

# Open and Reproducible research: the new frontier

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# Open data and reproducible research

## Summary

- ▶ The issue with verifiable research
- ▶ Open and reproducible research
- ▶ Data and **open** data
- ▶ Challenges

# The issue with verifiable research

- ▶ The current process is peer review
- ▶ Requires knowledgeable reviewers
- ▶ System has been questioned recently

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## Peer review: Troubled from the start

Alex Csizsar

19 April 2016

Pivotal moments in the history of academic refereeing have occurred at times when the public status of science was being renegotiated, explains Alex Csizsar.

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Subject terms: [Peer review](#) · [Publishing](#) · [History](#)

Referees are overworked. The problem of bias is

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## Reproducibility: A tragedy of errors

David B. Allison, Andrew W. Brown, Brandon J. George & Kathryn A. Kaiser

03 February 2016

Mistakes in peer-reviewed papers are easy to find but hard to fix, report David B. Allison and colleagues.

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Subject terms: [Communication](#) · [Publishing](#) · [Peer review](#)

An ideal description of open reproducible, peer reviewed research

# The roadblocks to open data and reproducible research

# Open data, how do we deal with this

- ▶ Why do we want open data do it, How do we do it, How to increase the value of data, Data publishing and data citation, data paper and data journal. Class activity. Describe how you shared data. In groups, what are the main ways they currently use to store and what actions do you have to take to share data. How easily have you accessed someone else's data?