

ANALYSIS OF IMPACT

MY CONVENTIONAL h, g AND I10 INDICES

- 1) The h index is defined as the number h of publications each cited h or more times. It is designed to measure a combination of quality and productivity, and has become very popular. However it is primitive compared with website feedback or scientometrics.
- 2) The g index is defined as the unique largest number of publications such that the sum of the top g articles received at least g squared citations. It is meant to take into account heavily cited publications.
- 3) The I10 index is the number of publications cited more than ten times. It was devised by Google Scholar.
- 4) I define the I5 index as the number of publications cited more than five times.

On 10/11/17 my citation indices are:

h = 43

g = 91

I10 = 211

I5 = 326

Total citations (n) = 11,207

Citations per paper = 53.11

A comparison of some indices is given in the following Table for some physicists and chemists. The * denotes staff at the EDCL.

Scientist	h	g	I10	n
Myron Evans*	43	91	211	11,207
Wolfgang Pauli	55	97	100	18,681
Paul Dirac	60		105	57,681
Mansel Davies*	30	51	68	~ 2,800
Jeremy Jones*	18	31	30	~ 990
Alun H. Price*	7	13	13	
Paolo Grigolini	52		200	9,320
W. T. Coffey	34		126	6,014
Friedrich Hehl	51		144	11,808
Sean Carroll	50		92	20,393
Ark. Jadczyk	23		43	1,787
W. Rodrigues	30		95	4,374

A. J. S. Williams*	4		2	45
Richard Feynman	61		94	84,994
J. O. Williams	24	34	55	1,500
G. Williams	33	67	67	12,159
H. G. Heller	21	35	33	1,848

An h index of 43 is good enough for Membership of the U. S. National Academy of Sciences. A g index of 91 is about the same as Einstein and Hawking from 2011 onwards. The median h index for full professors in physics is 25. The median citations per paper in physics is 7.22, and the median citations per paper in chemistry is 8.09. A sample on the web of 26 staff members from TU Chemnitz showed h indices from 5 - 39 and g indices from 9 - 67. A g index of 91 is about the same as those of Einstein and Hawking from 2011 onwards. This information is available on the web.

My I10 index is the highest in this sample of scientists, higher than Pauli, Dirac and Feynman, even though only about 20% of my output is on Google Scholar. Some of the EDCL staff indices would not be enough for tenure by today's standards. Someone like A. J. S. Williams for example is very poor. This reflects the fact that few EDCL staff members faced any competition.

THE SCIENTOMETRICS

The conventional indices, although far above average, give little or no idea of the vast impact of my work since 2002. The scientometrics are feedback for www.ajias.us and www.upitec.org. They average 272,724 distinct visits a year and 1,569,523 hits a year. They mean that the old system of citations is completely obsolete, because the readership reads every publication on the two sites. Google Scholar only uses citations from journals or books, not from websites. The two sites are accurately spidered by several search machines, so every item appears on the first page of Google, or high up on Google. Citations do not mean that every cited paper is read - far from it, citations occur only in a conventional field, which often becomes ossified or dogmatic, and citations often become habitual. ECE science is a completely new School of Thought, with a vast and direct following. In the same meaning, a poet or author has a direct following. So the new thought in science no longer comes from academia alone. The scientometrics also record gigabytes downloaded, page views, and give an analysis of which item has been read at which locality. Every item I have published from 1973 to present is read regularly at the world's best universities. So our teaching and research dissemination methods also make the old systems entirely obsolete.