figshare • Engineering Photonics

Building on shared research and sharing the data underlying a PhD

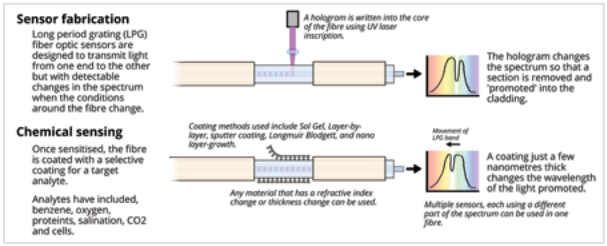
Matthew Partridge, Engineering Photonics

Key Points

- **Find data to build upon**
  You can use figshare to find data in your field to build upon or compare with your own research.
- **Share your PhD**
  Sharing your entire PhD on figshare can help build exposure and impact.
- **Improved data management**
  Keeping track of your data can help you package and manage your data better.

About Matthew

I work with fibre optic sensors. We use UV lasers to turn fibre optic threads into sensor units. So, individual little sections of them are different sensors for different things. Because they're optic-based, they don't have any electronics. We can have the sensor three miles from where we actually read the sensor because you can have these huge, long strands of fibre optic going under the ground.



Fibre optic chemical sensing

We make sensors for everything from biomedical projects to industrial stuff like concrete curing and foundation setting. We make sensors that do chemical sensing (antibodies and benzene concentrations or pollutants) and physical sensing (strain and stress).

There are some projects surrounding that, like 3D printing, which is the most recent thing I've had up on figshare. I'm not in physics and I'm not in chemistry - I'm somewhere in between where we do both.

The blog

Matthew also founded the blog Errant Science, which is his take on being a university researcher with a humourous twist.



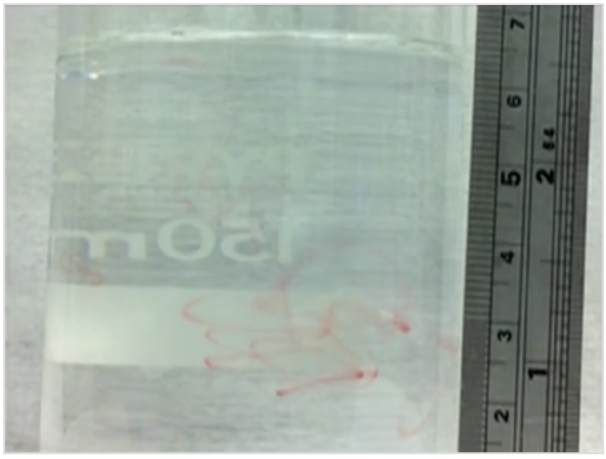
Days when nothing works - Errant Science Blog

“ In almost all cases, I’m looking for a specific dataset about a specific material or piece of work. I want to compare that to what I’m doing, which is the point of having stuff on figshare. ”

Using figshare to search and build upon research

If I were using figshare to search for data, I would be looking for the same thing out of the data that I look for out of papers. When I write up a piece of research, I’m looking for references or datasets that I can compare my work to.

I have also used figshare more at the design stage where I want to do a piece of work, and I’ve gone and looked on figshare to see if I can already find datasets that I can just use and compare them to. In almost all cases, I’m looking for a specific dataset about a specific material or piece of work. I want to compare that to what I’m doing, which is the point of having stuff on figshare.



Splitting vortex rings!

Using figshare to share your entire PhD

I first heard about figshare when I went to SpotOn in London, which is a social media Open Access conference. While I was there, I saw someone talking about figshare and what you could do with it. I went back and tried it and liked it. I thought the interface was incredibly easy and I liked the idea. Not long after that, I put up my whole PhD - my thesis and all my data associated with it. Since then, I’ve included figshare links on posters at conferences.

Improved data storage and management

I think more about how I package my data and my data management is better. In the past, you collect this massive pile of data and from it you pick the five things you then present in your paper. Now, I’m much more careful about how I choose what I’m going to pick out of that dataset and how I store and manage it. I consider the fact that at some point, someone is going to have to download and understand that data. Therefore, I need to have more metadata tags around it. I’m a little better at keeping metadata myself but I wouldn’t say it’s changed how I plan my experiments or my work.

I do talk to students about the fact that when they write a paper, they have to factor in a day to package their data together, ready to go up online.

“ I consider the fact that at some point, someone is going to have to download and understand that data. ”

See Matthew’s research on figshare!