

ON NANO SOFT  $^s(\mathcal{J})$ -CONTINUOUS FUNCTIONS

S. P. R. Priyalatha, S. Vanitha\* and T. Witczak\*\*

Department of Mathematics,  
Kongunadu Arts and Science College,  
Coimbatore - 641029, Tamil Nadu, INDIA

E-mail : priyalathamax@gmail.com

\*Department of Mathematics,  
Bharathiyar Institute of Engineering for Women,  
Salem - 636112, Tamil Nadu, INDIA

E-mail : svanithamaths@gmail.com

\*\*Institute of Mathematics,  
University of Silesia,  
Bankowa 14, Katowice, POLAND

E-mail : tm.witczak@gmail.com

(Received: Jul. 14, 2025 Accepted: Dec. 21, 2025 Published: Dec. 30, 2025)

**Abstract:** In this paper, we introduce new ideas of nano soft  $^s(\mathcal{J})$ -open sets and examine a few characteristics of nano soft  $^s(\mathcal{J})$ -openness. Furthermore, we study nano soft  $^s(\mathcal{J})$ -continuous functions. Likewise, some characterization and properties are given. We compare our framework with some other well-known ones that are present in the literature.

**Keywords and Phrases:** Nano soft  $^s(\mathcal{J})$ -open, nano soft  $^s(\mathcal{J})$ -closed set, nano soft  $^s(\mathcal{J})$ -continuity.

**2020 Mathematics Subject Classification:** 54A05, 68R10.

## 1. Introduction

In this paper we combine several mathematical tools which are all connected with general topology or with the ideas of uncertainty and approximation. Due to this reason, we would like to present briefly some basic components of our project.