

The Alan Turing Institute

Can we reimagine FAIR for building
communities in open science?

Malvika Sharan

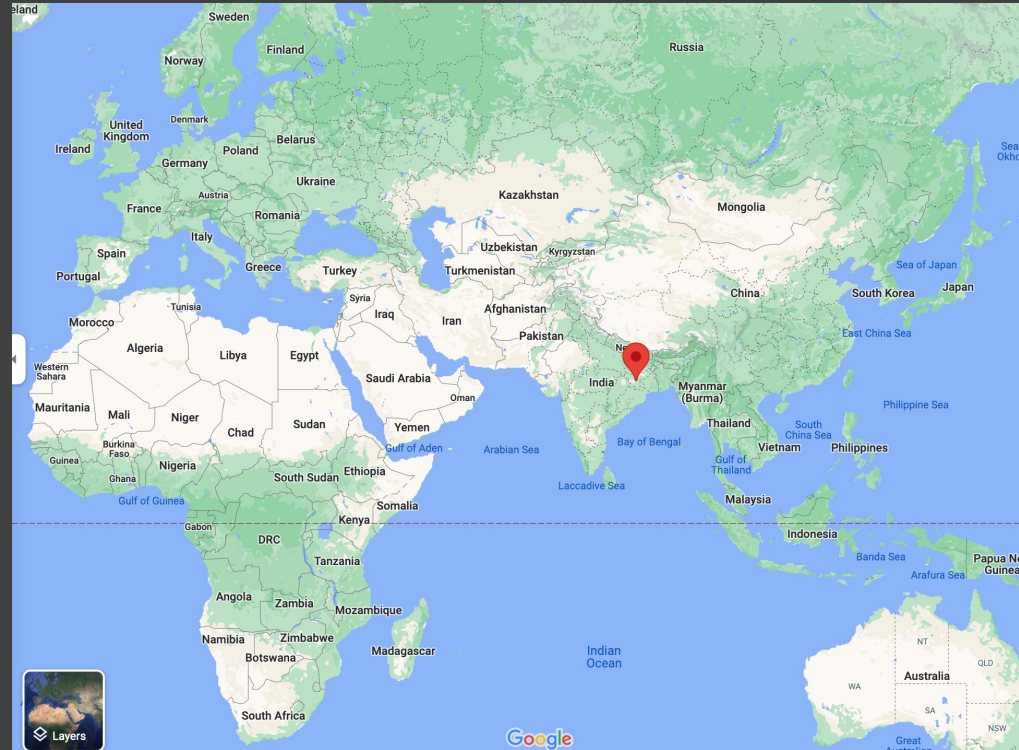
Pronouns: she/her



Jharkhand, India

*Meaning 'the land of forests'
Formed in 2000*

*Also a place that shaped my
understanding of community.*



My experience is not unique

*This is the place where I stand, on the day
when my feet are sore.*

- Irish phrase

Community

A social unit of people who share common values and mission.



Community of Practice

A social unit of people who share common values and mission, and benefit through social interaction.



Open Science

Everyone can **freely access, reuse, build upon and distribute** research objects.



Open Science Communities

A **social unit of people** who share common values and mission and **benefit** through **collaboration, peer production and project sustainability**.

Open Science Communities

A social unit of people who share common values and mission and benefit through collaboration, peer production and project sustainability.

Active participation in development and decision-making.



-Toward a UNESCO Recommendation on Open Science: Canadian Commission for UNESCO By Ella Chan, Dick Bourgeois-Doyle, Michael Donaldson, and Eleanor Haine-BennettOttawa, Canada, April 2020
- UNESCO presentation of 17 Feb 2021



“Openness is not a binary condition, but highly situational, contingent and dependent on the privilege and context of knowledge makers and gatekeepers.”

Contextualising Openness, 2020, edited by Leslie Chan. A. Okune, R. Hillyar, D. Albornoz, A. Posada

-Toward a UNESCO Recommendation on Open Science: Canadian Commission for UNESCO By Ella Chan, Dick Bourgeois-Doyle, Michael Donaldson, and Eleanor Haine-BennettOttawa, Canada, April 2020

- UNESCO presentation of 17 Feb 2021

Open Science Communities

Different goals of openness, but
common mission:

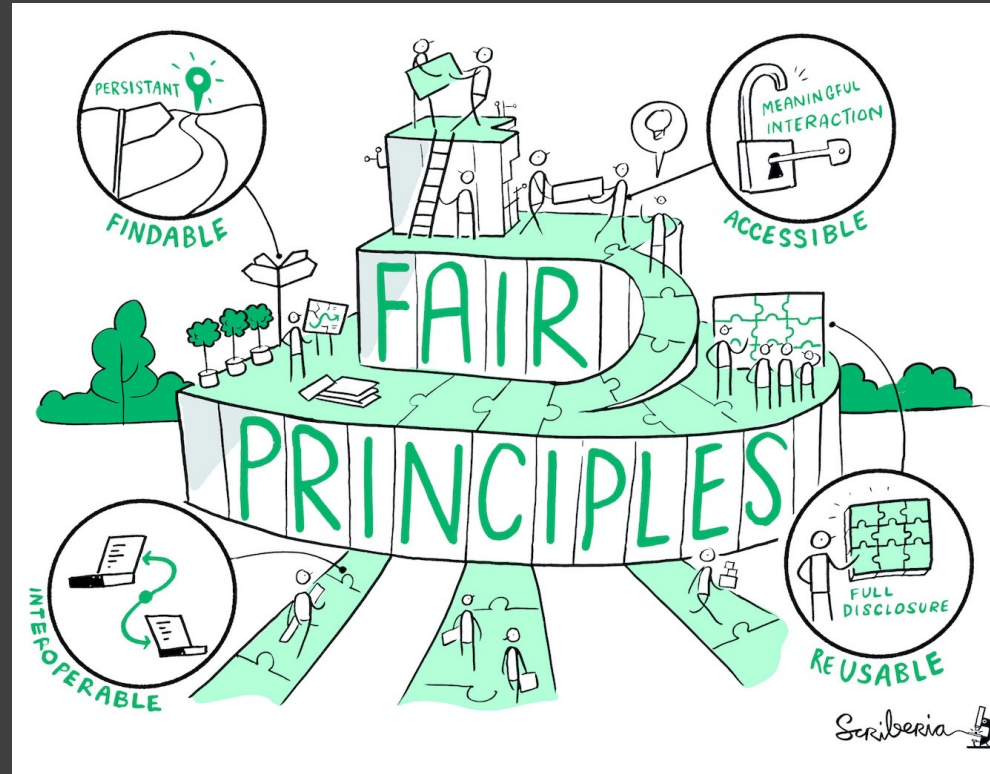
1. *to produce public good,*
2. *encourage collaboration, and*
3. *broaden the diversity of members*



F-A-I-R Concept

Findable – **A**ccessible –
Interoperable – **R**eusable

- Guiding principles
- Not a standard
- **Focus on common actions**
- Applied to digital asset



F-A-I-R for Community

Reimagining FAIR for building communities.

