

Accepted Manuscript

The alliance relationship analysis of international terrorist organizations with link prediction

Ling Fang, Haiyang Fang, Yanfang Tian, Tinghong Yang, Jing Zhao

PII: S0378-4371(17)30363-1

DOI: <http://dx.doi.org/10.1016/j.physa.2017.04.068>

Reference: PHYSA 18170

To appear in: *Physica A*

Received date: 22 December 2016

Revised date: 22 March 2017

Please cite this article as: L. Fang, H. Fang, Y. Tian, T. Yang, J. Zhao, The alliance relationship analysis of international terrorist organizations with link prediction, *Physica A* (2017), <http://dx.doi.org/10.1016/j.physa.2017.04.068>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



Highlights:

- We use link prediction to study alliance relationship of international terrorist organizations based on publicly available data
- We propose a novel index (OWF) based on optimal weighted fusion of six different similarity indices, in which the optimal weight is calculated by genetic algorithm
- We refer to the singular value decomposition used in image compression to reduce the amount of computation and to make the best use of information
- We show that OWF method is more useful for the identification of hidden information about terrorist organization alliance by experiment and literature search
- Using this method, we successfully find out 21 real terrorist organizations alliance from current data.
- The characteristics of terrorist organization alliance are revealed through the results analysis

Download English Version:

<https://daneshyari.com/en/article/5102872>

Download Persian Version:

<https://daneshyari.com/article/5102872>

[Daneshyari.com](https://daneshyari.com)