

# Better search engine results thanks to new method

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How does Google decide which search results to display? Doctoral candidate Anne Schuth developed a new method by which dozens or even hundreds of search algorithms can be compared with each other simultaneously. This means that the best search algorithm can be selected faster than was previously possible. Schuth will obtain his PhD from the UvA on 27 May.

A [search query](#) can turn up many webpages – often in the millions – with possible answers. Search engines such as Google are continually developing [new algorithms](#) to sort through all of those pages. In his research, Anne Schuth focused on developing methods to compare these search algorithms efficiently.

## Interleaving vs. multileaving

One of the methods currently being used for this purpose is called 'interleaving'. In this [method](#), two algorithms are compared by displaying their [search results](#) alternately in a single list of results intended for the search engine's user. The user, who is then unable to see where the results came from, merely clicks on the result which gives the preferred answer. With interleaving, it is possible to determine which of the two search algorithms led to the desired answer and thus to conclude which was the better algorithm. By repeating this process with millions of users, a reliable conclusion can be drawn as to the more effective algorithm.

'However, interleaving has one major limitation: only two search algorithms can be compared at once', says Schuth. 'So I spent part of my research developing a 'multileaving' method which does not have this limitation. With multileaving, several dozens or even hundreds of search algorithms can be compared with each other simultaneously by displaying their results alternately at the top of the user's screen. The preferred result is determined by interpreting user interaction.'

Schuth has shown that with this method, the best search algorithm can be found much more quickly. As a result, these algorithms will be available to more quickly, which means they can find the answer to their search query sooner. In any event, large companies such as Bloomberg, Netflix and Yandex are already using Schuth's multileaving method.

Provided by University of Amsterdam

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