- Guiding principles
- Not a standard
- Focus on common actions
- Applied to digital asset



F-A-I-R for Community

- Findable* – *Accessible* –
Interoperable – *Reusable*
- **Not a substitute** for open or the associated nuances
 - Valuable for designing, supporting and connecting



F-A-I-R for Community

Findable – *Accessible* –
Interconnected – *Reusable*

- **Not a substitute** for open or the associated nuances
- Valuable for designing, supporting and connecting



FAIR for Community

- Process to make open science communities **Findable**
- Ensure **Accessibility** of resources and participation
- **Interconnect** communities through intentional collaboration
- Ensure **Reusability** of resources through coordinated efforts



Through my Lens

Open Science is truly open when it's inclusive and equitable to a diverse group of individuals.



APPLY FOR THE OBF EVENT FELLOWSHIP: <https://www.open-bio.org>, Blog from BOSC: <https://www.open-bio.org/2019/08/27/tips-for-informal-discussions/>, 10 arguments ,against open science: <https://www.software.ac.uk/blog/2020-12-17-ten-arguments-against-open-science-you-can-win>, <https://www.uni-wuerzburg.de/en/university>, <https://carpentries.org/>,

Interconnecting Communities

- Applying **inclusive approaches** to training and capacity building.
- **Coordinated efforts** for knowledge and resource sharing.



Interconnecting Communities

- Connected and aligned efforts
- Opened up institutional resources
- Through shared activities, created quantitative and qualitative impact

The de.NBI/ELIXIR-DE training platform - Bioinformatics training in Germany and across Europe within ELIXIR. F1000Research, 8.
<https://doi.org/10.12688/f1000research.20244.2>



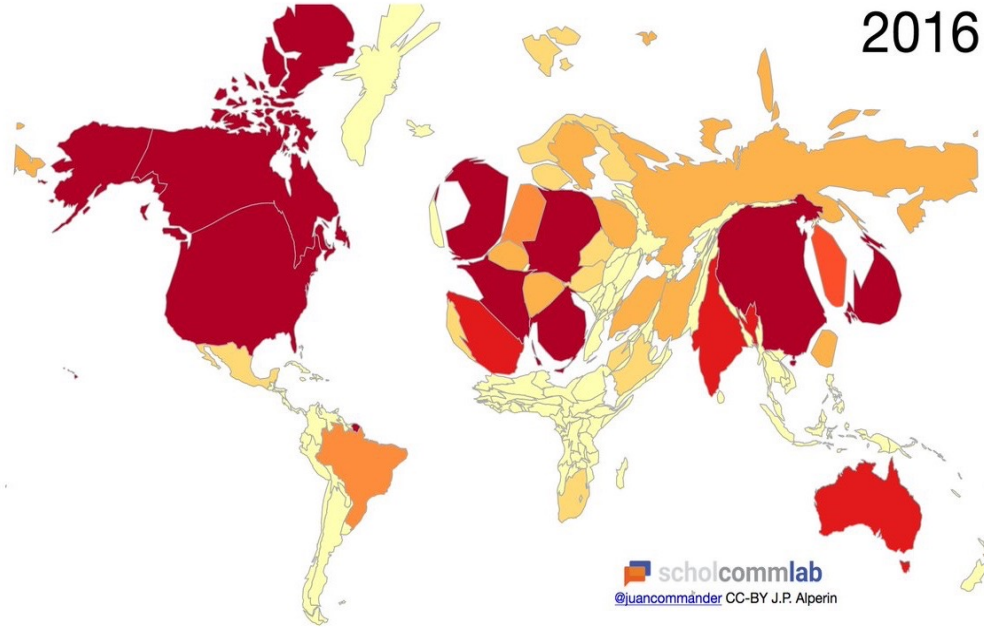
Context of knowledge makers and users

Access is not only about being able to read but being able to have a voice and shape the directions, economic models and infrastructure.

- Juan Pablo Alperin

World scaled by number of documents with authors from each country in Web of Science

2016



References: Mewa, & Goudarzi. (2018). Mapping Academic Publishing: Locating Enclaves of Development Knowledge. EElectronic PUBLISHing, Connecting the Knowledge Commons: From Projects to Sustainable Infrastructure, Image: <https://doi.org/10.6084/m9.figshare.953177>, Quote: <https://www.force11.org/blog/open-access-inclusion-interview-juan-pablo-alperin>

Local Vs. Global Open Science

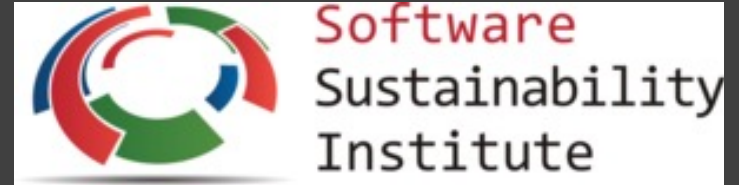
Scientists are told to collaborate across disciplines to contribute to interconnected stock of knowledge.

It is highly costly to combine all of those separate elements to produce useful solutions.



Joining Efforts

SSI Fellowship can be used for any activities that support research.



Joining Efforts

SSI Fellowship can be used for any activities that support research.

A very narrow demographic of researchers have the institutional support to spend time on open projects as well as the fortune to be publicly acknowledged for their hard work.



Kirstie Whitaker

The Turing Way

An Open Source guide on Data Science.

We involve and supports a **diverse community** to make data science **reproducible, ethical, collaborative and inclusive** for everyone.



The Alan Turing Institute

The national institute
for data science and
artificial intelligence



The Turing Way

Recommendations, best practices and guidance research reproducibility

Attend The Turing Way Workshop today!

The Turing Way is a lightly opinionated guide to reproducible data science.

Our goal is to provide all the information that researchers need at the start of their projects to ensure that they are easy to reproduce at the end.

This also means making sure PhD students, postdocs, PIs, and funding teams know which parts of the "responsibility of reproducibility" they can affect, and what they should do to nudge data science to being more efficient, effective, and understandable.

