## THE ANALYTICAL HIERARCHY PROCESS IN THE SUPPLIER SELECTION PROBLEM

Giuseppe Bruno
Engineering Management Department
"Federico II" University
Naples, Italy
E-mail: giuseppe.bruno@unina.it

Emilio Esposito
Engineering Management Department
"Federico II" University
Naples, Italy
E-mail: emilio.esposito@unina.it

Andrea Genovese
Engineering Management Department
"Federico II" University
Naples, Italy
E-mail: andrea.genovese@unina.it

Renato Passaro
Department of Technology
"Parthenope" University
Naples, Italy
E-mail: renato.passaro@uniparthenope.it

## **ABSTRACT**

The Supplier Selection Problem (SSP) consists of analyzing and measuring the performance of a set of suppliers in order to rank and select them for improving the competitiveness of the whole supply system. As many conflicting factors should be taken into account in the analysis, the problem can be tackled using multi-criteria models and methods. In this work a careful scrutiny of the papers appeared on international scientific journals in the recent years about SSP is provided. The survey highlights that the most used methodology is the Analytical Hierarchy Process (AHP). Thus, an overview view of the current proposals based on AHP and its variants to cope with the SSP is provided. Crucial aspects which arise when the methodology is actually applied in real cases are identified and discussed.

Keywords: Supply System, Supplier Selection, AHP.