Year of Open Science

National Aeronautics and Space Administration

NASA

A NASA OPEN-SOURCE SCIENCE MISSION:
TOPS: TRANSFORM TO OPEN SCIENCE

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Welcome!

Follow us on Twitter!!

#NASATOPS and #IHeartOpenScience

Following

TOPS - Transform to Open Science

@ToOpenScience Follows you

@theAGU TOPS🚀 Part of #NASATOPS mission to unlock the full potential of a more equitable, impactful, efficient, scientific future. Not an official NASA account

Everywhere github.com/nasa/Transform... Joined May 2022

TOPS Code of Conduct

TOPS expects everyone to comply with our code of conduct, communicating openly with respect for others and critiquing ideas rather than individuals

Anyone not abiding by the TOPS Code of Conduct will be asked to leave the forum. If you are the subject of unacceptable behavior or have witnessed any such behavior, please immediately notify a meeting host.

For more information, review the code of conduct found on the TOPS GitHub.

Submit Feedback or Suggestions

Your inputs are essential to the success of our mission. Please feel free to submit questions, feedback, or suggestions via the feedback tool.

You can use the QR code to access the feedback tool

Agenda

10:00 am	Welcome and Review of Code of Conduct	Cyndi Hall
10:05 am	TOPS OpenCore Curriculum Update	Shelley Stall and the OpenCore Module Leads and SMEs: **Open Science Ethos:** Yo Yehudi with Stephen Klusza **Open Data:** Sara El-Gebali with Hugh Shanahan **Open Software:** James Powell & Cameron Riddell **Open Results:** Natasha Batalha **Open Tools and Resources:** Shilaan Alzahawi
10:45 am	Process of Providing Feedback	Chris Erdmann
10:55 am	Announcements and Next Steps	Cyndi Hall

TOPS OpenCore Curriculum Update

Shelley Stall, AGU, and OpenCore Module Leads and Subject Matter Experts

Mentimeter Instructions

Option 1: Go to menti.com and enter code 1506 7145
Option 2: See chat for a direct link
Option 3: Use QR code on the screen

Menti Question # 1

We want to get to know you!

Please identify your involvement with Open Science by selecting all that apply:

_ Just learning about Open Science
_ Interested in learning more about Open Science
_ Practicing Open Science as I can
_ Experienced Open Science Practitioner
_ Teaching about Open Science or with Open Science

OpenCore Curricula

What is open science, why does it benefit me, and wł does it benefit the greater scientific community?

Sharing software openly

Using popular tools that support Open Science

ETHOS OF OPEN SCIENCE | OPEN DATA | OPEN SOFTWARE | OPEN RESULTS | OPEN TOOLS & RESOURCES

Using and sharing data openly

Sharing all results and analysis, as well as peer review

Complete All 5 & earn TOPS Open Science Badge & Certification

Introducing the OpenCore Module Leads

Yo Yehudi

Ethos of Open Science

Sara El-Gebali

Open Data

James Powell

Open Software

Cameron Riddell

Open Software

Shilaan Alzahawi

Open Tools & Resources

Natasha Batalha

Open Results

Ethos of Open Science

Featuring Stephen Klusza

Module Lead: Yo Yehudi

Why did you get involved in open science? Why is it important to keep pursuing open science despite the barriers to its adoption?

- Science and knowledge belong to **everyone**, not just a select few.
- Open Science **fosters participation** of marginalized communities.
- Open Science practices can help **research culture** in academia become **healthier.**
- Open Science is **how we come together** to resolve critical problems such as COVID and Climate Change.

What most excites you about this OpenCore module? What are you most excited to share?

- **There is no ONE ethos -** there are many ways to do Open Science, and it will vary based on needs.
- Open Science practices **around the globe.**
- Open Science drives research performance.
- More Transparency = Sharing = Reproducibility = gain insights into research performance.
- How Open Science **changes people's lives to the better**: through making them more informed and helping society to create better policies.

Do you have anything to share with us about the process of building this module?

