

“BUILDINGS”: A growing international journal on civil engineering with an emphasis on sustainability

Edmundas Kazimieras Zavadskas, Jurgita Antuchevičienė, Audrius Banaitis

Two years ago, an article about scientific journals published by Vilnius Gediminas Technical University was announced in the EWG ORSDCE Newsletter 2020 [1]. We presented short overviews of five journals, based on published bibliometric analyses of “Journal of Civil Engineering and Management” [2], “Technological and Economic Development of Economy” [3], “International Journal of Strategic Property Management” [4], “Journal of Environmental Engineering and Landscape Management” [5], “Transport” [6], also “The Baltic Journal of Road and Bridge Engineering” that was transferred from Vilnius Gediminas Technical University to Riga Technical University (Latvia) since 2018 [7].

The mentioned article [1] also presented bibliometric analysis of “Symmetry” journal (MDPI) [8] as the journal that published many papers related to EWG ORSDCE topical areas and Working Group members published or still have open several Special Issues in the journal.

The other journal, published by MDPI and closely related to EWG ORSDCE activities, is “Buildings”.



“Buildings” (ISSN 2075-5309) is an international, peer-reviewed, open access journal (free for readers) that publishes original articles, critical reviews, research notes, and communications on building science, building engineering and architecture design:

<https://www.mdpi.com/journal/buildings>

Two of the Working Group members from VILNIUS TECH are included in the Editorial Board of the journal – the Coordinator of EWG ORSDCE Prof Dr Audrius Banaitis and Prof Dr Jurgita Antuchevičienė:

<https://www.mdpi.com/journal/buildings/editors?search=vilnius+gediminas+technical+university>

The Special Issue "Sustainable Development of Buildings: Design, Construction, Quality Inspection, Operation Management", edited by former Coordinator of our Group Assoc Prof Dr Tatjana Vilutienė and Prof Dr Audrius Banaitis together with colleagues from Hong Kong Polytechnic University, Deakin University and University Politecnica de Catalunya, collected 12 papers on the actual topics of sustainable construction and sustainable buildings:

https://www.mdpi.com/journal/buildings/special_issues/Sustainable_Buildings

The Special Issue "Sustainable Supply Chain Management in Construction: Resilience, Flexibility, and Innovation", edited by Prof Dr Audrius Banaitis in collaboration with Prof Dr Anil Kumar (London Metropolitan University, UK) and Dr Serdar Durdyev (Ara Institute of Canterbury, New Zealand) is still waiting for submissions:

https://www.mdpi.com/journal/buildings/special_issues/sus_chain_construc

The Special Issue "Intelligent Multi-Criteria Decision-Making Methodologies in Building and Construction Management", edited by Prof Dr Jurgita Antuchevičienė and Dr S.A. Edalatpanah (Department of Applied Mathematics, Ayandegan Institute of Higher Education) has attracted many papers on developments and applications of multi-criteria decision-making methods, and future submissions are still welcome. Deadline for manuscript submissions is 31 May 2023. Call for Papers can be found here:

https://www.mdpi.com/journal/buildings/special_issues/decision_construction_management

Journal "Buildings" celebrated its 10th anniversary in 2021, therefore the bibliometric analysis of publications of the journal in a period of 2011 – 2021 was developed and published in 2022 [9].

"Buildings" was founded in 2011 as a quarterly journal. In 2017 the journal started new era of development when Prof Dr David Arditi became the Editor-in-Chief, the journal increased the number of issues and began to publish every month and became well recognized by the scientific community. It was indexed in Scopus (Elsevier) and the Science Citation Index Expanded (SCIE) of Web of Science Clarivate Analytics and received its first impact factor for 2020. When the bibliometric paper was being prepared, according to the Journal Citation Reports (JCR) of the Web of Science, the journal's 2020 impact factor was 2.648, ranking 32nd of 67 journals in the category of Construction & Building Technology (Q2) and 61st of 137 in Engineering, Civil (Q2). Next year the impact factor raised up and reached 3.324 (Fig. 1), the journal's ranking also raised by several positions in both categories, however, the JCR quartiles remained the same, Q2: Construction & Building Technology and Q2: Engineering, Civil. Number of citable items and citations is presented in Fig. 2.

