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## The hierarchal decision making algorithm as an analytical tool for a natural understanding physical systems

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**Abstract content** (Max 300 words) [http://events.saip.org.za/getFile.py?target=\\_blank](http://events.saip.org.za/getFile.py?target=_blank) **Formatting** **Special chars**

New technologies coupled with good innovative ideas are being developed at a very fast rate and as a result the world has become very dynamic with more complex decision problems to solve. These decisions often involve complex relationships and interactions among the decision elements. To assist decision makers and analysts, fundamental questions are asked in order to explain the existing phenomena. The suitable method used to decompose these problems in hierarchal levels and formulate hierarchal decisions was developed by Saaty in the late 1980. The AHP is a mathematical decision making tool for solving very complicated process planning decisions problems by decomposition, determination and synthesis.

This paper explores comprehensive algorithm of the Analytical Hierarchy Process (AHP) basic concept which uses different pairwise comparisons scales and judgement quantification techniques based on expert opinion to develop a decision model. The paper brings about a better understanding to the academic paternity, business community and complex decision makers in the public sector.

Keywords: Hierarchical decision, Physical Systems, Algorithms, Physics, Decision Models

**Apply to be considered for a student award (Yes / No)?**

no

**Level for award (Hons, MSc, PhD, N/A)?**

n/a

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