

# RANKING OF CROATIAN RESEARCHERS FROM SEVERAL DISCIPLINES USING GOOGLE SCHOLAR DATABASE

Gyula Mester\*

Óbuda University, Doctoral School of Safety and Security Sciences, Budapest, Hungary

DOI: 10.7906/indecs.15.2.6  
Preliminary report

*Received:* 20<sup>th</sup> June 2017.  
*Accepted:* 29<sup>th</sup> June 2017.

## ABSTRACT

Using the h-index and the total number of citations in (natural) sciences, techniques and humanities in this article the best 10 Croatian researchers is ranked. The list may be formed based on the h-index and the total number of citations, given in Web of Science, Scopus, Publish or Perish Program and Google Scholar. Data for the first 10 researchers are presented. Google Scholar is the most complete. Therefore, to define a single indicator, h-index calculated by Google Scholar may be a good and simple one. The author chooses the Google Scholar database as it is the broadest one.

## KEY WORDS

ranking, Croatian researchers, Google Scholar, h-index, total number of citations

## CLASSIFICATION

ACM: D.1.1.

JEL: O31

PACS: 89.70.Hj

## INTRODUCTION

Due to the requests in a variety of activities (for example, who will be proposed as a project leader) ranking researchers in different disciplines of science become very important in last decade. Ranking is possible on different criteria: number of published papers, number of citations, etc.

One of these measures is h-index which includes both the productivity and citation impact of the publications of a scientist. The index was suggested in 2005 by Jorge E. Hirsch [1]. h-index can be determined according to the different sources:

- Google Scholar,
- WOS (Web of Science),
- Scopus,
- Publish or Perish Program.

In this article the list of the 10 best researchers of Croatian researches is presented. List covers researchers from natural sciences, techniques and human sciences.

As a primary source Google Scholar [2] has been used [3-12]. The author chooses the Google Scholar database as it is the widest (see Table 1). Introduced by Google in 2004, Google Scholar has become a very popular alternative data source. Google Scholar is the most complete [13-16].

Therefore, to define a single indicator, h-index calculated by Google Scholar may be a good and simple one.

Ranking is possible to be based on h-index (primary) and total number of citations.

**Table 1.** Rate of citations in Scopus and Web of Science according to Google Scholar ones.

| Discipline      | Scopus citations as % of Google Scholar citations | Web of Science citations as % of Google Scholar citations |
|-----------------|---|---|
| Humanities      | 11,5  | 7,0   |
| Social Sciences | 30  | 22,7  |
| Engineering     | 57,6  | 45,7  |
| Sciences        | 64,2  | 65,6  |
| Life Sciences   | 70,5  | 66,8  |

The article is organized as follows:

- In Section 1, the Introduction is given,
- In Section 2, the Ranking list of Croatian researchers is considered,
- Conclusions are given in Section 3.

## RANKING LIST OF CROATIAN RESEARCHERS

In the following text detail information about researchers on the list based on Google Scholar are presented,

List of 10 best Croatian researchers can be constructed based on different sources. The primary condition for ranking is the h-index and the total citation number of the publications.

**Table 2.** h-index and number of citations for Croatian researchers from extracted disciplines, from Google Scholar.

| No. | Researchers      | h-index | Citations |
|-----|------------------|---------|-----------|
| 1.  | Ivica Puljak     | 114     | 70 062    |
| 2.  | Nikola Godinovic | 107     | 65 283    |
| 3.  | Darko Mekterovic | 90      | 49 004    |
| 4.  | Mile Dželalija   | 82      | 44 648    |
| 5.  | Nikola Poljak    | 80      | 19 176    |
| 6.  | Sven Gotovac     | 62      | 18 271    |
| 7.  | Linda Vickovic   | 62      | 15 387    |
| 8.  | Eugen Mudnic     | 61      | 17 959    |
| 9.  | Ozren Polašek    | 57      | 17 514    |
| 10. | Stipan Jonjic    | 52      | 8 523     |

Researchers, from Google Scholar data, were ranked according h-index in decreasing order as a first criteria and then by the total number of citations (Table 2).

Based on the data of Google Scholar the list of the 10 best Croatian researchers is given in Figures 1-10. The primary condition for ranking is the h-index followed by the total citation number of the publications.

