Some Operators on Interval-Valued Picture Fuzzy Sets and a Picture Clustering Algorithm on Picture Fuzzy Sets

B. C. Cuong[1], **L. H. Son**[2], **P. H. Phong**[3], **R. T. Ngan**[4], **and N. X. Thao**[5]

Abstract: In [1], Cuong and Kreinovich introduced the concept of picture fuzzy sets (PFS), which are the direct extensions of the Zadeh's fuzzy sets and Antanssov's intuitionistic fuzzy sets. Then some operations on PFS with some properties are examined. In this paper, we present the following issues:

- Define some new operators and prove some theorems of these operators on interval valued picture fuzzy sets;
- Present the main notions and some propositions of the picture fuzzy soft set theory, which is the combination of the picture fuzzy set and the Molodtsov's soft set theory. The basic properties of the picture fuzzy soft sets and the picture fuzzy soft relations are also discussed;
- Introduce several novel fuzzy clustering algorithms on the basis of picture fuzzy sets and applications to time series forecasting and weather forecasting [2-3].

References

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[1, 4, 5] Institute of Mathematics, Vietnam Academy of Science and Technology, 18 Hoang Quoc Viet, Cau Giay, Hanoi, Vienam
bccuong@gmail.com, rtngan@hunre.edu.vn, thaonx281082@yahoo.com

[2] VNU University of Science, Vietnam National University, 334 Nguyen Trai, Thanh Xuan, Hanoi, Vienam
sonlh@vnu.edu.vn

[3] Faculty of Information Technology, National University of Civil Engineering, 55 Giai Phong, Hanoi, Vienam
phphong84@yahoo.com