole Ribara 29,
38220 Kosovska Mitrovica, Serbia; jelena.vujakovic@pr.ac.rs

² Department of Mathematics, SRKR Engineering College, Bhimavaram, West Godavari 534 204, India;
kishore.apr2@gmail.com

³ Department of Mathematics, Acharya Nagarjuna University, Nagarjuna Nagar, Guntur 522 510, India;
kprao2004@yahoo.com

⁴ Department of Mathematics, College of Science, King Saud University, Riyadh 11451, Saudi Arabia

⁵ Department of Mathematics, Sir C R R College of Engineering, Eluru, West Godhavari 534 007, India;
sadikcrrce@gmail.com

* Correspondence: stojan.radenovic@tdtu.edu.vn; Tel.: +381-066-800-6569

Received: 30 January 2019; Accepted: 14 March 2019; Published: 28 March 2019



Abstract: In this paper, we prove a unique common coupled fixed point theorem for two pairs of w -compatible mappings in S_b -metric spaces. We also furnish an example to support our main result.

Keywords: S_b -metric space; w -compatible pairs; S_b -completeness.