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On the $(\xi, k)$-critical graphs. (Chinese. English summary) Zbl 0998.05057

Summary: Let $G$ be a connected graph with $\xi(g) = k \geq 1$, if $\xi(G \setminus e) = k - 1$. Then $G$ is called $(\xi, k)$-critical. This paper gives some characterizations of $\xi-1$-critical graphs and provides many classes of $\xi-1$-critical graphs.

MSC:
05C75 Structural characterization of families of graphs
05C10 Planar graphs; geometric and topological aspects of graph theory
05C35 Extremal problems in graph theory

Keywords:
maximum genus; Betti deficiency; critical graphs; characterizations