

**Chen, Wei****Explosive percolation in random networks.** (English) [Zbl 1296.74001](#)[Springer Theses](#). Berlin: Springer; Beijing: Peking Univ. (Diss.) (ISBN 978-3-662-43738-4/hbk; 978-3-662-43739-1/ebook). xv, 63 p. (2014).

Publisher's description: This thesis is devoted to the study of the Bohman-Frieze-Wormald percolation model, which exhibits a discontinuous transition at the critical threshold, while the phase transitions in random networks are originally considered to be robust continuous phase transitions. The underlying mechanism that leads to the discontinuous transition in this model is carefully analyzed and many interesting critical behaviors, including multiple giant components, multiple phase transitions, and unstable giant components are revealed. These findings should also be valuable with regard to applications in other disciplines such as physics, chemistry and biology.

**MSC:**

- [74-02](#) Research exposition (monographs, survey articles) pertaining to mechanics of deformable solids
- [74S60](#) Stochastic and other probabilistic methods applied to problems in solid mechanics
- [65Z05](#) Applications to the sciences

**Full Text:** [DOI](#)