Documents

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Demystifying algorithmic complexities and geometric review of the 'H'-index
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Abstract
The current discourse delves into the effectiveness of h-index1 as an author level metric. It further reviews and explains the algorithmic complexity of calculating h-index through algebraic method. To conduct the algebraic analysis propositional algebra, algorithm and coding techniques have been used. Some use cases have been identified with a finite data set/set of array to demonstrate the coding techniques and for further analysis. Finally, the explanation and calculative complexities to determine the index have been further simplified through geometric method of calculating the h-index using the similar use cases that was used for coding. It is concluded that determination of the h-index using Euclidean geometric method with Cartesian frame of reference provides a through and visual clarification. Finally, a set of postulates has been proposed at the end of the paper, based on the case studies.

MSC Codes 51N20 (Primary), 52B55 (Secondary), 65Y04 (Secondary), 68Q25 (Secondary), 68W40 (Secondary)

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