1163-60-1209 **Debasmita Banerjee*** (debasmitabanerjee12@gmail.com), **Bapi Dutta**, **Debashree Guha** and **Luis Martínez**. *Implementation of stochastic multiobjective acceptability analysis in combined MCHP-QUALIFLEX method to handle multi-criteria decision-making problems.*

QUALIFLEX is a convenient outranking technique to handle multi-criteria decision-making problems due to its less complexity and more user-friendly nature, whereas the multiple criteria hierarchy process (MCHP) allows decision-makers to deal with the hierarchical structure of criteria set where decision-makers can even estimate results for a particular sub-criterion at some intermediate level of the hierarchy. In this talk, we discuss the fusion of the MCHP and the QUALIFLEX methodology with special emphasis on modeling interaction among the set of criteria using the concept of bipolar Choquet integral. To give the decision-makers more freedom for expressing their cognition, the q-rung orthopair fuzzy (q-ROF) environment is adopted to expresses the criteria measurement. In addition, this study aims to establish a new framework by implementing stochastic multiobjective acceptability analysis (SMAA) in the proposed extended QUALIFLEX method to take into account a variety of parameters compatible with the descriptive information regarding the relative importance and interaction of different criteria provided by the decision-maker. At last, a numerical example based on the supplier selection problem is presented to inspect the feasibility of the proposed methodology. (Received September 15, 2020)