- Lot to process in limited time
- **Collaboration** is the key
- Responsible Open Science Matters ! : practicing open science the ethical way.
- There's always room for improvement.
- I learned a lot from others' points of view.
- I was surprised to conclude that **reflexivity** is such an important skill for any (open) researcher.

Open Data

Featuring Hugh Shanahan

Module Lead: Sara El-Gebali

Why did you get involved in open science? Why is it important to keep pursuing open science despite the barriers to its adoption?

- Sick and tired of not being able to get research done because **code is not there/doesn't work/data "available upon request"/data not annotated**…
- We cannot afford to keep pouring **money down the drain by not being open.** We can **level the playing field for LMIC research**.

What most excites you about this OpenCore module? What are you most excited to share?

- **Data is absolutely essential** to Open Science.
- Data is a **"first class research object"**.
- Having the chance to explain that **being open with your data means you have to do a lot more than just putting it up on GitHub!**
- Pointing out **FAIR and CARE principles**; metadata and DMPs.

Do you have anything to share with us about the process of building this module?

- We need to **keep in scope**.
- We shouldn't be afraid to push **some items down to more advanced materials**.
- Point out **why it's important and useful to make data open**.
- Provide **implementable steps**.
- Open Data has an **important role in society and science.**
- Effect on **communities and responsibilities**.

Open Software

Featuring James Powell & Cameron Riddell

Why did you get involved in open science? Why is it important to keep pursuing open science despite the barriers to its adoption?

- The search for knowledge through scientific research is one of few activities that truly has the potential to benefit humanity as a whole. **It must be conducted ethically, equitably, fairly, and in the open.**

What most excites you about this OpenCore module? What are you most excited to share?

- Our module introduces scientific researchers to the **benefits and challenges of embracing, maintaining, and building open source software**.
- Open source software (and computational approaches in general) **empower scientists to conduct research that would simply have been impossible otherwise**.

Do you have anything to share with us about the process of building this module?

- Our team of enthusiastic subject matter experts worked together excellently; **melding a variety of backgrounds and perspectives** into a comprehensive introduction to Open Software.
- Our module lead & SME lead structure helped us find organizational success, and we encourage future module leads to consider this approach.

Open Results

Featuring Natasha Batalha

Why did you get involved in open science? Why is it important to keep pursuing open science despite the barriers to its adoption?

- Great science should be driven by great ideas, diversity of thought, and creativity, not by access and privilege to certain tools.
- Any barriers to adoption are far and beyond outweighed by the benefit that open science brings to research as a whole.

What most excites you about this OpenCore module? What are you most excited to share?

- Our emphasis on highlighting how many diverse contributions go into a single research analysis.
- Our emphasis on research teams and building collaborations that center openness and equity.
- Our goal to help the learner take small feasible steps towards abiding by open science principles.

Do you have anything to share with us about the process of building this module?

- Echo others: 1) we must stay in scope, 2) we need community feedback: our SMEs brought many diverse perspectives but we are still only 7 brains!
- On the subject of feedback: The more straightforward and decipherable the comment, the faster/easier it will be for us to incorporate it. This process is moving FAST. We are doing our best to stay on top of things!

Open Tools & Resources

Featuring Shilaan Alzahawi

Why did you get involved in open science? Why is it important to keep pursuing open science despite the barriers to its adoption?

- Opportunity to join **communities** doing **large-scale science** and **revisiting the foundations** of my discipline.
- Steep learning curve + many challenges, but in the **long-run** incredibly **beneficial to individuals, institutions, and science** as a whole.

What most excites you about this OpenCore module? What are you most excited to share?

- Our **focus on responsible open science** throughout.
- Our **recognition of communities** (including all of you!) as core to practicing open science.

Do you have anything to share with us about the process of building this module?

- It was **intense**!
- **The curse of knowledge**: it's tempting to provide highly advanced content. Keeping **learner profiles** in mind throughout was immensely helpful.
- There's still work to be done, and **we'd love to hear from you**!

Menti Question # 2
More from you…

Which OpenCore module are you most interested in?

