

AIRCRAFT DESIGN AND SYSTEMS GROUP (AERO)

Aerospace Journals – Metrics & Ranking

DGLR - Top 40 - Aerospace Journal Ranking

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<https://doi.org/10.5281/zenodo.4073308>

Presentation based on a poster presented at
Deutscher Luft- und Raumfahrtkongress 2015
Rostock, 22.-24. September 2015

IF	IF-Rank	h5-Index	Google-Rank	SNIP	SNIP-Rank
2,540	1	25	6	3,89	1
1,291	4	36	1	2,43	4
1,207	5	34	2	1,69	9
0,796	15			3,33	2
1,122	6	29	4	1,71	8
0,930	11	33	3	2,02	5
1,070	7	20	10	1,80	6
1,757	2	---	21,000	2,90	3
1,560	3	17	13	1,31	13
0,873	13	22	7	1,44	11

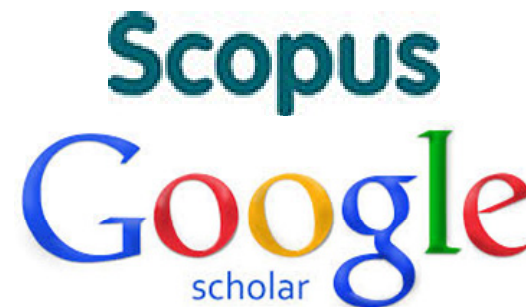
Abstract

The current discussions about publication ethics, impact factor, Google, and Open Access cause much confusion. With respect to aerospace journals, a listing of parameters and a ranking may be the first step to understand available options for authors and could guide them to where to publish. Journals with a general focus on aeronautical engineering or space engineering were selected to take part in the ranking. Journals were selected from existing aerospace journal rankings e.g. Google Scholar and Scopus (CWTS and SJR). These three metrics were selected: Impact Factor, Google Scholar h5-Index, SNIP (Source Normalized Impact per Paper) from Scopus. The average of these three journal rankings was the base for the final score and the so called "DGLR – Top 40 – Aerospace Journal Ranking". The ranking is named after the German Society for Aeronautics and Astronautics (DGLR) because this is the place selected to publish the results prominently (<http://12.dglr.de>). The Journal "Progress in Aerospace Science" was ranked number one in this year's ranking. It was observed that US American journals dominate the market and also this journal ranking. There are only few Open Access journals available. This is especially true for the top 40 in this journal ranking. The "DGLR – Top 40 – Aerospace Journal Ranking" could be updated with newly available data when necessary!

Background

The current discussions about **publication ethics, impact factor, Google, and Open Access** cause much confusion.

With respect to **aerospace journals**, a listing of **parameters** and a **ranking** may be the first step to understand available options for authors.



Research Questions

1. What is a suitable method for **selection of journals** to take part in the evaluation of aerospace journals?
2. What are suitable **metrics for the evaluation** of journals?
3. How can several metrics be **combined to a final score and ranking** of the journals?
4. How can the results best be distributed and **published**?



DEUTSCHE GESELLSCHAFT FÜR LUFT- UND
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Selection of Journals

- Predominantly only **journals with a general focus on aeronautical engineering or space engineering** are selected.
- Not considered are too general journals (e.g. about engineering) that may also have a substantial portion of aerospace papers.
- Not considered are more specialized journals in particular fields within aerospace e.g. journals specialized in turbo machinery or fluid dynamics.
- **Journals are selected from existing Aerospace Journal Rankings:**
 - * Google Scholar
 - * Scopus (CWTS and SJR)
 - * Journal Guide
 - * University of Illinois
- **All 20 journals from Google Scholar's ranking are considered.**
- Journals are selected not covered by any of the above selection methods,
 - * for the Impact Factor and/or the SNIP,
 - * for the (free) Open Access option.

Selection of Metrics

These three metrics were selected:

- **Impact Factor**
- Google Scholar **h5-Index**
- **SNIP** (Source Normalized Impact per Paper) from Scopus

All journals were **ranked according to these three metrics**. A journal without a value in the related metric was assigned the next highest integer. E.g. if the ranking runs up to 20 (Google) all journals without a Google ranking were assigned the rank 21.

The **average of these three journal rankings** is the (overall) index – i.e. the final score. A ranking in accordance with the final score **gives the Aerospace Journal Ranking**.

The Top 10 Journals

Rank	Index	Journal Name
1	2,7	Progress in Aerospace Sciences
2	3,0	Journal of Guidance Control and Dynamics
3	5,3	AIAA Journal
4	5,7	Journal of the American Helicopter Society
5	6,0	Acta Astronautica
6	6,3	Journal of Turbomachinery
7	7,7	Chinese Journal of Aeronautics
8	8,7	IEEE Transactions on Aerospace and Electronic Systems
9	9,7	Journal of Turbulence
10	10,3	Journal of Propulsion and Power

Calculating the final score:

21.000 is assigned because the journal has no h5-Index from Google Scholar.

The average of the three journal rankings is calculated e.g. for the top journal:

$$2.7 = (1 + 6 + 1) / 3$$

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Results and Discussion

Please find the detailed results online @ DGLR:

<https://HAMBURG.DGLR.DE> and with persistent link:

<https://doi.org/10.6084/m9.figshare.1508652>

Formats: HTML, Excel, PDF

- Selected **metrics** are **based on number of citations**.
- Article **quality** and journal quality are not directly evaluated.
- Journal **prestige** is not considered – it can not be measured.
- The **three selected metrics** – each by themselves – **yield quite different rankings** of the selected journals. For this reason, it was worth the effort to combine three different metrics and to calculate an average.
- **US American journals dominate the market** and also this journal ranking.
- There are only **few Open Access journals** available. This is especially reflected among the top 40 in this journal ranking.
- **The "DGLR – Top 40 – Aerospace Journal Ranking" could be updated when necessary!**