09-04-06-01-TriconnectedComponents

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1.1   Notes

1.1.1   basic

$\mathscr{E}(S) := \{e = (u,v), u \in S, or\ v \in S\}, S \in V$.

path from v to w is noted as $p : v \stackrel{*}{\Rightarrow} w$.

Tree T is directed, rooted. An edge within T is noted as $p : v \to w$, v is the father of w, w is the son of v. The path within T is noted as $p : v \stackrel{*}{\to} w$, v is the ancestor of w, w is the descendant of v. $D(v)$ is the set of all descendants of v.

frond edge is noted as $w - - > v$, means $v \stackrel{*}{\to} w$.

Palm tree, a tree with some fronds.

1.1.2   structure

separation point, or articulation point: for a, there exits 2 distinct vertices v,w, and a is on every path $p : v \stackrel{*}{\to} w$.

biconnected multifraph: no separation point. Which means, for each triple of distinct vertices v, w, a, there is a path $p : v \stackrel{*}{\to} w$ that a is not on the path.

biconnected components: use G to generate a set subgraph Gi, 4 properties:

(1) Gi is biconnected;

(2) No Gi is a prope subgraph of a biconnected subgraph of G

(3) all vertices of Gi, non-separation point occurs exactly once, separation point occurs more than onec. (4) every two Gi and Gj, contains at most one common vertex, which (if any) is a separation point.

biconnected components is unique.

Chapter 2　群的推广

Chapter 3　群论的应用

Chapter 4　参考文献说明

《矩阵理论-陈大新》[?]：好的观点的来源。