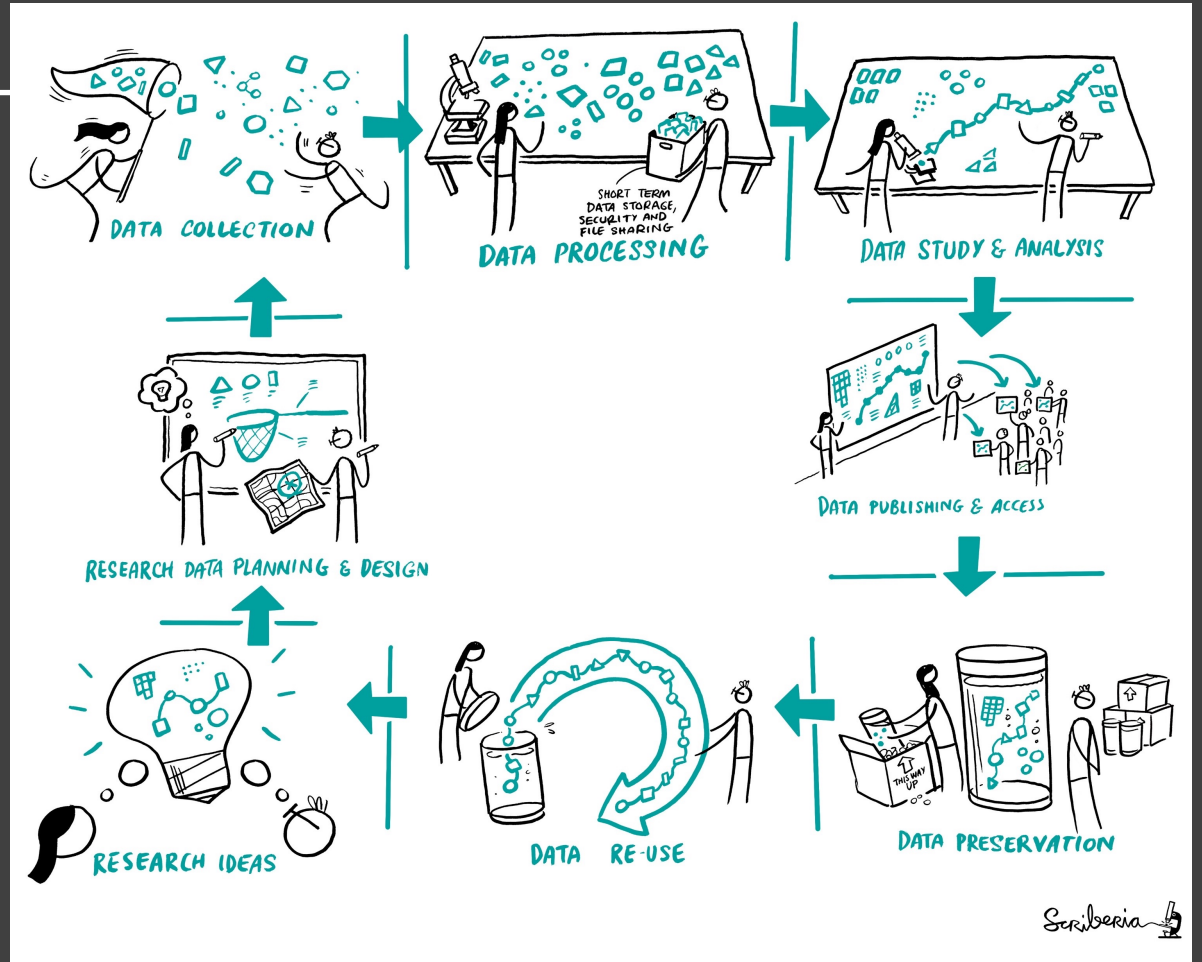


Reproducibility

		Data	
		Same	Different
Analysis	Same	Reproducible	Replicable
	Different	Robust	Generalisable

Reproducibility

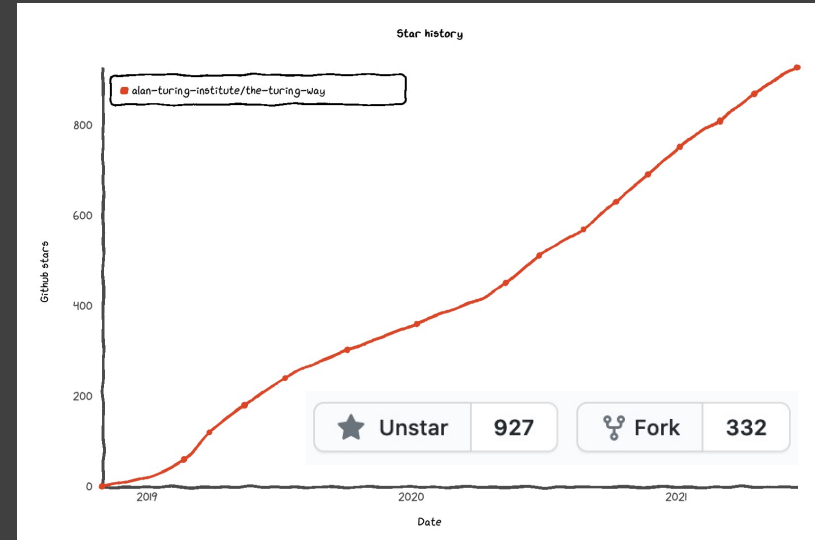
		Data	
		Same	Different
Analysis	Same	Reproducible	Replicable
	Different	Robust	Generalisable



Scriberia

Project and Community Growth

- 2.5 years, 180 subchapters
- Community resources, events, guidance, templates, training
- 285 direct GitHub contributors and thousands of users