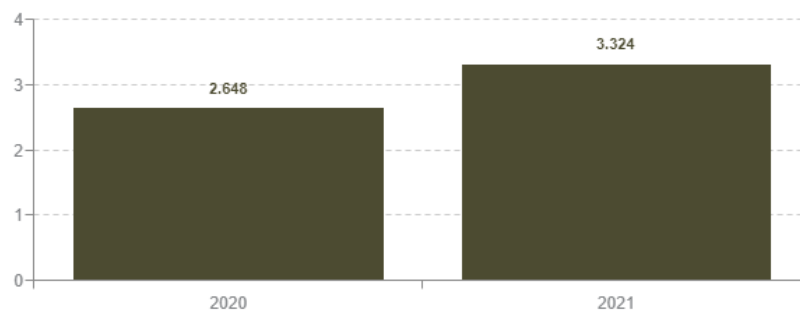


Fig. 1. Impact factor (<https://www.mdpi.com/journal/buildings/stats>)

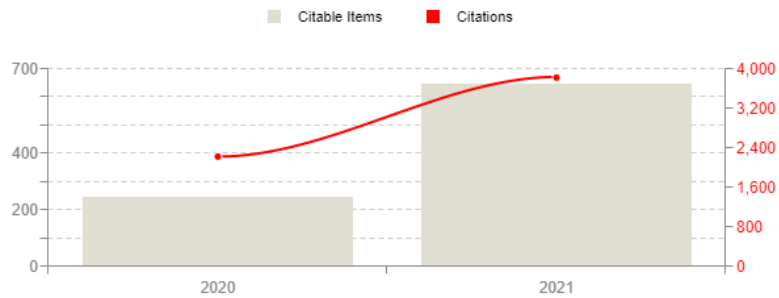


Fig. 2. Citable Items & Citations (<https://www.mdpi.com/journal/buildings/stats>)

Meanwhile in Scopus the journal is ranked even higher and reaches Q1 in Architecture, also Q2 in Building and Construction as well as in Civil and Structural Engineering.

The analysis shows the strong growth of “Buildings” over time. In 2022, number of publications as well as citations drastically increase (Fig. 3).

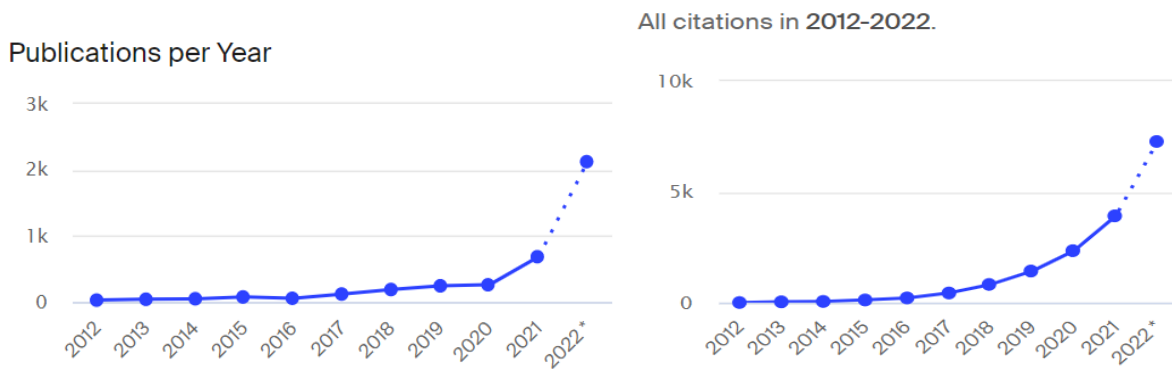


Fig. 3. Publications per year and citations per year of journal “Buildings” (<https://app.scilit.net/sources/2220>)

In the analysis carried in 2021 [9] the main keywords were identified and visualized with the help of word cloud (Fig. 4). The 50 most frequent author keywords are showed. The size of words in the picture demonstrates the word’s frequency of occurrence. It was found that the keyword “sustainability” is the main in the graph, followed by “energy efficiency” and “thermal comfort”. “Buildings”, “BIM” (Building Information Modelling) and “construction” also show their great importance. “Climate change” has been a hot topic in recent years, especially in fields such as architecture and the environment. And this I not surprisingly, as the subjects of “Architecture” and “Environmental Engineering” are among the leading subjects in the journal (Fig. 5).



