

[EE] Evening Poster | M (Multidisciplinary and Interdisciplinary) | M-GI General Geosciences, Information Geosciences & Simulations

[M-GI23]Open Science as a New Paradigm: Research Data Sharing, Infrastructure, Scientific Communications, and Beyond

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Open Science is growing as a new research paradigm to accelerate scientific innovation. Deployed by ICSU-WDS (2008), G8 Open Data Charter (2013), Research Data Alliance (2013), OECD Global Science Forum's research projects (2016), and G7 Science Ministers' Communique (2017), it commonly refers to the top-down policies to make results of publicly-funded research freely available and accessible. On the other hand, this term also refers to the participatory bottom-up approaches such as citizen science, crowdfunding, and transdisciplinary research (Kitamoto 2016). It is noted that both approaches envision the transformation of research process to more findable, accessible, interoperable, and inclusive one. As a follow-up of the Great Debate "Role of open data and open science in Geoscience", this session reviews the current broad spectrum of Open Science, by welcoming a wide range of oral presentations and posters covering (but not limited to) open research data, open source licenses, data papers and journals, data repository, data sharing infrastructures and platforms, citizen science, crowdsourcing, crowdfunding, transdisciplinary research, capacity building, international networking, and deployment in earth and planetary sciences.

[MGI23-P08]OpenPlanetary: An Open Science Community and Framework for Planetary Scientists and Developers

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OpenPlanetary, OP for short, is a community-driven initiative and effort to address the need of the planetary science community for sharing ideas and collaborating on common planetary research and data analysis problems, new challenges, and opportunities [1].

With 300+ members across many countries, the OpenPlanetary community is made-up of and intended for research and education professionals: scientists, engineers, designers, teachers and students, as well as space enthusiasts and citizen scientists.

Our common goal is to promote and facilitate the open practice of planetary science and data analysis

for professionals and amateurs. We do so by organizing events and conducting collaborative projects aimed at creating scientific, technical and educational resources, tools and data accessible to all.

We develop and use an online framework to stay connected, share, discuss, collaborate on common community-driven projects, and to reach out to the planetary science community and the general public. Our approach is to connect and administer existing free or low-cost cloud-based solutions, services and open-source tools (such as Slack, GitHub, and AWS S3).

One of our flagship project is OpenPlanetaryMap (OPM), an open planetary mapping and social platform to foster planetary mapping and cartography on the web for all. With OPM, our goal is to make it easy and collaborative to create and share location-based knowledge and maps of others planets of our Solar System [2].

We held our first “OpenPlanetary Data Cafacute;” at the at the European Planetary Science Conference 2017 in Riga, Latvia [3]; the idea for this Data Cafacute; was to invite both junior and senior scientists to share their expertise, tools, science use cases and issues through participative hands-on sessions.

OpenPlanetary started back in 2015 from an initial participants effort to stay connected and share information related to and beyond the ESA’s first Planetary GIS Workshop [4]. It then continued during the 2nd USGS Planetary Data Workshop [5], and aggregated more people.

We are now establishing OpenPlanetary as a non-profit organisation in order to provide us with a legal framework to sustainably fund our projects and activities, and better serve the planetary science community as a whole. We also intend to enter the Europlanet Memorandum of Understanding (MoU) signatory group [6] so as to gain more visibility and credibility within the community. We will present the challenges, results and our experience of building such a community.

References

- [1] OpenPlanetary website: <http://openplanetary.co>,
- [2] “OpenPlanetaryMap: Building the first Open Planetary Mapping and Social platform for researchers, educators, storytellers, and the general public”, N. Manaud et al., Vol. 11, EPSC2017-27-1, 2017,
- [3] “OpenPlanetary Data Cafacute; at EPSC 2017”, http://bit.ly/op-data-cafe_epsc17,
- [4] “Summary and Recommendations from the 2015 ESAC Planetary GIS Workshop”, N. Manaud et al., Lunar Planet. Sci. XLVII, #1387,
- [5] “Planetary Data: Workshops for Users and Software Developers”, <http://bit.ly/PlanetaryDataWorkshops>
- [6] EuroPlanet, <http://www.europlanet-2020-ri.eu/consortium>