A Population-Modulated Bibliometric Measure with an Application in the Field of Statistics

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Abstract

We use Confirmatory Factor Analysis (CFA) to derive a unifying measure of comparison of scientists based on bibliometric measurements, by utilizing the h-index, some similar h-type indices as well as other common measures of scientific performance. We use a real data example from ten of the most widely recognised Departments of Statistics (Berkeley, Carnegie Mellon, Chicago, Duke, Harvard, Minnesota, North Carolina State, Oxford, Stanford and Washington) to demonstrate our approach and argue that our combined measure results in a better overall evaluation of a researchers' scientific work.

Key words: *Citation metrics, Research output, h-index, h-type indices, Confirmatory Factor Analysis (CFA), Component scores, Highly cited Researchers*

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