Core Topics and Vocabulary in Remote Sensing Researches

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Abstract: There are various topics in history of remote sensing research. Some are traditional topics tackled continuously since the early days of the history such as agriculture, forestry, digital image processing, land-use or water resources. Others are trend topics such as disaster management which is more remarkable than normal years when a huge natural hazard in global scale happens. In addition, new concept and term such as WebGIS, which was appeared from about 2002 after the World Wide Web had been popular, is often generated at some point in the research history. Therefore, we analyze whole vocabulary in research papers released through the history of Asian Conference on Remote Sensing (ACRS) to evaluate the trend and stability of the topics. In this research, we use text mining techniques such as topic model in order to calculate statistic of word counts, association between topics or relation between topics and authors. Our results can support remote sensing researchers when they review the historical change of topic and join it to a future research.

Keyword: Core topic, terminology, text mining, topic model, vocabulary