# Template for preparing your research report submission to PNAS using Overleaf

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This manuscript was compiled on May 11, 2020

Please provide an abstract of no more than 250 words in a single paragraph. Abstracts should explain to the general reader the major contributions of the article. References in the abstract must be cited in full within the abstract itself and cited in the text.

community | robustness | node centrality | ...

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Note: please start your introduction without including the word "Introduction" as a section heading (except for math articles in the Physical Sciences section); this heading is implied in the first paragraphs.

## Related work

Node centrality: - bridgeness - betweenness - pagerank - community centrality (1) - shapley values centrality (2), (3)

Community robustness: - conductance (4) - pairwise similarity (5) - variation of information in perturbed networks (6)

Benchmark networks: - Girvan-Newman (7) - Lancichinetti (LFR) (8) - Affiliation graph model (9)

# **Methods**

- find communities in network (if we don't know them) - rank nodes with respect to a selected measure - remove best nodes - compare new communities with previous

# Results

# **Discussion**

# Conclusion

**Supporting Information (SI).** Authors should submit SI as a single separate PDF file, combining all text, figures, tables, movie legends, and SI references. PNAS will publish SI uncomposed, as the authors have provided it. Additional details can be found here: policy on SI. For SI formatting instructions click here. The PNAS Overleaf SI template can be found here. Refer to the SI Appendix in the manuscript at an appropriate point in the text. Number supporting figures and tables starting with S1, S2, etc.

Authors who place detailed materials and methods in an SI Appendix must provide sufficient detail in the main text methods to enable a reader to follow the logic of the procedures and results and also must reference the SI methods. If a paper is fundamentally a study of a new method or technique, then the methods must be described completely in the main text.

### **Materials and Methods**

Please describe your materials and methods here. This can be more than one paragraph, and may contain subsections and equations as required. Authors should include a statement in the methods section describing how readers will be able to access the data in the paper.

**Subsection for Method.** Example text for subsection. (1) (9)

**ACKNOWLEDGMENTS.** Please include your acknowledgments here, set in a single paragraph. Please do not include any acknowledgments in the Supporting Information, or anywhere else in the manuscript.

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Authors must submit a 120-word maximum statement about the significance of their research paper written at a level understandable to an undergraduate educated scientist outside their field of speciality. The primary goal of the Significance Statement is to explain the relevance of the work in broad context to a broad readership. The Significance Statement appears in the paper itself and is required for all research papers.

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