

Social networking shortcut to finding medical experts

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It can be difficult for someone outside of a specialist field to identify subject experts and the ever increasing amount of available data can be bewildering. New research, published in BioMed Central's open access journal, *Journal of Biomedical Semantics*, describes a method of social network analysis, similar to finding friends on Facebook, able to sift through scientific literature and news articles to identify opinion leaders and media experts.

Pharmaceutical companies and public health programs rely on opinion leaders to clarify and condense research into a format understandable by the general public and employees. While there are already [computer programs](#) which are able to link scientists and [medical doctors](#) to their areas of knowledge, this is the first system that is able to identify the opinion leaders from these subject lists.

A team from Lnx Research developed an extraction engine, which used text mining technology, to produce a network of subject experts, and find people, organisations and locations associated with a specific health topic from [research articles](#). The three sets of results from the search were combined, and, using simple rules, people with the most 'hits' who were most likely to be the opinion leaders were identified. Social network analysis was then used to generate a ranked web of linked experts, based on the number of times they were mentioned together in [news articles](#).

The team tested their program, using the topic 'obesity', and generated a

network of over 16,000 experts with 100,000 links between them. The people at the heart of the network, with the most connections, tended to be the subject experts. In about an hour this 'find a friend' system found experts on obesity with an accuracy of about 90%.

Dr Siddhartha Jonnalagadda who led this research explained, "This amount of data would be impossible to sort through without the help of a computer. However when we analysed the results from the program we found that the top twenty obesity experts had all contributed significantly to the advancement of science in the literature and in the news, many having won awards for their work."

Dr Jonnalagadda continued, "We were also able to identify a group of people who, although they were not publishing scientists, were still experts, most likely involved in public education or in science reporting."

So although the system was designed with the aim of finding scientific experts it was also able to find celebrities, and people with a high media profile, who support a particular cause. This information would be invaluable to scientists, students and people wanting to get straight to the heart of a subject.

More information: Discovering opinion leaders for medical topics using news articles, Siddhartha Jonnalagadda, Ryan Peeler and Philip Topham, *Journal of Biomedical Semantics* (in press)

Provided by BioMed Central

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