

Open Research Conversations: Reproducibility In Practice

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What does a Research
Practice Lead do?

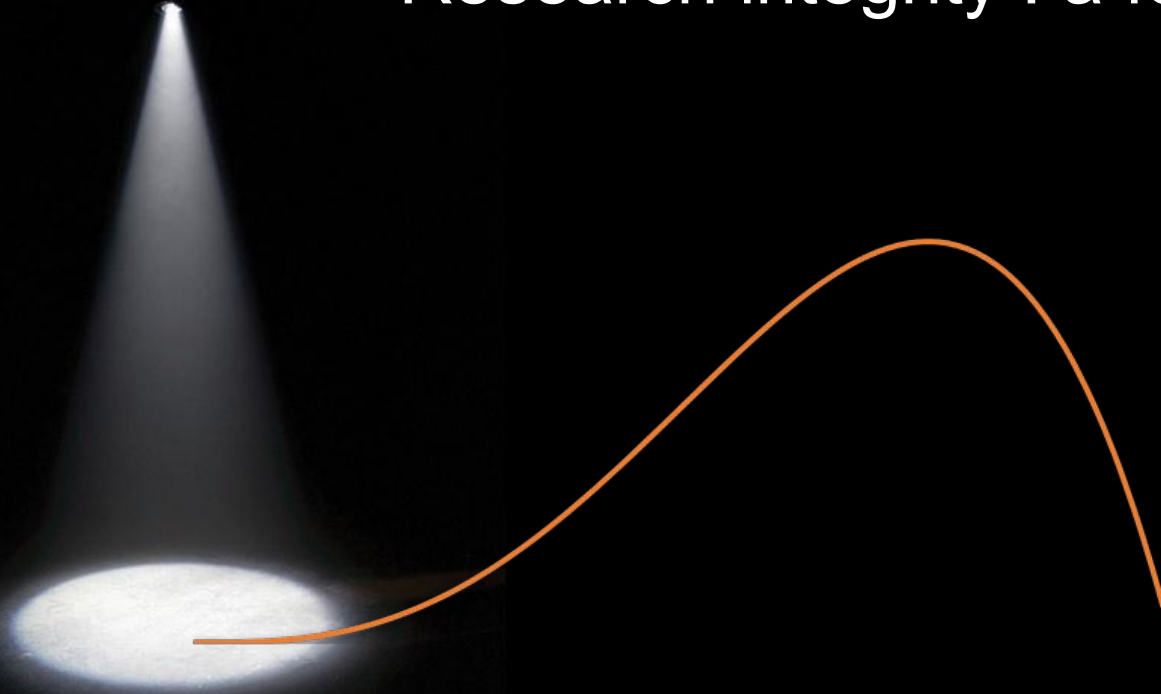
... Sheffield is a UKRN founder member

“Ensuring the UK remains a centre for world-leading research.”

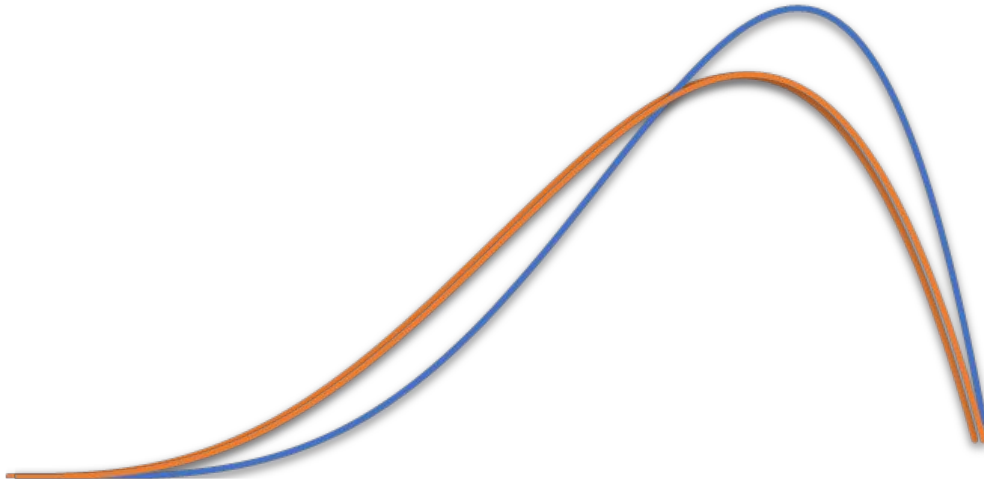
<https://www.ukrn.org/>



Research integrity : a forensic model?



Research Improvement Strategy



Research integrity is not researcher integrity

Honest, diligent researchers can still produce unreliable research

You get errors for free, no deliberate effort is required

Why Openness is key to quality

audit / replication

dissemination

extension & integration

collaboration

an ethical duty

an honest signal

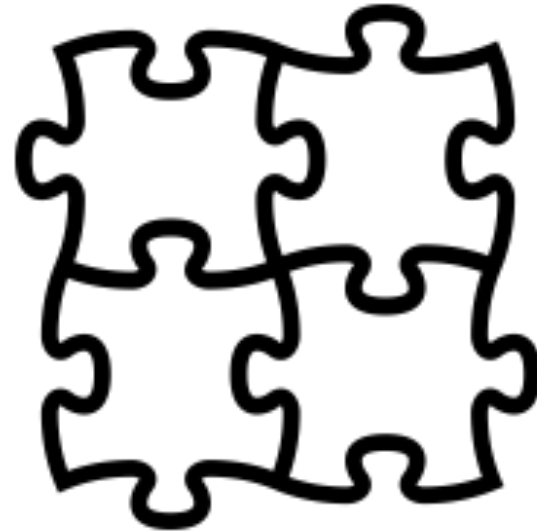


Image: Puzzle Pieces, CC-BY by M Ryan, US

What this means on the ground

Code (sharing, version control)

Data (management, sharing)

Open Access publishing

Research Culture

Policies and responsible metrics

Research training

Practices: replication, pre-registration, version control, collaboration

News

Open Research Working Group @ Sheffield

Claudia von Bastian



Jim Uttley



UKRN@sheffield.ac.uk

Event Tomorrow!

