# Open Science & Data Management

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https://harshp.com/





01 - Introduction

02 - Science

03 - Data

04 - Publishing

05 - Community











# Twitter

### @harsh@eupolicy.social

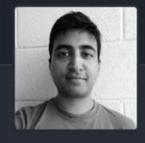
@coolharsh55

moved to Mastodon as @harsh@eupolicy.social

O Dublin City, Ireland O harshp.com Joined July 2009

207 Following 555 Followers





Edit profile

### harsh

@harsh@eupolicy.social

Assistant Professor @ Dublin City University; Chair W3C Data Privacy Vocabularies & Controls Community Group (DPVCG); Semantics x Privacy/DataProtection x Consent x GDPR

# Mastodon

# Google Scholar

### Harshvardhan J.Pandit 🖍

ADAPT Centre, Dublin City University (go to homepage copies)

Verified email at adaptcentre.ie - Homepage

privacy semantic web consent GDPR regulatory compliance



### Harshvardhan Pandit

Assistant Professor at Dublin City University

County Dublin, Ireland · Contact info

489 connections

Open to

Add profile section

More )



**Dublin City University** 

Trinity College Dublin

# 02 - Science



Open science is the <u>movement</u> to make <u>scientific research</u> (including <u>publications</u>, <u>data</u>, <u>physical samples</u>, and <u>software</u>) and its <u>dissemination</u> <u>accessible</u> to all levels of society, amateur or professional.

Data

Visualization

Open science is transparent and accessible knowledge that is shared and developed through collaborative networks. It encompasses practices such as publishing open research, campaigning for open access, encouraging scientists to practice open-notebook science (such as openly sharing data and code, broader dissemination and engagement in science and generally making it easier to publish, access and communicate scientific knowledge

# 02 - Six Principles of Open Science

Scientific process requires reviewing and replication

- Open methodology
- Open source
- Open data
- Open access
- Open peer review
- Open educational resources



# 02 - Data





### Hypothesis development

- Systematic literature review
- Meta-analyses
- Critical reading and peer review
- · Publication bias
- Patient and Public Involvement

### Study design

- Randomization and blinding
- Statistical Power and sample sizes
- Preregistration and Registered Reports
- Research data management plans
- Data simulation
- SOPs
- Patient and Public Involvement

### Data collection

- Research data management
- Electronic lab notebooks
- Reproducibility/Quality checks
- · Reagent identifiers
- · Open source tools
- Patient and Public Involvement

### Publishing

- Open access publishing
- Preprints
- Licensing
- · Reporting guidelines
- Publishing data
- Publishing materials and methods
- · FAIR principles
- · CRediT statement
- ORCiDs

### nterpretation

- · Author biases
- · Conflict of interest
- Distinction between pre-registered and exploratory analyses
- Avoiding spin and selective publication
- Significance beyond pvalues

### Data analysis

- Data visualization
- Coding skills; documentation and version control
- · Open source tools
- Reproducibility/Quality checks
- Patient and Public Involvement
- FAIR principles

# Data or Information Samples or Collections Records or Documents

# 03 - Data what now?

Data Spaces?







http://www.orfg.org



http://scoss.org

### European Open Science Cloud (EOSC)

This is a cloud for research data in Europe. Background, policy information, events and publications related to the EOSC

### **Open Science Policy Platform**

Group that advises the Commission on how to develop open science policy. Meeting reports, member details and background

### Open science monitor

Tracking trends for open access, collaborative and transparent research across countries and disciplines.







BILL& MELINDA GATES foundation









Open Policies 101

What is an "open" policy? Open policies promote the artistreed destillation and sharing of nessenth outputs. These policies typically encompess both read outputs. These policies typically encompess both and octobally investigation (commonly known as "open access") and the factual information from which research (instigns are delinial, including datasets, sufferers, and code ("open data").