<https://zenodo.org/record/3332807>

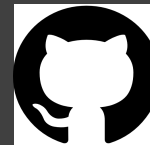


5,501

views

6,686

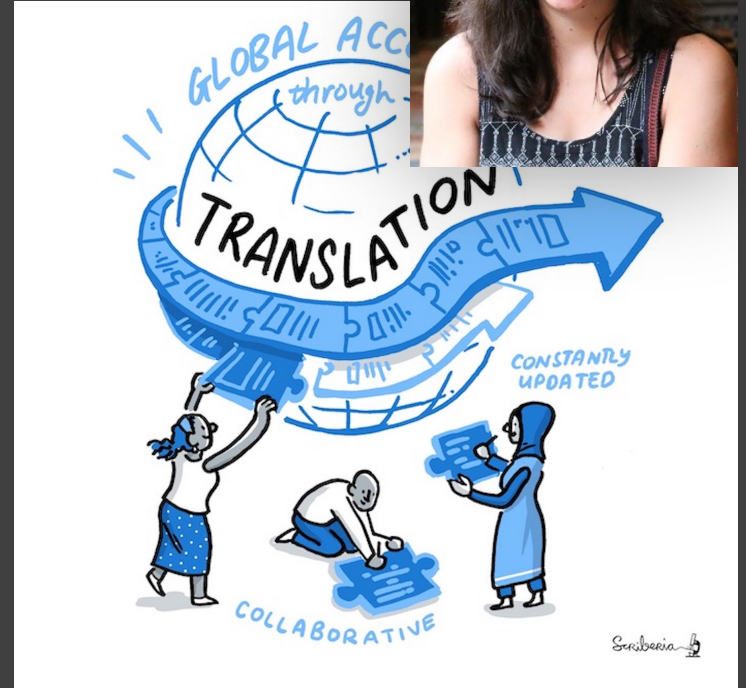
downloads



Translation to ensure “Findability”

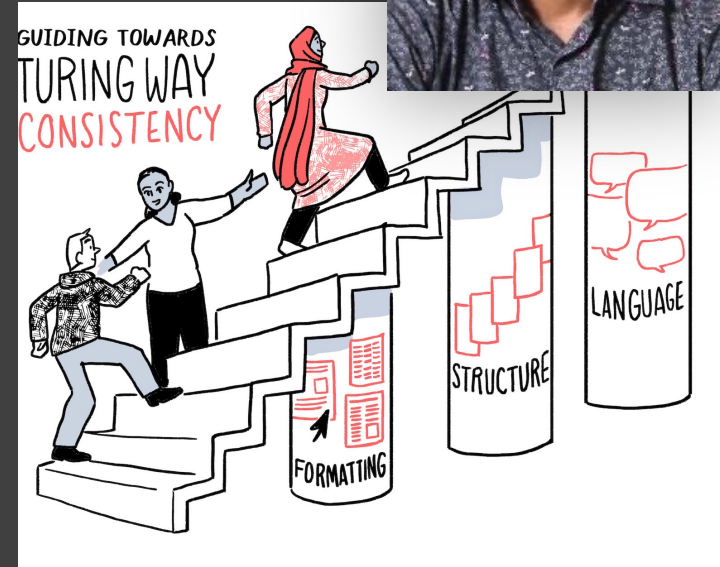
We must do everything we can to break the language barriers and improve the accessibility of knowledge.

- Camila Rangel Smith



Simplicity for “Accessibility”

The value I left behind was not in the amount of work I did, but how I enabled others' work. – Paul Owoicho



Simplicity for “Accessibility”

The value I left behind was not in the amount of work I did, but how I enabled others’ work. – Paul Owoicho

Researchers should consider scientific communication less technically to ensure it is accessible to wider audiences.

– Emma Karoune



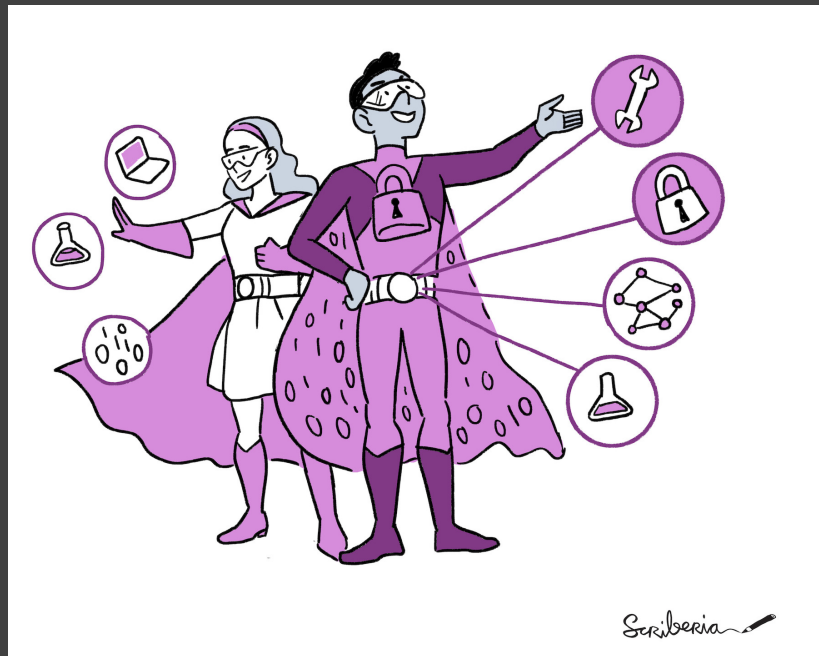
“Interconnecting” to Stop Reinventing



Esther Plomp
Data Steward, Delft
University of Technology



Carlos Martinez
Community Manager,
eScience Center NL



Collaboration to Ensure “Reusability”