1.

| Citation indices | All   | Since 2012 |
|------------------|-------|------------|
| Citations        | 70062 | 62479      |
| h-index          | 114   | 106        |

**Figure 1.** Ivica Puljak, h-index = 114, citations: 70 062 [17].

2.

| Citation indices | All   | Since 2012 |
|------------------|-------|------------|
| Citations        | 65283 | 58629      |
| h-index          | 107   | 101        |

**Figure 2.** Nikola Godinovic, h-index = 107, citations: 65 283 [18].

3.

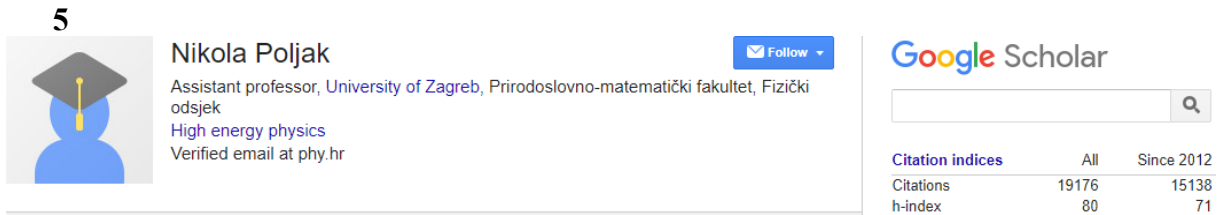
| Citation indices | All   | Since 2012 |
|------------------|-------|------------|
| Citations        | 49004 | 46320      |
| h-index          | 90    | 89         |

**Figure 3.** Darko Mekterovic, h-index = 90, citations: 49 004 [19].

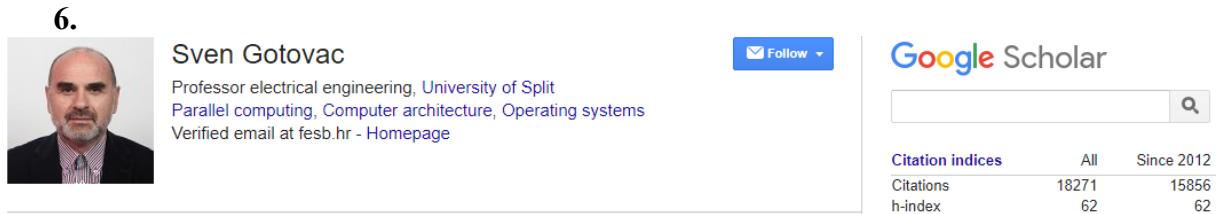
4.

| Citation indices | All   | Since 2012 |
|------------------|-------|------------|
| Citations        | 44648 | 36084      |
| h-index          | 82    | 71         |

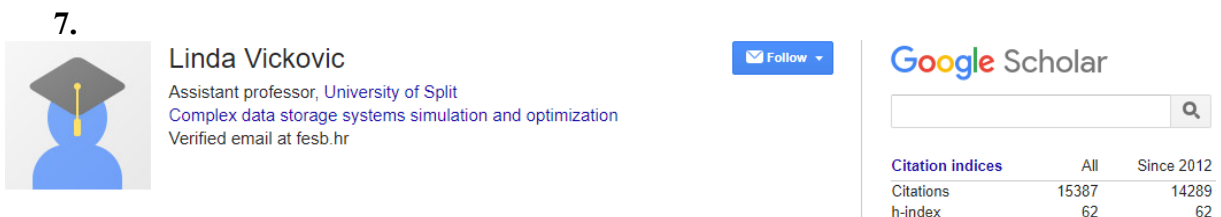
**Figure 4.** Mile Dželalija, h-index = 82, citations: 44 648 [20].



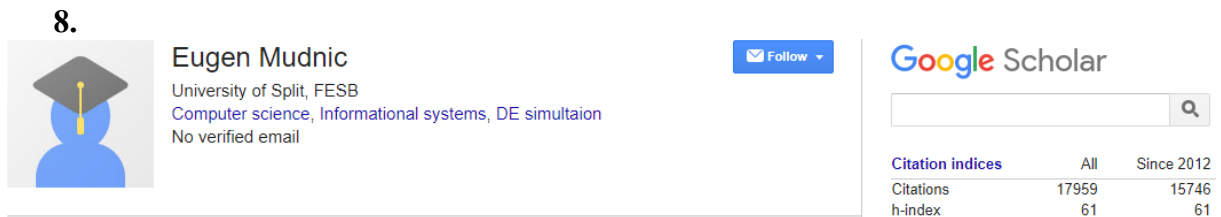
**Figure 5.** Nikola Poljak, h-index = 80, citations: 19 176 [21].