Why are research funders adopting open policies. The open sharing of research nationals benefits social by getting more information quickly and widely into



























JAMES S. McDONNELL FOUNDATION







04 - Publishing

<u>osf.io</u>

zenodo.org

public "preprint server"



DORAS

DCU Online Research Access Service

tara.tcd.ie

institutional repository



Publications Reports Data



doras.dcu.ie



# 04 - Publishing Options

Draft --> Publish for comments

Finalise --> Publish for feedback

Accepted --> Publish for early access

Presented --> Publish slides

Published --> Publish for 'open' copies

Publishing articles at different stages helpsdifferent "aims" in the context of Open Science

Can you cite "not accepted" articles ??? What about "accepted but not published" ???

No

Yes



# 04 - FAIR Publishing



### **FINDABLE**

Unique identifiers and metadata are used to allow data to be located quickly and efficiently



## ACCESSIBLE

Data is open, free and universally available for research discovery efforts



### INTER-OPERABLE

A common programming language is used to allow use in a broad range of applications



### REUSABLE

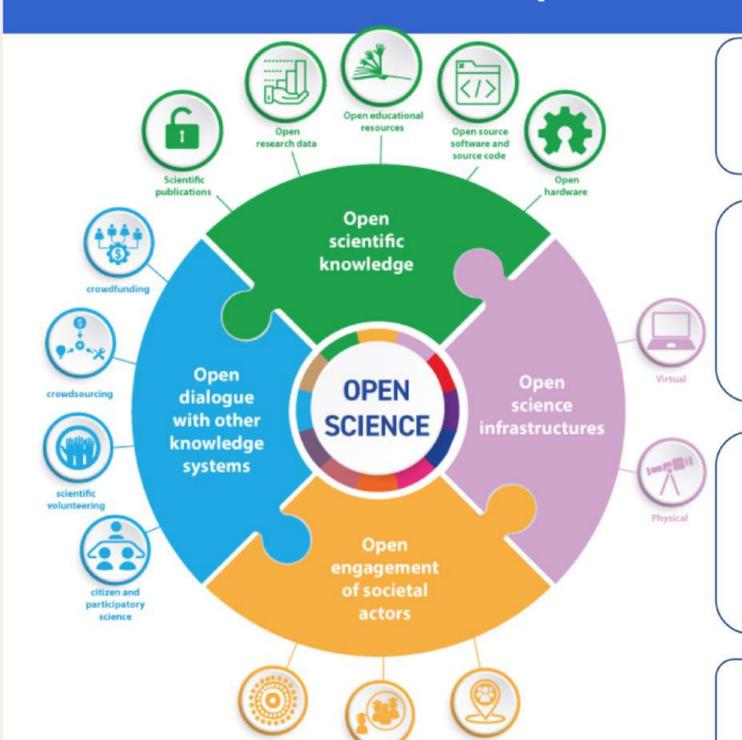
All data is clearly described and outlines associated data-use standards



# CC (1) (5) (9) BY NC SA

# 04 - Publishing Open Science

# Key Pillars of Open Science



Open Scientific Knowledge: scientific publications, research data, software, source code and hardware available in the public domain or under the copyright that has been released under an open license

Open Science infrastructures: scientific equipment or sets of instruments, knowledge-based resources such as collections, repositories, archives and scientific data, open computational and digital infrastructures, needed to support Open Science and serve the needs of different communities

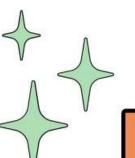
Open engagement of societal actors: citizen and participatory science and other extended collaboration between scientists and societal actors beyond the scientific community, opening up practices and tools that are part of the research cycle and by making the scientific process more inclusive and accessible to the broader inquiring society

Open dialogue with other knowledge systems: recognition of complementarities between diverse epistemologies, including indigenous knowledge systems

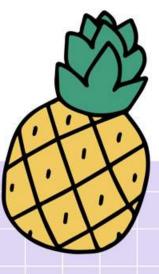








# PERSONAL PROFILE



### **ORCID**

uniquely identify authors and contributors of scholarly communication

### **GOOGLE SCHOLAR**

automatic aggregator of publications crawled from the web into a profile

### LINKEDIN

professional "social network" to connect, communicate, and disseminate

### **PERSONAL WEBSITE**

this is my page, there are many like it, but this one is mine

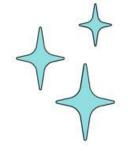


### **EXAMPLE.COM**





I'm researching on this stuff, and other stuff, and then some more other stuff. I am interested in the areas of blah and blah. Here are my projects, and my publications, my data, and stuff.







