

# WEB OF KNOWLEDGE<sup>SM</sup> BACKFILES

DEEPER RESULTS AND A MORE IMPACTFUL H-INDEX



“ For the few scientists who earn a Nobel prize, the impact and relevance of their research is unquestionable. Among the rest of us, how does one quantify the cumulative impact and relevance of an individual’s scientific research output? In a world of limited resources, such quantification (even if potentially distasteful) is often needed for evaluation and comparison purposes (e.g., for university faculty recruitment and advancement, award of grants, etc.). ”

— *An index to quantify an individual’s scientific research output*, J. E. Hirsch  
(click here for full article: <http://www.pnas.org/content/102/46/16569.full> )

## WERE YOU AWARE THAT YOUR *H-INDEX* CALCULATION COULD BE INACCURATE?

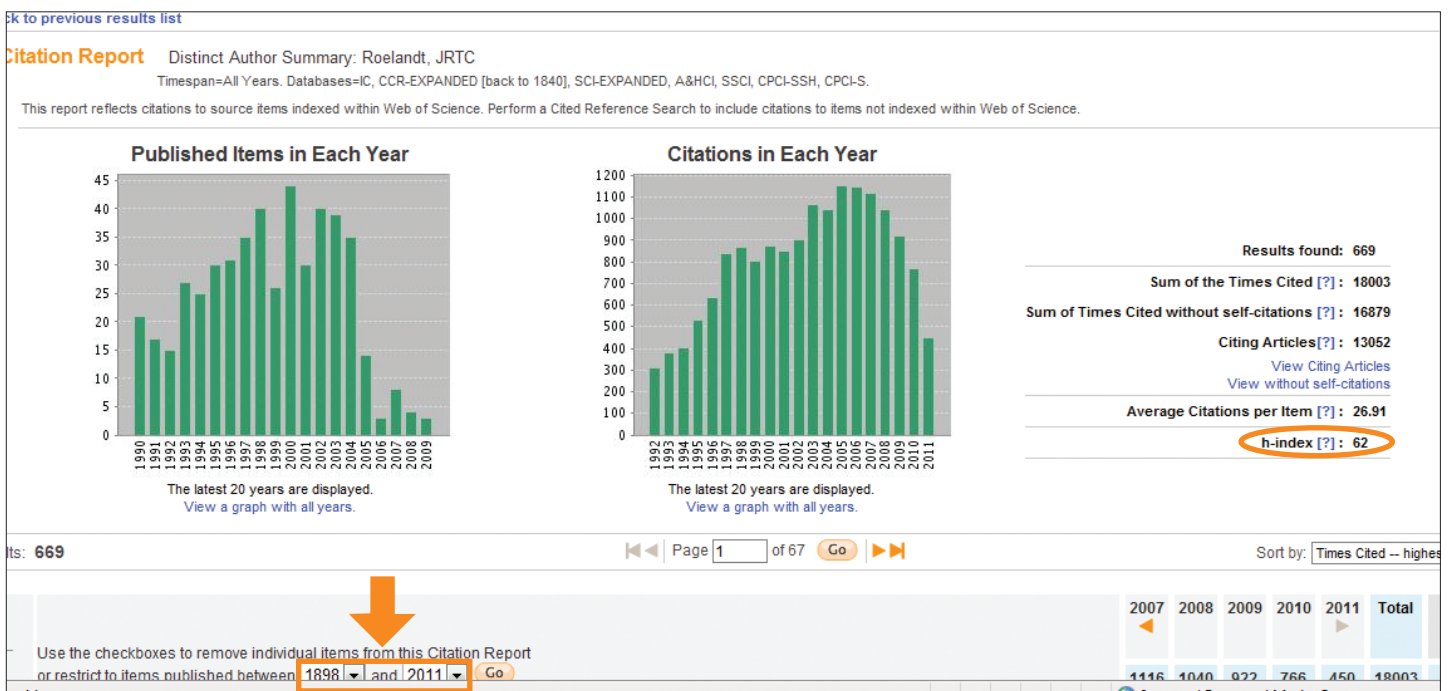
Whether you are promoting your own research or tracking the research activities of colleagues, competitors and potential collaborators, the *h-index* is a vital indicator of the impact and quantity of an individual’s research performance.

Accurate *h-index* calculations are crucial if institutions are to identify researchers of the highest caliber, or if researchers themselves are to communicate the power and influence of their work to the wider community. However the *h-index* is very often miscalculated because the full extent of an author’s past research is not taken into account. This can have significant implications for the success of an institution and the credibility of a researcher.