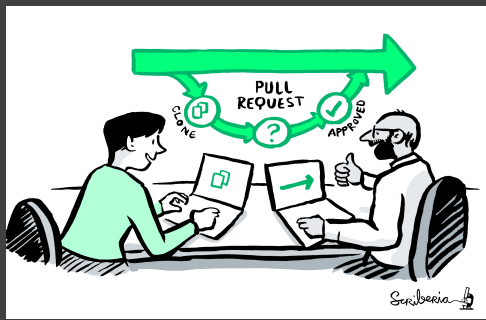
Develop, share, mentor



Maintain & improve



Share resources



Cowork and collaborate



Make it global



Join committees

“Interconnecting” to Stop Reinventing



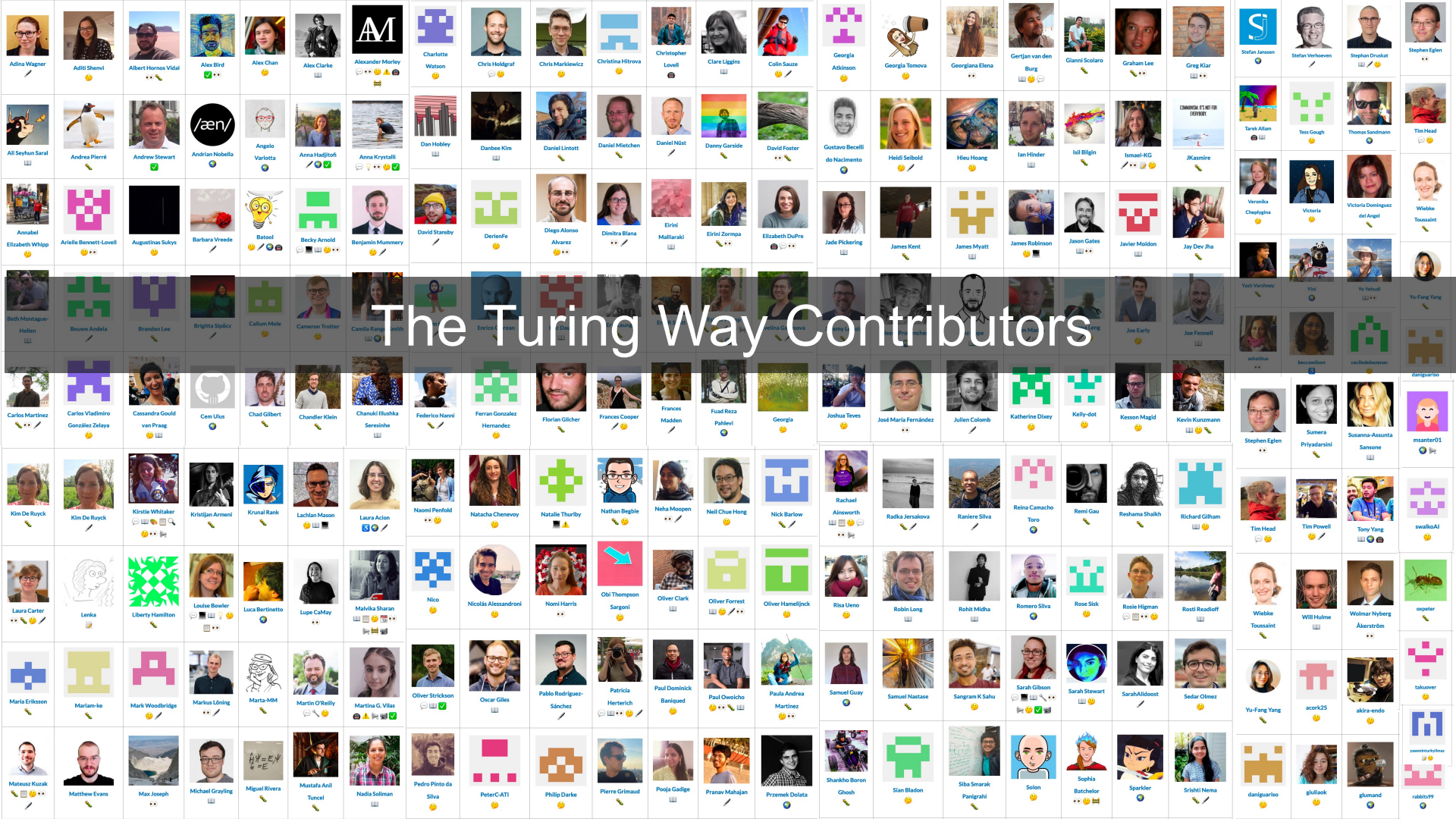
Apply to join:

- Community Manager Role
 - deadline: 12 October
- Book Dash event 09-12 Nov, short sessions per day
 - deadline: 1st October

bit.ly/turingway

Contributors record: <https://the-turing-way.netlify.app/afterword/contributors-record.html#collaborating-organisations-and-projects>,

Image from The Turing Way Book Dash Feb 2020, Shared under CC-BY 4.0, DOI: 10.5281/zenodo.5518163



The Turing Way Contributors

- | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------|----------------------------------|---------------------------|------------------|-----------------|---------------------|---------------------------|----------------------|---------------------------|----------------------|----------------------|--------------------|-------------------|-------------------|-------------------------------|----------------------|-----------------------|----------------------|------------------|---------------|-----------------|-------------------|------------------|------------------------------|------------------|
| Adina Wagner | Aditi Shevli | Albert Hornos Vidal | Alex Bird | Alex Chan | Alex Clarke | Alexander Morley | Charlotte Watson | Chris Holdgraf | Chris Markiewicz | Christina Hltrova | Christopher Lovell | Clare Liggins | Colin Scaze | Georgina Atkinson | Georgina Tomova | Georgiana Elena | Gerjjan van den Burg | Gianni Sciarlo | Graham Lee | Greg Klar | Stefan Janssen | Stefan Verhoeven | Stephan Druskat | Stephen Eglen |
| Ali Seyhan Saral | Andria Pierre | Andrew Stewart | Andrian Nobella | Angelo Variotta | Ana Hadjioff | Anna Krystall | Dan Hobby | Danbee Kim | Daniel Lintot | Daniel Mitchen | Daniel Nüst | Danny Gorside | David Foster | Gustavo Becelli do Nascimento | Heidi Seibold | Hieu Hoang | Ian Hinder | Ili Bilgin | Imael-KG | JKasmir | Tarek Alam | Tez Geeth | Thomas Sjöström | Tim Head |
| Annabel Elizabeth Whippo | Arielle Bennett-Lovell | Augustinas Sukys | Barbara Vreede | Batoof | Becky Arnold | Benjamin Mummery | David Stansby | DerienFe | Diego Alonso Alvarez | Dimitra Biana | Eirini Malliaraki | Eirini Zompa | Elizabeth DuPre | Jade Pickering | James Kent | James Myatt | James Robinson | Jason Gates | Javier Moldon | Jay Dev Jha | Veronica Chaygina | Victoria | Victoria Dominguez del Angel | Wiebke Toussaint |
| Bath Montague-Hellen | Broune Andela | Brandon Lee | Brigitta Djipica | Callum Mole | Cameron Truettner | Camila Rangel | Erico | Enrik | Enrik | Enrik | Enrik | Enrik | Enrik | Enrik | Enrik | Enrik | Enrik | Enrik | Enrik | Enrik | Enrik | Enrik | Enrik | Enrik |
| Carlos Martínez | Carlos Vladimiro González Zelaya | Cassandra Gould van Praag | Cem Ulus | Chad Gilbert | Chandler Klein | Chanuki Ilushka Serevishu | Federico Nanni | Ferran Gonzalez Hernandez | Florjan Glicher | Frances Cooper | Frances Madden | Fuad Reza Poljovi | Georgia | Joshua Teves | Jose Maria Fernandez | Julien Colomb | Katherine Dixey | Kelly-dot | Kesson Magid | Kevin Kutzmann | Stephane | Suzanne | Vedran | Viktor |
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| Maria Eriksson | Marlam-ke | Mark Woodbridge | Markus Löning | Marta-MM | Martin O'Reilly | Martina G. Vilas | Nico | Nicola Alessandrini | Nomi Harris | Obi Thompson Sargoni | Oliver Clark | Oliver Forrest | Oliver Hamelgynck | Risa Ueno | Robin Long | Rohit Mishra | Romero Silva | Rose Sisk | Rosie Higman | Rosti Residloff | Wiebke Toussaint | Will Hulme | Wolmar Nyberg Akerstrom | opeter |
| Nicozai Kuzak | Matthew Evans | Max Joseph | Michael Grayling | Miguel Rivera | Mustafa Anil Tuncel | Nadia Soliman | Pedro Pinto da Silva | Peter-CATI | Philip Darke | Pierre Grimaud | Pooga Gadige | Pranav Mahajan | Przemek Dolata | Shankho Boron Ghosh | Sian Bladen | Siba Sranak Panigrahi | Soon | Sophia Batchelor | Sparker | Srihiti Nema | Stephan Eglen | acork25 | alio-endo | talsover |
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Open Life Science (OLS)