Or

Which module is most relevant to your work?

___ Ethos of Open Science
___ Open Data
___ Open Software
___ Open Results
___ Open Tools
___ I can't just choose one

Menti Question # 3

Things to Consider…

From your perspective, what…

… barriers, challenges, or considerations

… exist for practicing science openly?

(open-ended question)

What is Next…

- 25 July - 4 Aug: Community provides feedback on **module <u>objectives and outlines</u>**
- 5 -20 Aug: Provide feedback on **<u>module content</u> for initial iteration**
- 21 Aug +: **Continue providing feedback** for next iterations

Audience

- International researcher community
- All research disciplines
- Little or no knowledge of Open Science or open practices in general

Module Format

- 2.5 hours (or so) for each module
- Online for all; with targeted in-person events at 12 (or so) society meetings each year.
- **Open Science Ethos** module is relevant to any science-enthusiast

Menti Question # 4

Opportunities to Consider

What opportunities do you see for practicing science openly?

(open-ended question)

Working Openly - in Community

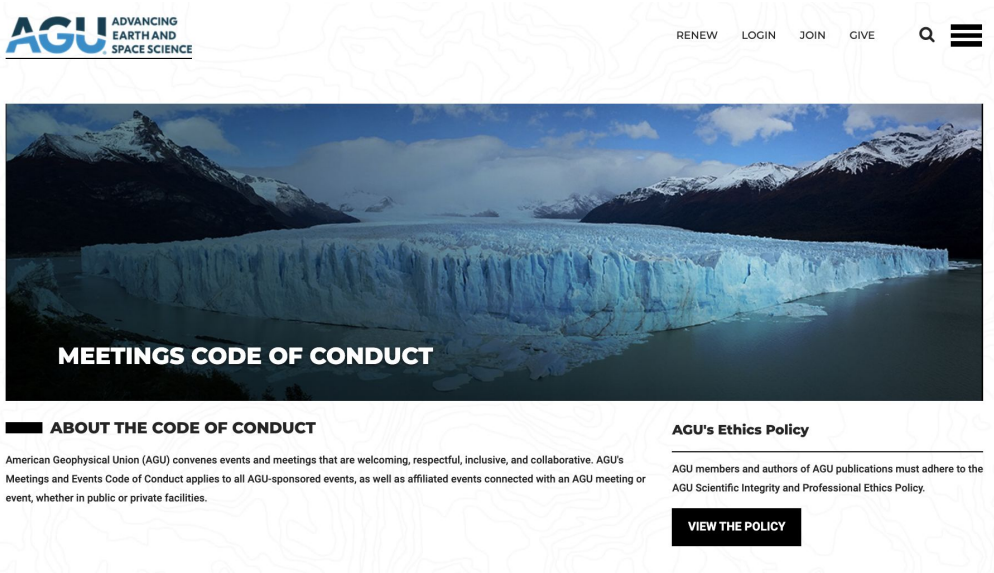
- Sharing in the middle of the process, before copy editing, before instructional design.
- Grammar and spelling mistakes still present. Please focus feedback on content.

Process of Providing Feedback

Chris Erdmann, AGU

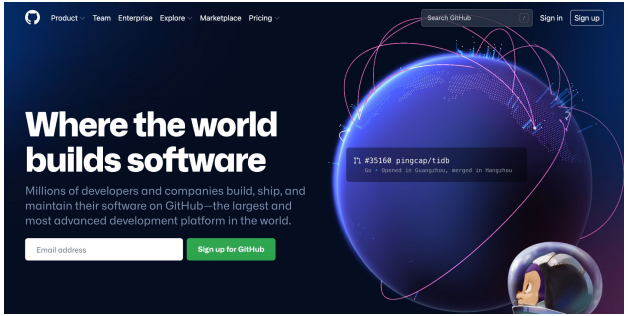
Feedback Process for Objectives and Outlines, 25 July - 4 Aug

- Please be respectful.
- We will follow the [AGU Code of Conduct]