### What information should be on this website?

The objective of this website is to:

- 1. Collect information related to our "regtech" work in a single location (i.e. this website)
- 2. Provide topical information collections e.g. work on GDPR, or work on Al Act
- 3. Share a comprehensive list of publications associated with "regtech"
- 4. Share outputs, methods, resources anything that can be "reused" or "extended" to encourage adoption and collab
- 5. Share details about projects (funded as well as adhoc)
- 6. Share details about involvements in activities and groups e.g. DPVCG, NSAI, CEN, ISO
- 7. Share the people involved and show presence of a 'team'
- 8. Provide contact information

### RESEARCH



### OVERVIEW

I am an Assistant Professor at the School of Computing is include application of semantics towards solving real-wor protection, legal and regulatory compliance, and consent Dublin) explored the application of linked data and seman with a particular focus on consent and provenance. I chair Community Group (DPVCG) – which develops interopera activities based on legal and practical requirements. I am Ireland (NSAI) and work on standardisation for CEN/CEN

You can see more information about my:

- research interests
- publications
- draft publications for feedback and collaboration
- past and present research projects
- · research activities, group memberships
- events and conference organisation
- participation in peer-review
- supervision and mentoring
- · teaching, lectures, seminars

harshp.com/research

### # RESEARCH INTERESTS

### Privacy

I'm interested in the exploration of issues regarding privacy, especially those related to use of technology

and data protection. My primary existing work in identification ar technologies and innovations.

### Consent

Consent is a broad mechanism based on choice. My primary in protection issues, where it is us research revolves around quantidentifying and mitigating issues

General Data Protection Regulation
The GDPR and other recent date collecting, using, sharing person research interest revolves around representation for evaluating collecting.

Semantic Web and Data Model
The Semantic Web standards, placed on the web infrastructure relationships. My interest lies in information from other research

### # PUBLICATIONS

See full list of publications with links to copies and resources here. Lists also available at Google S and dblp.

### **# SELECTED PUBLICATIONS**

Applications and Harmonis

Mon May 01 2023 Confere

Conference on Fairness, A

Delaram Golpayegani\*, Ha

To Be High-Risk, or Not To

Making Sense of Solid for I

Mon Feb 13 2023 Journal
MDPI Information
Harshvardhan J. Pandit\*

Creating A Vocabulary for I

Fri Oct 11 2019 Confere.
International Conference of
Harshvardhan J. Pandit\*, A
Javier Fernandez, Ramisa
Wenning

### PEER-REVIEW

### Reviewer for Journals

- Future Generation Computer Systems (FGCS)
- Journal of Data Protection & Privacy (JDPP)
- · Journal of Information Security and Applications (JISA)
- · Journal of Personal and Ubiquitous Computing (JPUC)
- Journal of Responsible Technology (JRT)
- Journal of Web Semantics (JWS)
- Semantic Web Journal (SWJ)
- IEEE Access (IEEE Access)

### # Reviewer for Conferences/Workshop

- AICS (Irish Conference on Artificial Intelligence and Cognitive Science) 2022 2018
- CIKM (29th ACM International Conference on Information and Knowledge Managem
- CKG (Workshop on Contextualized Knowledge Graphs) 2019
- DataValue (Workshop on Governing Value: The Practice of Exploiting Data Value) 20
- ESWC (Extended Semantic Web Conference) 2023 2022 2021 2020 2019 2018
- FAccT (Conference on Fairness, Accountability, and Transparency) 2023
- ISWC (International Semantic Web Conference) 2023 2022 2021 2020 2019 2018
- IWPE (International Workshop on Privacy Engineering) 2022
- JURIX (International Conference on Legal Knowledge and Information Systems) 202

05 - Community

Tarshvardhan Pandit | Open Science & Data Mgmt. | 22-NOV-2023 | https://harshp.com/research/presentations

# ly workflow



### Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? Import a repository.