Individuals learn to integrate open principles in their work and become open science ambassadors in their communities.



Bérénice Batut,
Postdoc at Uni Freiburg,
Galaxy team

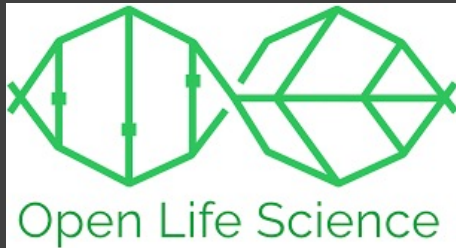


Yo Yehudi,
Open Source Tech Lead,
Wellcome Trust

Open Life Science (OLS)

Individuals learn to integrate open principles in their work and become open science ambassadors in their communities.

- Provide accountable space
- Support diverse leaders
- Community-oriented research



Bérénice Batut,
Postdoc at Uni Freiburg,
Galaxy team




Yo Yehudi,
Open Source Tech Lead,
Wellcome Trust

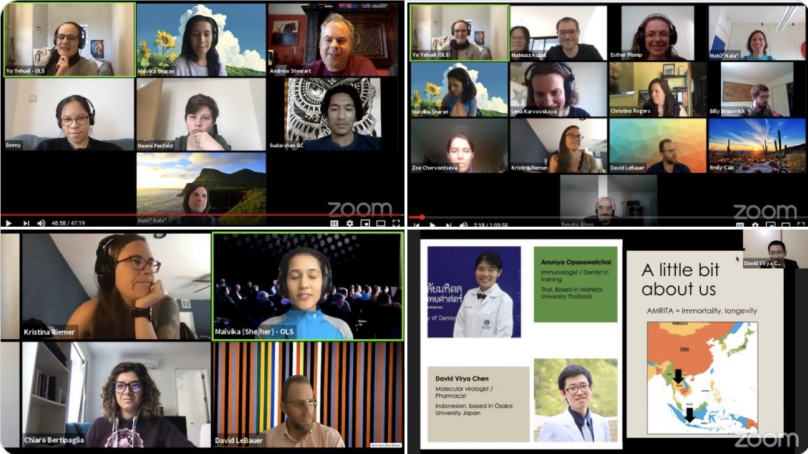
First Cohort, OLS-1

- 20 projects, 27 members
- 20 Mentors, 3 Organisers
- 18 Speaker, 37 experts
- 100% Volunteer work

Need sustainable ways to engage volunteers by creating tangible benefits for them.

 **openlifescience**
@openlifesci

In case you missed it, last week, our first cohort graduated and gave presentations on their work over the last few months. You can catch up on the amazing set of presentations here: youtube.com/c/OpenLifeSci - too many people to tag!



The screenshot shows a Zoom meeting interface. The top part displays a grid of 20 small video thumbnails of participants. Below this, there are larger video thumbnails for Kristina Sommer and Malvika (Shehavi) OLS. On the right side, there are presentation slides. One slide features a woman in a white lab coat with the text: 'Atanya Opanaswathul Immunologist / Center in Training, Based in Mumbai, University of Cambridge'. Another slide is titled 'A little bit about us' and includes the text 'AMRITA = Immortality, longevity' and a map of India. A third slide features 'David Vitor Chen Molecular virologist / Epidemiologist, based in Osaka University, Japan'.



OLS project funders, partners, collaborators and connectors



OLS 1,2,3 project leads, mentors and their sustained participation

Our Success through Participants' Success

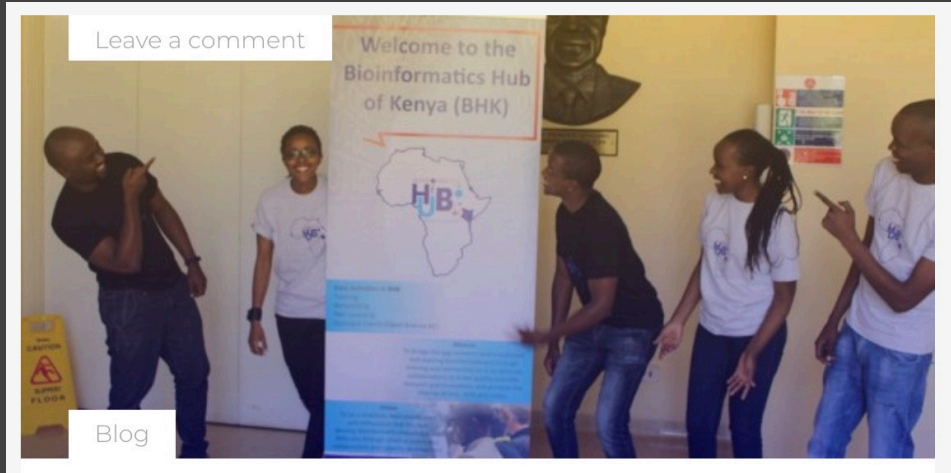
- Participants help interconnect their efforts
- Create visibility for their communities
- Build their profile through open leadership skills



<https://codeforscience.org/> (call will open soon), <https://software.ac.uk/> (call is open), <https://lacunafund.org/>,
<https://www.open-bio.org/> (call is open), <https://www.eosc-life.eu/services/open-call-training/>

Bioinformatics Hub of Kenya Initiative

OLS has dramatically impacted the Bioinformatics Hub of Kenya Initiative hub community. OLS empowered us as well as trained us to empower others to grow our communities. - Michael Kofia



GyaNamuna in Nepalese Schools

After attending this programme, I got inspired to integrate open practices in other sectors. Now, through OpenFowl I engage farmers in enhancing their understanding of science. - Prakriti Karki



Open Science Saudi Arabia

OLS not only has an international influence on participants but also provides a network of experts and champions to overcome challenges while building and leading communities in their networks.