Fig. 4. Word cloud of keywords of “Buildings” [9]

Rank	Subject	Publications
1	Civil Engineering	823
2	Architecture	713
3	Characterization and Testing of Materials	328
4	Environmental Engineering	214
5	Information and Library Science	168
6	Industrial Engineering	113
7	Transportation Science and Technology	80
8	Geological Engineering	55
9	Paper and Wood	49
10	Remote Sensing	45

Fig. 5. Top subjects of “Buildings” (<https://app.scilit.net/sources/2220>)

We invite the interested colleagues to read the entire paper [9]. The analysis showed that the journal is closely related to EWG ORSDCE topical research areas.

REFERENCES:

[1] Zavadskas, E. K., Xu, Z., Antuchevičienė, J. (2020). Bibliometric analysis of journals published by Vilnius Gediminas Technical University. *Newsletter of EWG ORSDCE*, 11, 17-24. Vilnius: Vilnius Gediminas Technical University.

<https://www.euro-online.org/websites/orsdce/wp-content/uploads/sites/16/2020/12/EWG-ORSDCE-Newsletter-2020.pdf>

[2] Yu, D., Xu, Z., & Antuchevičienė, J. (2019). Bibliometric analysis of the Journal of Civil Engineering and Management between 2008 and 2018. *Journal of Civil Engineering and Management*, 25(5), 402-410. <https://doi.org/10.3846/jcem.2019.9925>

<https://journals.vilniustech.lt/index.php/ICEM/article/view/9925/8713>

- [3] Yu, D., Xu, Z., & Šaparauskas, J. (2019). The evolution of "Technological and Economic Development of Economy": a bibliometric analysis. *Technological and Economic Development of Economy*, 25(3), 369-385. <https://doi.org/10.3846/tede.2019.10193>
<https://journals.vilniustech.lt/index.php/TEDE/article/view/10193/8874>
- [4] Zhou, W., Xu, Z., & Zavadskas, E. K. (2019). A bibliometric overview of the International Journal of Strategic Property Management between 2008 and 2019. *International Journal of Strategic Property Management*, 23(6), 366-377. <https://doi.org/10.3846/ijspm.2019.10535>
<https://journals.vilniustech.lt/index.php/IJSPM/article/view/10535/9324>
- [5] Xu, Z., Zhou, W., & Baltrėnaitė, E. (2019). Comprehensive bibliometric study of Journal of Environmental Engineering and Landscape Management from 2007 to 2019. *Journal of Environmental Engineering and Landscape Management*, 27(4), 215-227. <https://doi.org/10.3846/jeelm.2019.11366>
<https://journals.vilniustech.lt/index.php/IEELM/article/view/11366/9502>
- [6] Zhou, W., Xu, Z., & Skačkauskas, P. (2019). Mapping knowledge domain of "TRANSPORT": a bibliometric study of its status quo and emerging trends. *Transport*, 34(6), 741-753. <https://doi.org/10.3846/transport.2019.11774>
<https://journals.vilniustech.lt/index.php/Transport/article/view/11774/9612>
- [7] Zhou, W., Xu, Z., Zavadskas, E. K., & Laurinavičius, A. (2020). The Knowledge Domain of The Baltic Journal of Road and Bridge Engineering Between 2006 and 2019. *The Baltic Journal of Road and Bridge Engineering*, 15(2), 1-30. <https://doi.org/10.7250/bjrbe.2020-15.470>
<https://bjrbe-journals.rtu.lv/article/view/bjrbe.2020-15.470/pdf>
- [8] Li, B., Xu, Z., Zavadskas, E. K., Antuchevičienė, J., & Turskis, Z. (2020). A Bibliometric Analysis of Symmetry (2009–2019). *Symmetry*, 12(8), 1304. <https://doi.org/10.3390/sym12081304>
<https://www.mdpi.com/2073-8994/12/8/1304>
- [9] Xiao, Z., Qin, Y., Xu, Z., Antuchevičienė, J., Zavadskas, E. K. (2022). The Journal *Buildings*: A Bibliometric Analysis (2011–2021). *Buildings*, 12(1), 37. <https://doi.org/10.3390/buildings12010037>