### CASE STUDY: ERASMUS UNIVERSITY, ROTTERDAM

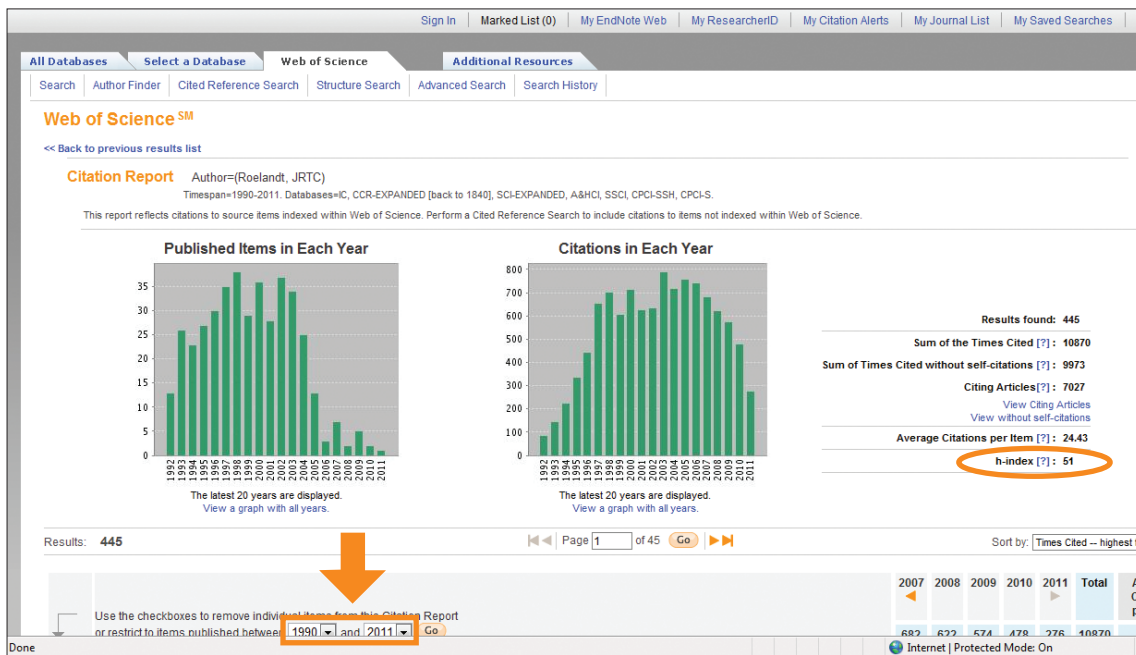
**Dr Jos Roelandt Ph.D** was professor of Cardiology at Erasmus University, Rotterdam in 1983; Chairman of the Department of the Thoraxcenter of the Erasmus MC, Rotterdam from 1987 to 2004; and currently Editor in Chief of the *‘European Journal of Echocardiography’*.

If Dr Roelandt’s *h-index* is calculated using backfiles from 1900 to the present day, his resulting *h-index* is **62** :

