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*Under the Title*  
**“Collaboration in Science and in Technology”**  
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April 15, 2010

Dear Dr. **Abdolreza Noroozi Chakoli**,

It is a great pleasure for us to inform you more than 125 qualified papers are submitted for presentation at the 7<sup>th</sup> International Conference on Webometrics, Informetrics and Scientometrics & 12<sup>th</sup> COLLNET Meeting, September 20-23, Istanbul, Turkey. The authors are coming from

**23 Countries and Regions:**

**Europe (10):** Belgium, France, Germany, Hungary, Italy, Poland, Russia, Spain, The Netherlands, UK

**Asia (8):** China, Bangladesh, India, Iran, Japan, South Korea, Taiwan, Turkey

**America (3):** Brazil, Canada, USA

**Africa (1):** Cameroon

**Australia (1):** Australia

Furthermore, we are pleased to inform you the paper of your submitted abstract (see below) is accepted for poster presentation in Istanbul:

**Abdolreza Noroozi Chakoli; Leila Chehrenegar (Iran):** The Presence of Iran, Turkey and South Korea in science arena during 2000 and 2010

We kindly remind you that the final version of your paper is expected before July 15<sup>th</sup>, 2011.

The precise paper format specification is available on the Website Page:

<http://collnet.cs.bilgi.edu.tr/>

The final version of the paper must be emailed to: Bülent Özel (e-mail:

[bulent@cs.bilgi.edu.tr](mailto:bulent@cs.bilgi.edu.tr))

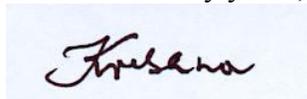
and a copy to: [kretschmer.h@onlinehome.de](mailto:kretschmer.h@onlinehome.de).

If you need some formal invitation letter (For example for visa), we kindly ask you to contact the Organising Chair, Bülent Özel (e-mail: [bulent@cs.bilgi.edu.tr](mailto:bulent@cs.bilgi.edu.tr))

Best regards.

On behalf of the Organising Chair, Bülent Özel and the Istanbul Bilgi University,  
Istanbul, Turkey,

Sincerely yours,



Hildrun Kretschmer  
General Chair

## **The Presence of Iran, Turkey and South Korea in science arena during 2000 and 2010**

ABDOLREZA NOROOZI CHAKOLI <sup>1</sup>

LEILA CHEHRENEGAR <sup>2</sup>

*Extended Abstract*

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Islamic Republic of Iran, as another Asian country which had faced imposed war up to late 1980s, initiated its development programs in different scientific, cultural, economic and political aspects. Moreover, Turkey, one of the most important countries of Islamic, has undergone numerous developments during the last two decades considering the expansion of its indicators of sciences and technology. South Korea has had such improvements in various indicators of sciences and technology that have attracted many communities of science and technology as well as global markets to their products and services. The development programs in each of these countries have had different influences in their scientific, cultural, economic and social aspects. The extent of participation and the global place of each of these countries in the production of science have been always considered as the most important indicators of science and technology. Therefore, it is possible to evaluate the quality of performance of these countries with the above-mentioned information and merging them with the results of separate studies which are carried out on the situation of each country through other indicators of science and technology. It is essential to emphasize that it is impractical to judge about their scientific developments in all aspects only on the basis of the information retrieved from these indicators. Therefore, this information makes it only possible to evaluate and compare the scientific outputs of these countries. The evaluation of ideality of their performance requires another independent research which would be conducted to identify the extent of input which was required to produce such output.

Essential Science Indicators (ESI) is one of the most important bases of ISI which can be used to analyze the international places of countries regarding their production of science. This article was conducted through library method and the data was analyzed via comparative method. It compares and evaluates the global places of Islamic Republic of Iran, Turkey and South Korea during the eleven years between January 1, 2000 and December 31, 2010 based on the data retrieved from 22 subject areas of ESI according to “number of papers”, “total number of citations”, and “citations per paper”.

A comparative study of the situation of Iranian papers with the situation of other countries in the Asia and region can be influential in leading the major research plans of Iran to achieve its regional goals and outpace the countries in the region. Turkey and South Korea have been chosen in this study because they had similar situations to Iran in

the early 1990s, considering many of the global indicators of science and technology; however, all these countries have had quite different situations during the recent years. These countries have enjoyed considerable improvements considering various indicators of sciences and technology and have attracted the attention of many countries.

A comparison of the countries under the study on the basis of the data at ESI shows that during the mentioned eleven years, South Korea, Turkey and Iran were respectively in the 13<sup>th</sup>, 20<sup>th</sup> and 30<sup>th</sup> places in the world considering the number of papers in all subject areas considering “total number of papers”. Also, South Korea, Turkey and Iran were respectively placed in the 14<sup>th</sup>, 27<sup>th</sup> and 40<sup>th</sup> rank regarding “total number of citations”. Thus, South Korea had higher ranks than Turkey and Iran regarding “total number of citations”. Another important point is that although “total number of citations” of these countries was more than their “number of papers”, their global ranks on the basis of “total number of citations” were times lower than their rank on the basis of “number of papers”.

These countries had a different situation considering “citations per paper”; because it did not match with their “number of papers” and “total number of citations” to their papers and did not increase accordingly. “Citations per paper” is considered as one of the most important indicators which shows the average number of citations to each paper. South Korea had a better situation than the 2 other countries regarding this indicator; because, in average, it had the highest number of citations to each paper. However, it must be taken into account that none of the countries under the study had a suitable global rank in this regard. Even Turkey which achieved the 20<sup>th</sup> and 27<sup>th</sup> places respectively regarding “number of papers” and “total number of citations” did not have a high rank considering “citations per paper” and gained the 120<sup>th</sup> place in the world and Iran had the lowest rank among these countries in this regard.

According to the study, the situation of the countries under the study seemed to be better in some subject areas such as ‘chemistry’ than their situation in other subject areas; however, this point should be taken into consideration that they did not have an equal presence in all subject areas. Considering “total number of papers”, Iran’s global ranks were higher in subject areas such as ‘multidisciplinary’, ‘chemistry’ and ‘engineering’ than other subject areas. South Korea had concentrated more on ‘pharmacology and toxicology’, ‘materials sciences’, ‘engineering’, ‘computer sciences’, ‘microbiology’ and

'physics' while India had mainly focused on 'agricultural sciences', 'multidisciplinary', 'plant and animal sciences', 'chemistry', 'pharmacology & Toxicology' and 'materials science' which made their ranks in these subject areas better than other subject areas.

Turkey gained considerable ranks, in comparison with the countries under the study, in some subject areas such as 'chemistry', 'multidisciplinary', 'agricultural science', 'Clinical Medicine' and 'engineering'.

In general, it can be stated that all the 3 countries had higher ranks in 'multidisciplinary', 'chemistry' and 'engineering' than other subject areas.