

# INNOVATIVE GRAPHS VIA $E_J$ -NEIGHBORHOODS RISING FROM IDEALS

### Aynur KESKİN KAYMAKCI<sup>1,\*</sup>,

<sup>1</sup>Selcuk University, Faculty of Science, Department of Mathematics, Campus, 42130, Konya/TÜRKİYE

### ABSTRACT

Neighborhoods systems is an important tool for graphs in view of topological. So, in this paper, we establish new types of eight neighborhoods via the notion of set-ideal and  $E_j$ -neighborhoods from vertices of any graph. Then, the accuracy measures and boundary regions of these approximations are calculated. We explore novel types of j-lower (resp. j-upper) approximations are obtained and some algorithms are introduced. Finally, we give a real-life problem which is related to our methods.

Keywords Neighborhood Systems · Rough Sets · Graph Topology · j-Accuracy Measure

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<sup>\*</sup>Corresponding Author's E-mail: akeskin@selcuk.edu.tr

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