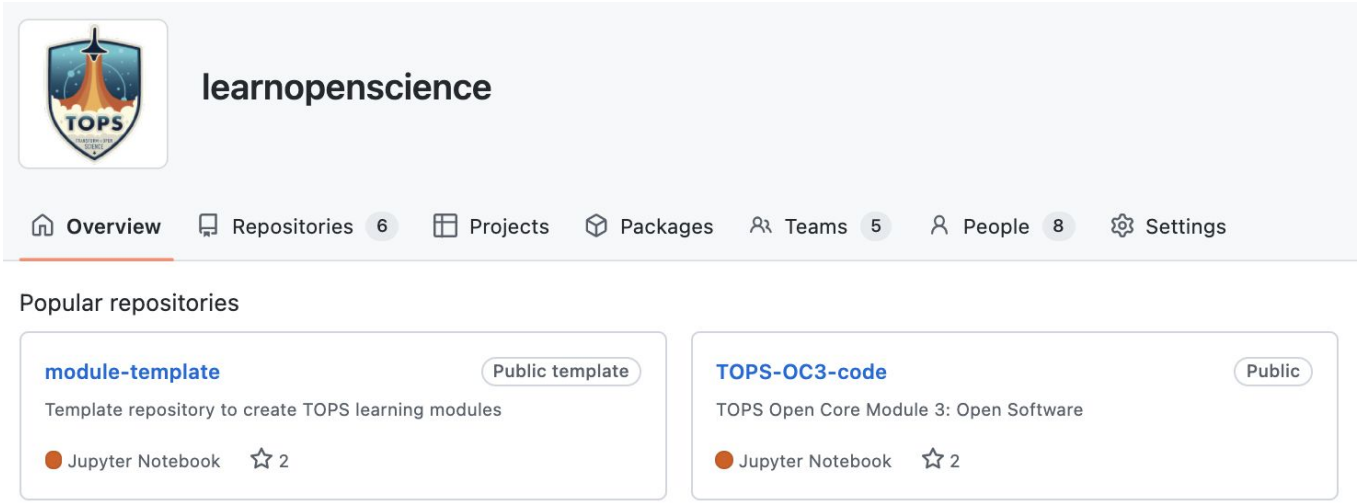
Feedback Process for Objectives and Outlines, 25 July - 4 Aug

- Sign up for a GitHub account
- Already have a GitHub account, great!
- Issues submitted to Module GitHub repositories preferred
- Alternatively, a form is available if using GitHub is not possible



Feedback Process for Objectives and Outlines, 25 July - 4 Aug

- Module repositories can be found at: https://github.com/learnopenscience



Feedback Process for Objectives and Outlines, 25 July - 4 Aug

- Use the TOPS Issue Template:

Feedback Process for Objectives and Outlines, 25 July - 4 Aug

The TOPS Issue Template Includes:

- The Code of Conduct
- Be specific with your feedback and provide a recommended correction
- Include file name/line number(s) for clarity
- Identify the type of issue:
  - Something is missing,
  - Something is incorrect,
  - Reference(s) need fixing
- Register to receive acknowledgment for your contribution

This community feedback opportunity is **before copy editing**, so please focus on content and not spelling or grammar.

Feedback Process for Objectives and Outlines, 25 July - 4 Aug

Receive Recognition for your Contributions

- In order for us to recognize and give acknowledgement for your contributions, you will need to fill out the following form: https://forms.gle/MpLg3eLmHp1S81cE6

- Fields include: 1) Name; 2) Affiliation; 3) Country; 4) ORCID; 5) Email; 6) GitHub Account; 6) Demographic Information.

- Feedback that are not specific/clear will be more difficult to address and may not be considered in this iteration. **Please be as clear as possible.**

Feedback Process for Objectives and Outlines, 25 July - 4 Aug

If you are unable to use GitHub…

- The following form can be used to receive your feedback: https://forms.gle/MpLg3eLmHp1S81cE6

- We ask that you **follow the same guidance and instructions** outlined in the template earlier


Q&A
Learn more and
collaborate with us!
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