Note on the Multiplicative Zagreb Indices

Journal: Discrete Applied Mathematics
Author(s): Ramin Kazemi
Abstract: The first and second multiplicative Zagreb indices of a graph $G$ are

$$\Pi_1(G) = \prod_{v \in V(G)} (d(v))^2$$

and

$$\Pi_2(G) = \prod_{uv \in E(G)} d(u)d(v),$$

respectively. Eliasi et al. (2012) introduced a multiplicative version of the first Zagreb index, defined as

$$\Pi_1^*(G) = \prod_{uv \in E(G)} (d(u) + d(v))$$

and Xu et al. (2012) named it as the multiplicative sum Zagreb index. In this paper, we study the multiplicative Zagreb indices of molecular graphs with tree structure. More precisely, we obtain the bounds for the moments and the probability generating function of these indices in a randomly chosen molecular graph with tree structure of order $n$.

Key words: The multiplicative Zagreb indices; Moments; probability generating function.

Vol: 198 (1)
Pages: 147-154
Year: 2016
Publisher: Elsevier, North Holland.
ISSN: 0166-218X

Indexing and Abstracting: ISI (IF(2015)=0.802), SCOPUS, INSPEC, Zentralblatt Math, Google Scholar, EBSCO, ProQuest, Academic OneFile, Academic Search, Chinese Science Citation Database, Current Abstracts, Current Contents/Physical, Chemical and Earth Sciences, Gale, Journal Citation Reports/Science Edition, MathEDUC, Mathematical Reviews, OCLC, SCImago, STMA-Z, Summon by Serial Solutions, VINITI-Russian Academy of Science.

Link: http://www.journals.elsevier.com/discrete-applied-mathematics/