Lessons from the Open Source Software communities (and research software)

# Introduction

### Who am I?

* I was a researcher
* I’m now a RSD
* I love teaching
* OpenAstronomy / SunPy (open source)
* Caprentries (teaching network)
* Sunspotter (citizen science)

## Problems

### For Teachers

* A place to share
* Get recognition
* Get contributors

### For Learners

* Find material and trust it!
* Know the material is still being maintained!
* Be able to contribute back!

# Open Source Software

## Some examples



## OSS vs Research software

### OSS

* To be reused
* Repositories
* Simple to contribute

### Research

* Single use (many claim so!)
* Some link on a paper
* Contribute back?

## GitHub: open source software more open!

[RSD engineering](https://github.com/ucl/rsd-engineeringcourse/) course material.

## Metrics in …

### Open source

* Downloads (but GH doesn’t give you the number).
* Forks
* Stars
* Contributors

### Research software

* Papers and citations
* Publish software as such ([Zenodo](https://zenodo.org/)/[Figshare](https://figshare.com/)) and [Citation File Format](https://citation-file-format.github.io/).

# OER

## Impact

### Downloads

* self-study (1 download = 1 person)
* delivery (1 download > 30 people)
* bots (1 download = 0 people)

### Contributors

Make it easy for people to contribute (and get recognition).

* No PDF
* Share sources! not only final product. E.g., videos.

### Remix

Make it easy for people to remix and let the source know!

* mix material
* produce translations

Value added to your programme! Network size! adds value! More users => How? make it accessible to others to modify. PDF? No! Help them to get to that level!

## How?

* Create a new “social” network to include these requirements
* reuse what exists and provide mechanisms to help creators to use it.
	+ [GitHub](https://github.com/ucl/rsd-engineeringcourse/), [gitlab](https://gitlab.com/), [bitbucket](http://bitbucket.org/)
	+ [Wikiversity](https://en.wikiversity.org/wiki/Wikiversity%3AMain_Page), [wikibooks](https://en.wikibooks.org/wiki/Main_Page)
	+ [Open Science Framework](https://osf.io/)
	+ [clara.io](https://clara.io) (3d models, e.g. [jupiter](https://clara.io/view/d26b7f2f-d412-4bcc-b16a-b1b513c8e80f))