https://www.scirp.org/journal/ns Natural Science, 2020, Vol. 12, (No. 9), pp: 659-660

The Significant and Profound Impacts of Chou's Invariance Theorem

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Keywords: Invariance Theorem, Mahalanobis Distance, Significant Impacts, Profound Impacts
Received: September 2, 2020 **Accepted:** September 12, 2020 **Published:** September 15, 2020

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ABSTRACT

In this short review paper, the significant and profound impacts of the Chou's "invariance theorem" have been briefly presented with crystal clear convincingness.

The Chou's invariance theorem was originally proposed by Kuo-Chen Chou [1] in 1995 to address the problem often encountered in bioinformatics and cheminformatics. The issue is that the Mahalanobis distance [2] cannot be defined because its covariance matrix is singular. One effective approach to solve this problem is to reduce its Dimension (vector space) until the covariance matrix concerned is well defined. This can be done by removing one or more components until the matrix concerned is no longer singular. The "Chou's invariance theorem" says that it does not matter at all to remove which components because exactly the same final outcome will be remained.

Ever since it was proposed, the "Chou's invariance theorem" has been widely and increasingly used by many follow-up scientists (see, e.g., [3-7]).

CONFLICTS OF INTEREST

The author declares no conflicts of interest regarding the publication of this paper.

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