Required fields are marked with an asterisk (\*).

Owner \*

Repository name \*



open-data-for-project

open-data-for-project is available.

Great repository names are short and memorable. Need inspiration? How about supreme-palm-tree?

### **Description** (optional)

This repository provides access to data and code from the project.



Public

Anyone on the internet can see this repository. You choose who can commit.



Private

You choose who can see and commit to this repository.

personal repo - Github ADAPT repo - Gitlab

### Initialize this repository with:



Add a README file

This is where you can write a long description

### Add .gitignore

.gitignore template: None -

Choose which files not to track from a list of temp

### Choose a license

License: Apache License 2.0 ▼

A license tells others what they can and can't do v





# Open Science/Data = Permissive License

# Choose an open source license

An open source license protects contributors and users. Businesses and savvy developers won't touch a project without this protection.





Use the license preferred by the community you're contributing to or depending on. Your project will fit right in.

If you have a dependency that doesn't have a license, ask its maintainers to add a license.



The MIT License is short and to the point. It lets people do almost anything they want with your project, like making and distributing closed source versions.

Babel, .NET, and Rails use the MIT License.



The **GNU GPLv3** also lets people do almost anything they want with your project, *except* distributing closed source versions.

Ansible, Bash, and GIMP use the GNU GPLv3.















# My workflow

- 1. TODO Submitting the Paper: [0/8]
- 2. TODO Reviews received: [0/5]
- 3. T0D0 Camera-ready: [0/2]
  - o 3.1. Todo Submit Camera-Ready version [0/4]
  - o 3.2. TODO Upload pre-print
    - 3.2.1. TODO Upload pre-print to Zenodo
    - 3.2.2. TODO Upload pre-print to TCD TARA
- 4. TODO Presentation: [0/2]
- 5. TODO Published: [0/1]

# [ ] Check format and page requirements [ ] Check single/double blind requirements

1. TODO Submitting the Paper: [0/8]

- [ ] Acknowledgements for funding
- [ ] Email addresses
- [ ] OA link in abstract
- [ ] Link to resources
- [ ] Submit paper
- [ ] Save copy as submitted version

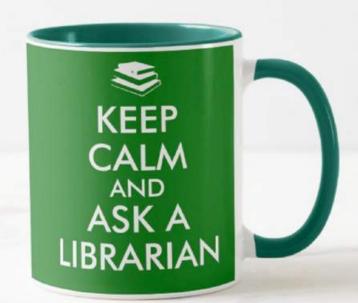
### 5. TODO Published: [0/1]

- [ ] Update trackers
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  - ighthat is a larger lar
  - [ ] TCD/RSS



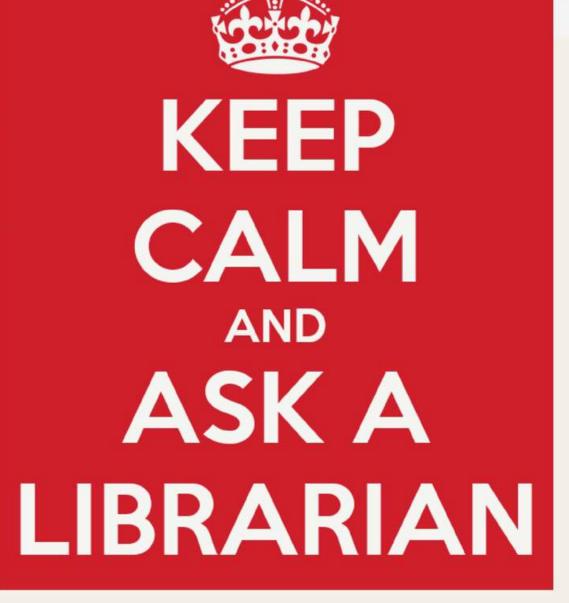
















# Thank You

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https://harshp.com/research/presentations