- Batool Almatzouq



Mentors Catalyse Collaboration

Mentors Catalyse Collaboration



- Founded South African consulting firm, Talarify, to support researchers in Africa to adopt open science and reproducible practices
- Reusing OLS resources in African context

How can open educational video resources be made more accessible for remixing and translation beyond posting on YouTube?

Anelda van der Walt & Batool Almarzouq

22nd of Sep 2021

global summit



Anelda van der Walt

Mentors Catalyse Collaboration

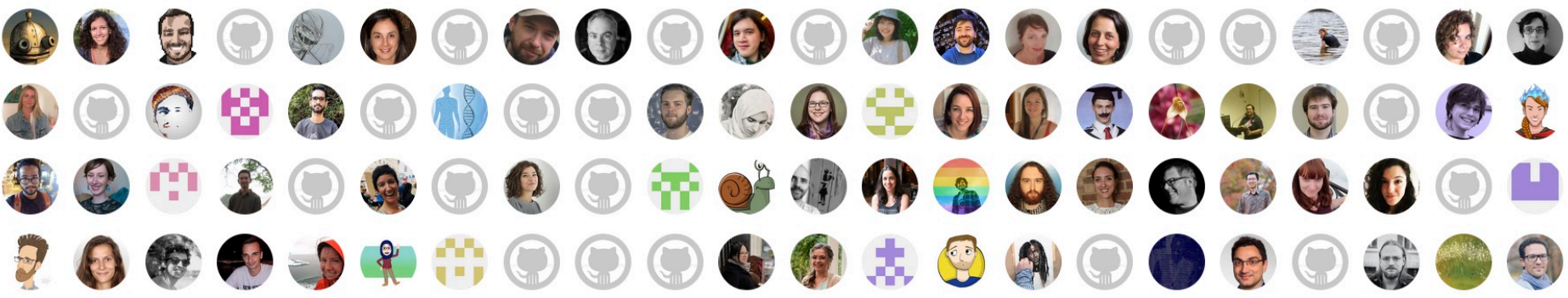
Co-founded MetaDocencia to teach open and reproducible research in Latin America. Taught 1200+ teachers across 30 countries since 2020.



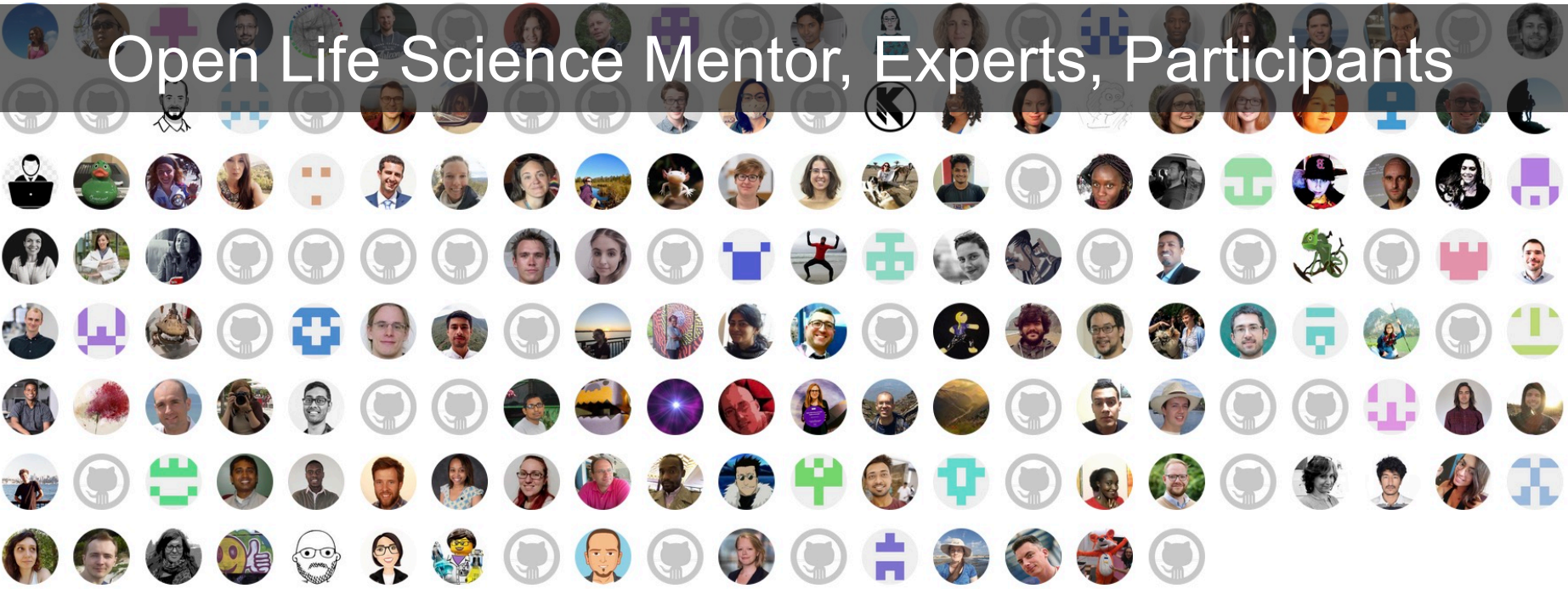
OLS has nurtured meaningful connections among Global South colleagues, where we share challenges to implement open principles often developed in high-income countries.

