

## Accepted Manuscript

Robustness and percolation of holes in complex networks

Andu Zhou, Slobodan Maletić, Yi Zhao

PII: S0378-4371(18)30218-8  
DOI: <https://doi.org/10.1016/j.physa.2018.02.149>  
Reference: PHYSA 19269

To appear in: *Physica A*

Received date: 10 August 2017  
Revised date: 18 January 2018

Please cite this article as: A. Zhou, S. Maletić, Y. Zhao, Robustness and percolation of holes in complex networks, *Physica A* (2018), <https://doi.org/10.1016/j.physa.2018.02.149>

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HIGHLIGHTS

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- Percolation on network and homology of associated clique complex is related to vulnerability
- Distribution of holes per cluster under different attacks strategies is related to robustness
- Simulation results for homology of random clique complex are in accordance with theoretical estimates
- Changes in homology groups as a possible signal of phase changes in network's function

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