Pemetaan struktur intelektual literatur gempa bumi di Indonesia dari tahun 2004-2018: analisis co-citation = Mapping the intellectual structure of earthquakes literature in Indonesia from 2004-2018: a co-citation analysis / Ariska Oktavia

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Abstrak

ABSTRAK
<p>Gempa ganda yang terjadi di sepanjang patahan Sumatra (explosive eruption)
merupakan pemicu pertumbuhan literatur tentang kegempaan di Indonesia. Kerusakan
akibat gempa bumi (masonry wall), masalah geoteknis, ketidakstabilan lereng,
perubahan stres, gempa dangkal dan dalam, keruntuhan bangunan, konstruksi
perumahan, seismik aktif, berbasis aturan fuzzy, kode bangunan indonesia, dan
parameter pecah (sumatra earthquake), dinamika pantai yang kompleks dan kebijakan
tentang pantai (green reconstruction) merupakan topik yang banyak ditulis dalam
bidang gempa bumi di Indonesia. Namun sampai saat ini belum dipetakan struktur
ilmiah jaringan ko-sitasi yang menggunakan kata kunci untuk menganalisis
perkembangan dan tren penelitian dalam bidang gempa bumi di Indonesia. Tujuan dari
penelitian ini adalah untuk memetakan dan mengevaluasi struktur intelektual bidang
gempa bumi di Indonesia dari tahun 2004-2018 dengan menggunakan teknik ko-sitasi
(co-citation) berdasarkan Document Co-citation Analysis (DCA), Author Co-citation
Anaysis (ACA), Journal Co-citation Analysis (JCA), dan Co-occurence/ kata kunci.
Metode bibliometrika dan teknik visualisasi ilmiah dari perangkat lunak CiteSpace
digunakan dalam penelitian ini. Sebanyak 898 dokumen artikel yang berisi referensi
21.238 sitasi yang valid, dan merupakan data primer yang diunduh dari Scopus. Hasil
penelitian menunjukkan bahwa dokumen yang memiliki pengaruh terhadadap
perkembangan bidang gempa bumi di Indonesia ditulis oleh Seth Stein dan Emile A.
Okal. Dokumen tersebut terbit di jurnal Nature, dengan judul Speed and size of the
Sumatra earthquake. Peneliti yang menjadi rujukan utama adalah Seth Stein yang
memperoleh nilai kekuatan (Strength) tinggi 7,341, diikuti oleh Rudolff A (4,786), dan
Fujii Y (4,650). Journal of Geophysical Research memperoleh sitasi yang paling tinggi
yaitu 176, sedangkan Natural Hazards dan Nature adalah jurnal yang menjadi pusat
rujukan. Andri Dian (AD) Nugraha menjadi penulis paling produktif dan berpengaruh
dalam bidang gempa bumi di Indonesia selama periode 15 tahun (2004-2018). AD
Nugraha, S Widiyantoro, A Gunawan, G Suantika penulis berpengaruh secara
kolabratif. Institut Teknologi Bandung (ITB), yaitu Department of Civil Engineering,
Civil Engineering Department, Department of Physics, Geophysical Engineering, dan
Ganesha adalah lembaga utama yang meneliti tentang gempa bumi di Indonesia.
Indonesia memberikan kontribusi terbesar terhadap perkembangan literatur mengenai
kegempaan, semetara China, Thailand, Prancis, Belanda, dan Kanada adalah negara
yang paling awal menghasilkan artikel tentang gempa bumi di Indonesia dimulai pada
tahun 2005.
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ABSTRACT

 <hr /> The double earthquake that occurred along the Sumatra fault was the trigger for
the growth of literature about seismicity in Indonesia. Masonry wall, geotechnical
problems, slope instability, stress changes; shallow and deep earthquakes, building
collapse, housing construction; Active seismic, fuzzy-based rules, Indonesian building
codes, and broken parameters (sumatra earthquake), complex beach dynamics and green
reconstruction policies are widely written in the field of earthquakes in Indonesia. But
until now there has not been a map of the intellectual structure of the citation networks
that uses keywords to analyze developments and research trends in the field of
earthquakes in Indonesia. The purpose of this study was to map and evaluate the
intellectual structure of the earthquake field in Indonesia from 2004-2018 using co-
citation techniques based on Document Co-citation Analysis (DCA), Author Co-citation
Analysis (ACA), Journal Co-citation Analysis (JCA), and Co-occurrence / keywords.
Bibliometric methods and scientific visualization techniques from CiteSpace software
were used in this study. A total of 898 article documents containing 21,238 valid
citations were primary data downloaded from Scopus. The results of the study show that
documents that had an influence on the development of the earthquake field in
Indonesia were written by Seth Stein and Emile A. Okal. The document was published
in the journal Nature, the title was Speed and size of the Sumatra earthquake. The
researcher who became the main reference was Seth Stein who obtained a high strength
of 7,341, followed by Rudolff A (4,786), and Fujii Y (4,650). The Journal of
Geophysical Research gets the highest citation, which is 176, while Natural Hazards and
Nature are journals that are the reference centers. Andri Dian (AD) Nugraha became the
most productive and influential writer in the field of earthquakes in Indonesia over a
period of 15 years (2004-2018). AD Nugraha, S Widiyantoro, A Gunawan, G Suantika,
the writer influences collectively. Bandung Institute of Technology (ITB), namely the
Department of Civil Engineering, Civil Engineering Department, Department of
Physics, Geophysical Engineering, and Ganesha are the main institutions that research
earthquakes in Indonesia. Indonesia was the biggest contribution to the development of
literature regarding seismicity, while China, Thailand, France, the Netherlands, and
Canada were the earliest countries to produce articles about earthquakes in Indonesia
starting in 2005.