



UNIVERSITY OF PADOVA

Beyond  $p < .05$   
Modern statistical approaches  
in psychological science

INTERNATIONAL WINTER SCHOOL 2019

## School abstract - Chris Chambers

### Reforming the culture of scientific practice in psychology

In this talk I will summarise seven major problems facing psychological science, including bias, hidden analytic flexibility, unreliability, data hoarding, corruptibility, lack of open access publishing, and bean counting. In each case I will introduce a solution or set of solutions to reform incentive structures in science, many of which now exist or are in the process of being implemented. One of the principal solutions to flawed research practices in psychology is study preregistration and, in particular, the Registered Reports (RR) initiative that was introduced in 2013 and is now offered by over 100 journals. Among discussing other solutions, I will cover the basics of the RR format.

### Registered Reports in depth

**Abstract** This workshop will introduce attendees to the concept of Registered Reports — a new type of empirical article offered by academic journals that is designed to reward transparency and openness in research (for details see <https://cos.io/rr/>). In contrast to conventional research articles, Registered Reports are peer reviewed before results of a research study are known to the authors, and usually before the results exist. Research proposals that meet high standards of theoretical or applied value and methodological rigour are then accepted in advance, with final acceptance guaranteed regardless of the outcomes provided researchers adhere to their approved protocol and conduct the research to a high standard. This model of publishing eliminates bias against negative (or null) results, and also makes clear the distinction between confirmatory hypothesis testing and exploratory post hoc analysis. The workshop will contain an introduction to the Registered Reports format, including how it solves various problems in research and publishing, the benefits it brings to authors in terms of efficiency and article impact, and anticipating answers to frequently asked questions. Attendees will then perform a practical exercise in small groups to develop their own preregistered protocol using a template Registered Report available here: <https://osf.io/93znh/> and we will cover top tips for maximising success. Attendees who send their templates to Chris Chambers ([chambersc1@cardiff.ac.uk](mailto:chambersc1@cardiff.ac.uk)) two weeks before the Winter School will receive personalised feedback in advance of this workshop, increasing the value of the practical exercise.