Open and Reproducible Research Workshop

Tues 19 January, 10:00 - 16:00

Whistlestop tour of problems associated with replication crisis and potential solutions

Initially aimed at PhD students in Social Science but open to anyone

Link to join:

<https://eu.bbcollab.com/guest/3d87f0f5b85b4d0b93343400c534f810>

Time	Session
10:00-10:10	Introductions
10:10-10:50	Current problems in science
10:50-11:20	Data simulation
11:20-11:30	BREAK
11:30-12:00	Preregistration & Registered Reports
12:00-12:45	Systematic reviews
12:45-13:15	LUNCH
13:15-14:00	Application of open research methods
14:00-15:00	Reproducible methods and analysis
15:00-15:45	Data management & open data publication
15:45-16:00	Question and answer

TIER Fellowship for Aneta Piekut



Project Tier: Teaching Integrity in Empirical Research

“Enhancing teaching in reproducing data analysis”

Senior Lecturer Dr Aneta Piekut has been awarded a prestigious Fellowship by Project TIER to enhance the teaching of replicability in the training of social scientists.

<https://www.sheffield.ac.uk/smi/news/enhancing-teaching-reproducing-data-analysis>

TIER Symposium on teaching reproducibility

Call for Proposals !

<https://www.projecttier.org/fellowships-and-workshops/2021-spring-symposium/>

Deadline 25th Jan

We are interested in proposals for presentations that identify and discuss the variety of educational outcomes associated with teaching reproducible research and/or suggest pedagogical methods that promote specific outcomes.

We are also interested in proposals for presentations that review existing empirical evidence about the educational impacts of teaching reproducible research, and/or articulate strategies or study designs for generating systematic evidence.

An Open Research Statement for Sheffield

[FAIR principles](#): FAIR—Findable, Accessible, Interoperable, Reusable

DORA

Data security / privacy

Our vision

<https://www.sheffield.ac.uk/vision/our-pillars/research/>

Priority one: Excellence

“Create an open research culture that values a range of contributions and delivers the highest standards and best practice in research integrity and ethics. We will adhere to the FAIR principles to the benefit of society (findable, accessible, interoperable, reusable).”

Policies & Plans

UKRN template policies

Research Transparency

Responsible Research Evaluation

Responsible Use of Metrics

Rewards and Incentives

Open Research - an action plan to support the statement

- work in progress!

Training & Support

Seeking funding to support computational literacy / data science skills

- Research England Development Fund / Wellcome Trust / UKRI Data Science centre calls

Ongoing assessment of research culture

- see [Wellcome strategy on this](#)

Open Research Resources from Library

Research lifecycle project from IT services

Research Software Engineering

Statistics advisory...

...And more

Research on Research

RoRi



<http://researchonresearch.org/>

The UKRN Academy

8 PhD students,

at 5 institutions

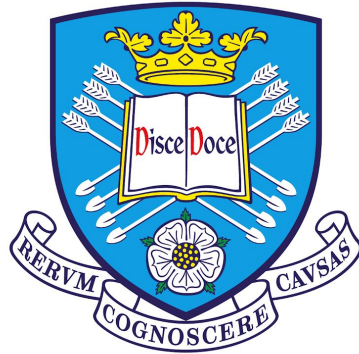


Zuzanna Zagrodzka

Evaluating the perceptions of bias, replication and transparency in evolution and climate change science

My ambition for Sheffield

“Made in Sheffield”



The
University
Of
Sheffield.

My questions for you?

What is the work? What needs doing?

What is already happening? What can you share with the rest of the institution?

Who should I listen to?

What would you do in my shoes?

Questions & feedback

t.stafford@sheffield.ac.uk

Want to get involved in promoting Open Research?

ukrn@sheffield.ac.uk

These slides available at

<http://tomstafford.staff.shef.ac.uk/talks/>

END

Reserve slides follow

Is my field at risk? Ask yourself

Publication pressures

- speed? volume? status?

Focus on novelty / Lack of replication?

Expensive or laborious methods?

Complex/opaque analysis?

Data / materials / platforms hard to access?

Dogmatic peers?

Incomplete training?

Conflict of interest from funders?

- impact? profit?

Lack of standards / consensus on criteria by which research should be assessed?

Also?

Lack of consortia / competitions / common data

Reliance on indirect / proxy measures

Lack of formal theory / support for theoretical work

Bias against (no funding for) exploratory and observational research

Lack of standardised reporting / measures

Lack of risk of bias / quality indicator tools

Lack of (enough) expert reviewers/reviews

Common concerns about “open research”

Sharing of code limiting scope for commercialisation

Weaponisation of open data by bad actors (e.g. climategate)

Pre-prints squandering trust in research

Lack of funding model for auxiliary “research services” (e.g. statistical support)

Rising journal costs / extortion by academic publishers

Training & support gaps?

Licensing: Do we need a research code management plan, like we have research data management plans?

PGR training 1: There is no financial model to incentivise specialist DDP training.

PGR training 2: supporting "Computational literacy" is a core research practice skill

Statistics support/advisory: could be better joined up / sign posted?