
Editorial

Denise Chiavetta* and Alan Porter

Search Technology, Inc.,
6025 The Corners Pkwy., Suite 202,
Norcross, GA 30092, USA
Email: dchiavetta@searchtech.com
Email: alan.porter@isye.gatech.edu
*Corresponding author

Biographical notes: Denise Chiavetta is the Academic Coordinator at Search Technology. She brings expertise in organisational applications of technology foresight developed over 20 years as a consultant as well as a professional inside Fortune 100 companies and government agencies. He has been a co-Chair of the Global TechMining Conference [<http://www.gtmconference.org>] since in 2011.

Alan Porter is the Director of R&D for Search Technology, Inc., Norcross, GA, USA. He produces software to help analyse science, technology and innovation database search results [see: <http://www.theVantagePoint.com> for information and various papers]. He is also Professor Emeritus of Industrial and Systems Engineering, and of Public Policy, at Georgia Tech, where he continues as the co-Director of the Technology Policy and Assessment Center (TPAC). He is the author of some 240 articles and books, including *Tech Mining* (Wiley, 2005). His current research emphasises R&D profiling and assessment, and forecasting of emerging technology innovation pathways.

This special issue focuses on research presented at the *Global Tech Mining Conference* held in Atlanta in September, 2013. *Tech Mining* is short for ‘text mining of science and technology information resources’ to elicit usable intelligence. The key premise underlying it is that *intelligence* is a prime requirement for effective technology management. Organisations operating in competitive and/or collaborative environments must track information on external science, technology and innovation (ST&I) developments to inform key decisions.

The six papers present intriguing commonalities and differences. All address patent data, but through various analytical and visualisation approaches. Many of the papers perform variations of social network analyses, offering interesting contrasts. We think you will find this issue provides a rich set of applied analytical methods adding value for management of technology and innovation.

We spotlight points of special interest:

- Chen et al. analyse the effectiveness of brokering organisations in bolstering innovation. They apply social network analyses to identify weaknesses of such organisations in Taiwanese biopharmaceuticals.
- Ma et al. analyse patenting to understand the evolution of collaboration networks among organisations pursuing nano-enabled drug delivery (NEDD).

- Ye et al. treat patent data via network analyses, but focusing on research knowledge flows transnationally. They study electronics technology patents and citation patterns through empirical social network analyses.
- Rocha et al. treat a national technology development case – biodiesel – using patent data. They are able to develop innovation indicators through tech mining for Brazil.
- Gavilanes-Trapote et al. employ patent overlay mapping to compare regional with national sector strengths. This offers a policy tool for technology development.
- Porter et al. advance the forecasting innovation pathways (FIP) methodology in collaboration with SKF. Addressing a major transportation technology – hybrid and electric vehicles – they expand FIP in terms of sub-system analyses, consideration of complex infrastructures, and interactive workshop techniques to anticipate potential innovation pathways distinguished by regions and target sectors.

We feel there are still many more opportunities to exploit large-data analytics for the betterment of innovation processes and look forward to the continuing work of these and other researchers.