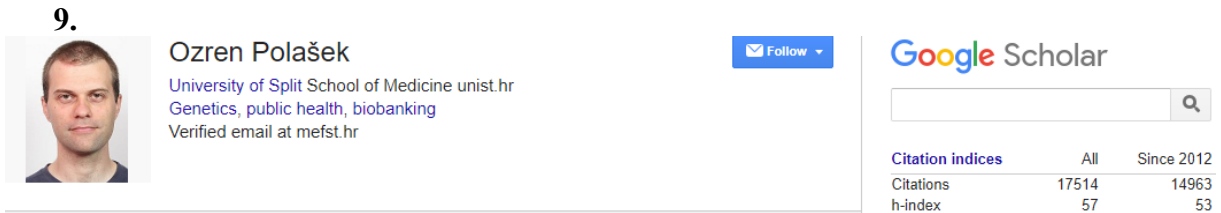
**Figure 6.** Sven Gotovac, h-index = 62, citations: 18 271 [22].



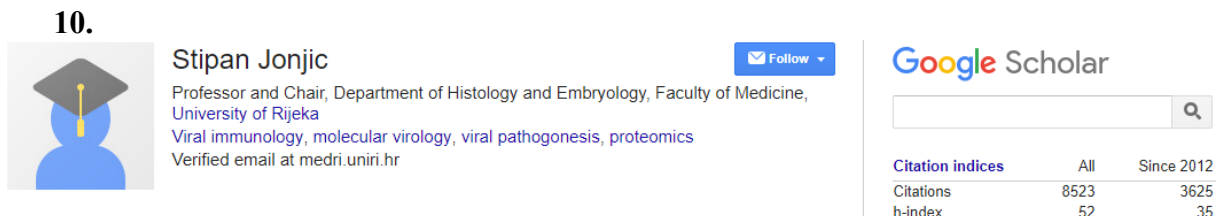
**Figure 7.** Linda Vickovic, h-index = 62, citations: 15 387 [23].



**Figure 8.** Eugen Mudnic, h-index = 61, citations: 17 959 [24].



**Figure 9.** Ozren Polašek, h-index = 57, citations: 17 514 [25].



**Figure 10.** Stipan Jonjic, h-index = 52, citations: 8 523 [26].

## CONCLUSIONS

List of best 10 researchers in natural sciences, techniques and humanities, of Croatia is presented, The ranking is made based primary on h-index and total citation number based on the database in Google Scholar, Researches ranked first by h-index in decreasing order and then by the total number of citations,

