

Some fixed point results for F-contractions

Milica Savatović

*University of Belgrade, School of Electrical Engineering, Bulevar kralja Aleksandra 73, 11000 Belgrade, Serbia
e-mail: milica.makragic@etf.rs*

Jasmina Vujadinović

*University of Defence, Military Academy, Generala Pavla Jurišića Šturma 33, 11000 Belgrade, Serbia
e-mail: jasmina.fjuljanin@va.mod.gov.rs*

Abstract. Based on the Banach contraction principle, many mathematicians began to formulate various contractive conditions under which a fixed point exists. D. Wardowski [1] introduced F-contractions in metric spaces and, therefore, proved a generalization of Banach contraction principle. In following ten years, Wardowski's approach, or some of its modifications, have been widely used by many researchers for obtaining new fixed-point results for single- and multivalued mappings in various kinds of spaces, such as b-metric spaces, fuzzy metric spaces, etc. In this talk, we present an overview of these investigations, modified with some improvements, especially regarding the conditions imposed on the function F entering the contractive condition.

Keywords: F-contraction; fixed point; Banach contraction principle.

References

- [1] **D. Wardowski.** Fixed points of a new type of contractive mappings in complete metric spaces. *Fixed Point Theory Appl.*, 2012, 94.
- [2] **N. Fabiano, Z. Kadelburg, N. Mirkov, V. Šešum Čavić, S. Radenović.** On F-Contractions: A Survey. *Contemporary Mathematics*, 2022, 3(3), 327 - 342.
- [3] **M. Cvetković.** Comparison of F-contraction and φ -contractions. *Filomat*, 2023, 37(12), 3951-3961.