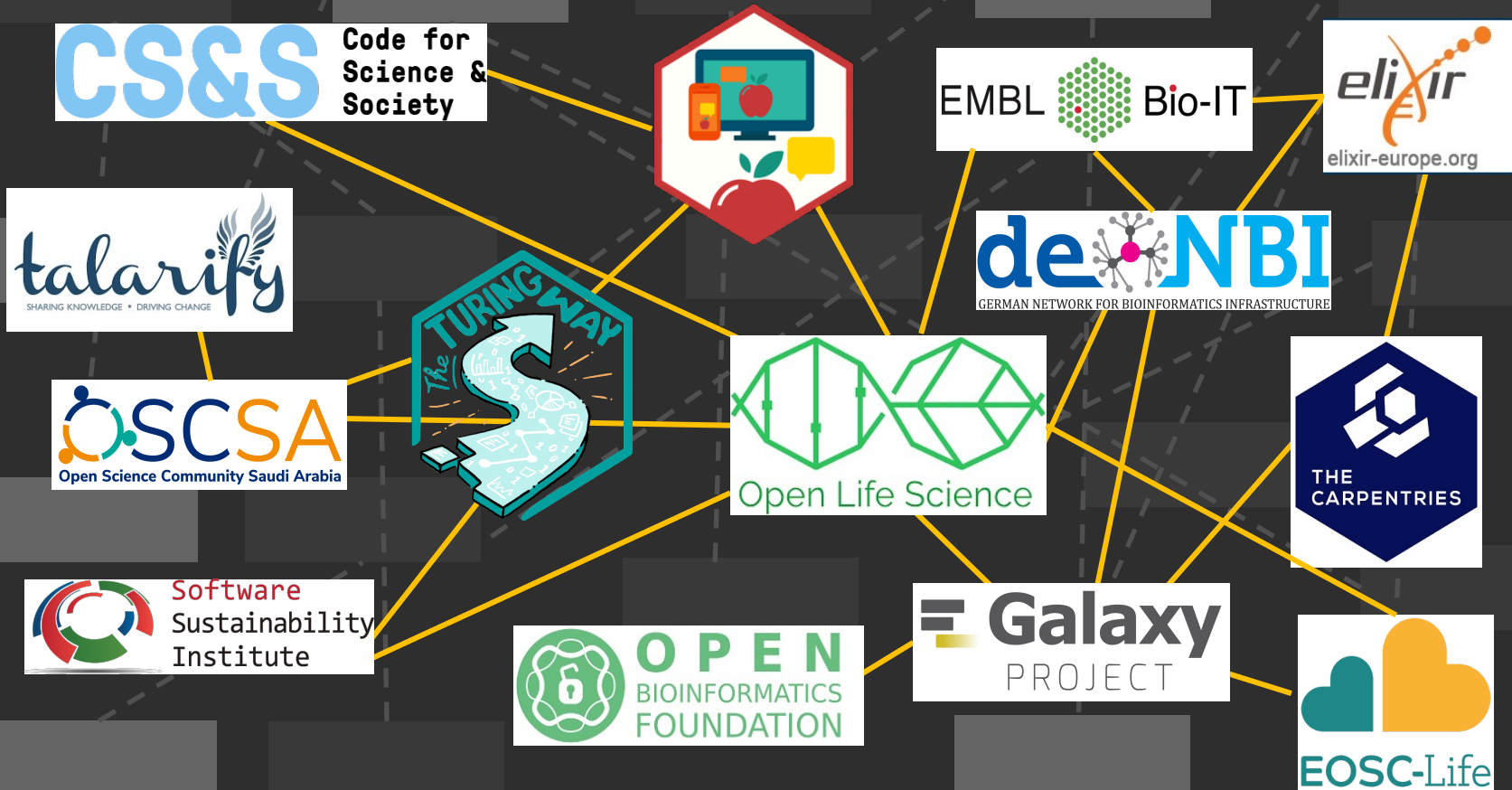


Laura Acion,
Universidad de Buenos
Aires-CONICET, Argentina



Open Life Science Mentor, Experts, Participants





Logos taken from respective websites.

People in Open Science Infrastructure

*[Open science] projects are akin to a group of **citizens getting together and deciding they want to build roads, bridges, and highways** - that brought together previously isolated communities. - Nadia Eghbal*

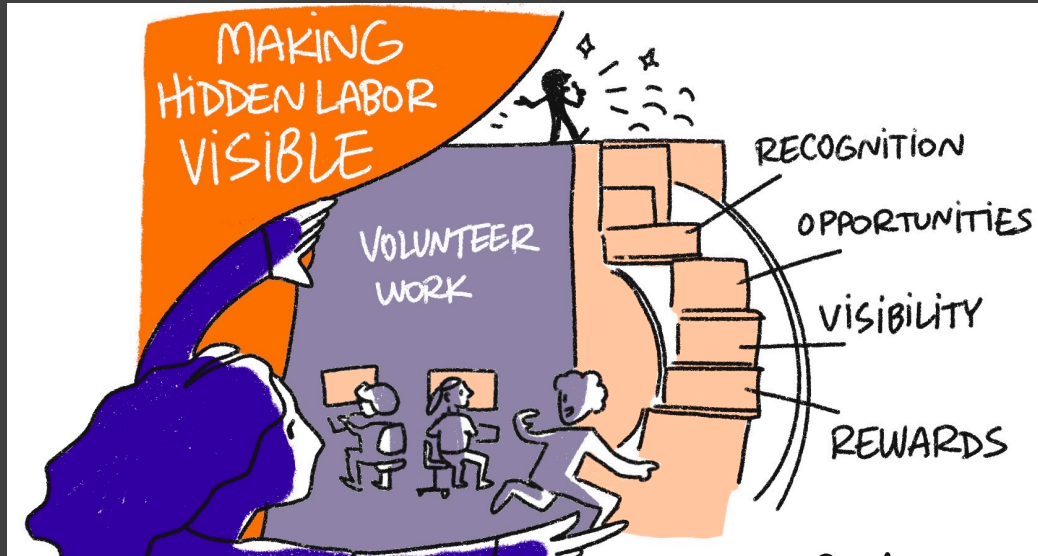


Fairness through Inclusion



Open Science, Closed Doors? Countering Marginalization through an Agenda for Ethical, Inclusive Research in Communication. J. Commun. doi: 10.1093/joc/jqab029, Inclusiveness in Open Science Communities. Zenodo. <http://doi.org/10.5281/zenodo.4051476>, Image by Scriberia for The Turing Way, Shared under CC-BY 4.0, DOI: 10.5281/zenodo.5518163

Fairness through Inclusion



Let's recognise "people in open infrastructure" for their irreplaceable service and celebrate the diversity that emerge from global collaboration.

Acknowledgements & Links

The
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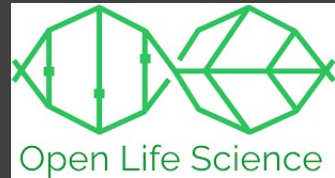
The Turing Way

- Kirstie Whitaker, The Turing Way core contributors and community
- **Book:** the-turing-way.netlify.com, **Twitter:** twitter.com/turingway
- **GitHub:** github.com/alan-turing-institute/the-turing-way



Open Life Science

- Open Life Science community; Yo Yehudi, Bérénice Batut, Emmy Tsang
- **Website:** openlifesci.org/, **Twitter:** twitter.com/openlifesci
- **GitHub:** github.com/open-life-science/open-life-science.github.io



Useful links & opportunities are listed here: <https://bit.ly/turingway>

Thanks to Yo Yehudi and Laura Acion for discussions and comments on the early draft.