**SPARC-SPy - A python tool to enhance the accessibility of SPARC dataset visualisations and their analyses in accordance with FAIR principles.**

This document demonstrates how SPARC-SPy repository of the 2024 SPARC codeathon applies the FAIRness [1] standards. The repository is located at <https://github.com/SPARC-FAIR-Codeathon/SPARC-SPy>.

The table below demonstrates features of SPARC-SPy adhere to FAIR Principles established for research software.

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| **FAIRness level** | **Description** | **Embodiment within SPARC-SPy** |
| Findability F1 | Software is assigned a globally unique and persistent identifier. | On Github, PyPI and Zenodo |
| Findability F2 | Software is described with rich metadata | Extensive descriptions provided |
| Findability F3 | Metadata clearly and explicitly include the identifier of the software they describe. | Detailed on Github and in Readme. |
| Findability F4 | Metadata are FAIR, searchable and indexable. | Comprehensive Readme |
| Accessibility A1 | Software is retrievable by its identifier using a standardised communications protocol. | DOI is available through Zenodo (https://zenodo.org/record/XXXX) |
| A1.1 | The protocol is open, free, and universally implementable. | SPARC-SPy is public on Github |
| Accessibility A2 | Metadata are accessible, even when the software is no longer available. | Persistent visualisation tags/descriptors |
| Interoperability I1 | Software reads, writes and exchanges data in a way that meets domain-relevant community standards. | SPARC-SPy reads scaffold data from standard .json files and exports visualisations as .VTK |
| Interoperability I2 | Software includes qualified references to other objects. | To be completed |
| Reusability R1 | Software is described with a plurality of accurate and relevant attributes. | Detailed on Github, in Readme and tutorials. |
| R1.1 | Software is given a clear and accessible licence. | Detailed on Github and in Readme. |
| Reusability R2 | Software includes qualified references to other software. | To be completed |
| Reusability R3 | Software meets domain-relevant community standards. | To be completed |

**References:**

[1] Wilkinson, M., Dumontier, M., Aalbersberg, I. et al. The FAIR Guiding Principles for scientific data management and stewardship. Sci Data 3, 160018 (2016).