## REFERENCES

- [1] Hirsch, J.E.: *An index to quantify an individual's scientific research output*. Proceedings of the National Academy of Sciences of the United States of America **102**(46), 16569-16572, 2005, <http://dx.doi.org/10.1073/pnas.0507655102>,
- [2] <http://scholar.google.hr>, accessed 26<sup>th</sup> June, 2017,
- [3] Mester, G.; Pletl, Sz.; Pajor, G. and Rudas, I.: *Adaptive Control of Robot Manipulators with Fuzzy Supervisor Using Genetic Algorithms*. In: Kaynak, O., ed.: Proceedings of International Conference on Recent Advances in Mechatronics. Istanbul, 1995,
- [4] Mester, G.: *Neuro-Fuzzy-Genetic Trajectory Tracking Control of Flexible Joint Robots*. Proceedings of the I ECPD International Conference on Advanced Robotics and Intelligent Automation, 1995. Athens, 1995,
- [5] Mester, G.; Pletl, S.; Pajor, G. and Basic, D.: *Adaptive Control of Rigid-Link Flexible-Joint Robots*. Proceedings of 3<sup>rd</sup> International Workshop of Advanced Motion Control, March 20-23, 1994. Berkeley, 1994,
- [6] Mester, G.; Pletl, S.; Pajor, G. and Jeges, Z.: *Flexible Planetary Gear Drives in Robotics*. Proceedings of the 1992 International Conference on Industrial Electronics, Control, Instrumentation and Automation – Robotics, CIM and Automation, Emerging Technologies, San Diego, 1992, <http://dx.doi.org/10.1109/iecon.1992.254556>,
- [7] Mester, G.: *Neuro-Fuzzy-Genetic Controller Design for Robot Manipulators*. Proceedings of the IEEE IECON'95, International Conference on Industrial Electronics, Control and Instrumentation, November 6-10, 1995. Orlando, 1995, <http://dx.doi.org/10.1109/iecon.1995.483338>,
- [8] Mester, G. and Rodic, A.: *Autonomous Locomotion of Humanoid Robots in Presence of Mobile and Immobile Obstacles*. Studies in Computational Intelligence, Towards Intelligent Engineering and Information Technology, Part III Robotics, Springer, 2009, [http://dx.doi.org/10.1007/978-3-642-03737-5\\_20](http://dx.doi.org/10.1007/978-3-642-03737-5_20),
- [9] Mester, G.: *Improving the Mobile Robot Control in Unknown Environments*. Proceedings of the YUINFO'2007, 2007. Kopaonik, 2007,
- [10] Mester, G.: *Introduction to Control of Mobile Robots*. Proceedings of the YUINFO'2006, 2006. Kopaonik, 2006, <http://dx.doi.org/10.1109/sisy.2009.5291190>,
- [11] Mester, G.: *Wireless Sensor-based Control of Mobile Robots Motion*. Proceedings of the IEEE SISY 2009. Subotica, 2009,
- [12] Mester, G.: *Sensor Based Control of Autonomous Wheeled Mobile Robots*. The Ipsi BgD Transactions on Internet Research, TIR **6**(2), 29-34, 2010,
- [13] Rubóczki, E.S. and Rajnai, Z.: *Moving towards Cloud Security*. Interdisciplinary Description of Complex Systems **13**(1), 9-14, 2015,
- [14] Ćosić Lesičar, J.; Posavec, M. and Stepanić, J.: *The use of information entropy in extracting the irregularities of autonomous systems*. Annals of Faculty of Hunedoara – International Journal of Engineering **XIII**(3), 269-272, 2015,
- [15] Stepanić, J.; Kasać, J. and Ćosić Lesičar, J.: *What is Taken for Granted about Quadrotors: Remarks about drive and communication*. Proceedings of the 3<sup>rd</sup> International Workshop on Advanced Computational Intelligence and Intelligent Informatics (IWACIII 2013), October 18-21, 2013. N. Kubota, Shanghai, 2013,
- [16] Stepanić, J.; Mester, G. and Kasać, J.: *Synthetic Inertial Navigation Systems: Case Study Of Determining Direction*, Proceedings of 57<sup>th</sup> ETRAN Conference, June 3-6, 2013. Zlatibor, 2013,

- [17] <http://scholar.google.hu/citations?user=w6MmUp0AAAAJ&hl=en>, accessed 26<sup>th</sup> June, 2017,
- [18] <http://scholar.google.hu/citations?user=yanp1rYAAAAJ&hl=en>, accessed 26<sup>th</sup> June, 2017,
- [19] <http://scholar.google.hu/citations?user=ZT3IYQ4AAAAJ&hl=en>, accessed 26<sup>th</sup> June, 2017,
- [20] <http://scholar.google.hu/citations?user=le9QuQUAAAAJ&hl=en>, accessed 26<sup>th</sup> June, 2017,
- [21] <http://scholar.google.hu/citations?user=tThof7QAAAAJ&hl=en>, accessed 26<sup>th</sup> June, 2017,
- [22] <http://scholar.google.hu/citations?user=jdkVWz0AAAAJ&hl=en>, accessed 26<sup>th</sup> June, 2017,
- [23] [http://scholar.google.hu/citations?user=Pb\\_olyAAAAAJ&hl=en](http://scholar.google.hu/citations?user=Pb_olyAAAAAJ&hl=en), accessed 26<sup>th</sup> June, 2017,
- [24] [http://scholar.google.hu/citations?user=\\_rh4wIIAAAAJ&hl=en](http://scholar.google.hu/citations?user=_rh4wIIAAAAJ&hl=en), accessed 26<sup>th</sup> June, 2017,
- [25] <http://scholar.google.hu/citations?user=d02gBZQAAAAJ&hl=en>, accessed 26<sup>th</sup> June, 2017,
- [26] <http://scholar.google.hu/citations?user=GEIV-PIAAAAJ&hl=en>, accessed 26<sup>th</sup> June, 2017.