Motivation:

* Explosion of DD papers in the past (plot with number of papers)
* Hopeful DD

Motivation:

* Identify subgroups that follow parallel trends

Contributions:

* Reduce (partial) bias in point estimates.
* Improve usefulness of robust sensitivity analysis.

Setup:

* DD with potential outcomes
* PTA assumption

Sources of bias:

* Observed, time varying and unobserved.
* Matching reduces observed, and sensitivity analysis deals with the other two.

Sensitivity analysis:

* Rambachan and Roth: Honest CI 🡪 Usefulness depends on pre-parallel trend violations AND bias
* Keele et al.: How unobserved confounding (in the previous sense) would affect estimates.

3 Simulations:

* Increasing effects, bias in the same direction:
  + Matching helps with point estimate and helps with honest Cis.
* No effect, bias in the same direction:
  + Matching helps with point estimate, and particularly helps with honest Cis.
* Increasing effect, bias in different direction:
  + No decrease in bias (increase), but can be caught with sensitivity analysis.

Application: