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Zadeh (Fuzzy Sets and Systems, 1978) presented the theory of possibility related to the theory of fuzzy sets by defining the concept of a possibility distribution as a fuzzy restriction, which acts as an elastic constraint on the values that can be assigned to a variable. We discuss the widely used possibilistic approach given by Lai and Hwang (Fuzzy Sets and Systems, 1992) that convert the fuzzy objective with a triangular possibility distribution into three crisp objectives corresponding to the three critical values (the most possible, the pessimistic, and the optimistic values). The approach has many advantages over other approaches from the literature. In this talk, we also report some new developments in possibilistic programming approach given by Gupta and Mehlawat (IEEE Transactions on Fuzzy Systems, 2014) for solving optimization problems wherein the solution approach simultaneously minimizes the best scenario, the likeliest scenario, and the worst scenario for the imprecise objective functions using α -level sets that define confidence level of the fuzzy judgements of the decision maker. (Received September 19, 2016)