

## **Fuzzy Critical Path for Project Network**

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### **Abstract**

In this paper an algorithm is presented to perform critical path analysis in a fuzzy environment. The trapezoidal fuzzy numbers, given by decision makers or characterized by historical data, are utilized to assess the activity times in a project network. And a fuzzy critical path analysis is proposed for project network problem. So, the grade of membership that the project can be completed within a prefixed period can be computed. By using this algorithm, the ambiguities involved in the assessment activity times in a project network can be effectively improved and thus a more convincing and effective project management decision-making can be obtained.

*Keywords:* Fuzzy Set Theory, Trapezoidal Fuzzy Numbers, Fuzzy Critical Path Analysis, Project Network.