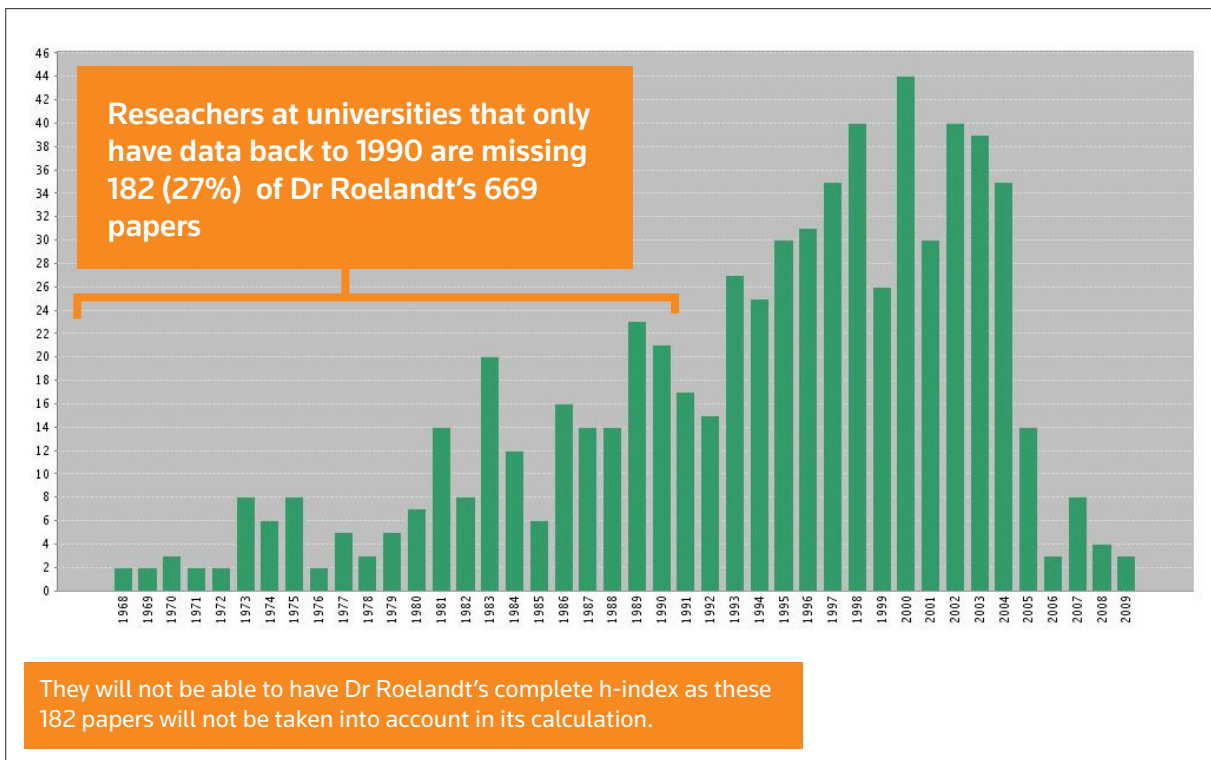


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If, however, Dr Roelandt's h-index is calculated without factoring in backfiles, the result is significantly and unfavourably different. By calculating his h-index using papers which only date back as far as 1990, not only is a significant amount of his portfolio omitted, but his result drops by 10 to **51**.



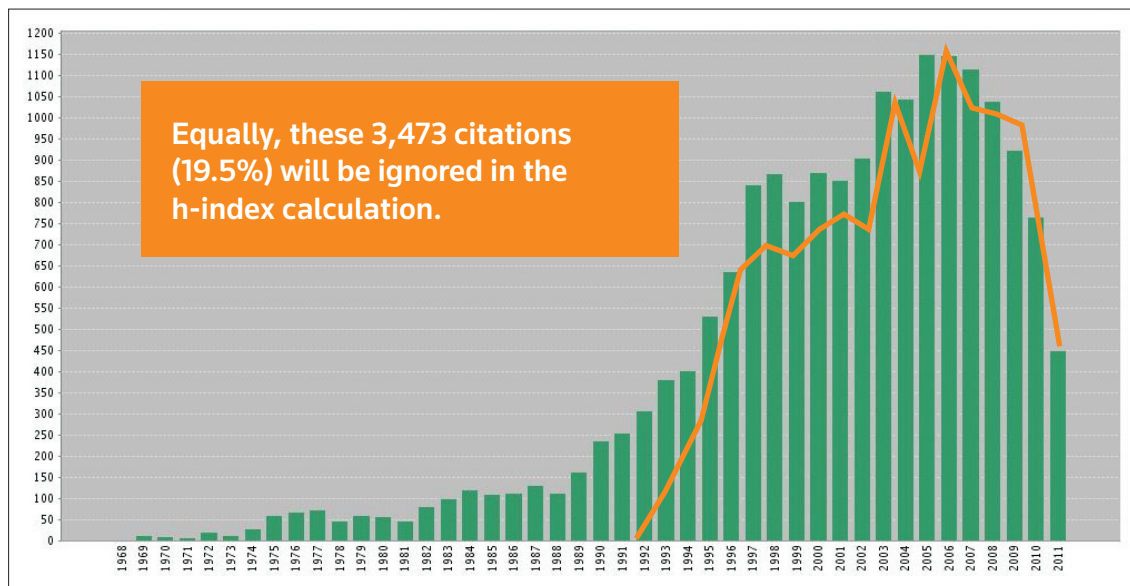
Researchers at universities that only have data back to 1990 are missing 182 (27%) of Dr Roelandt's 669 papers



Number of papers published by Dr Roelandt during his whole career

Equally, 3,523 (19.5%) of the 18,003 citations that have been made to Dr Roelandt's work would be ignored in the h-index calculation.

Number of citations received by Dr Roelandt's publications



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