Sara El-Gebali PhD

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Profile

Metadata Specialist and Project Lead with over a decade of experience in scientific data curation, metadata management, and open science advocacy. Passionate about advancing open science and making a meaningful impact through collaborative efforts. Proven track record of leading cross-functional teams to implement large-scale, open-source technical solutions that enhance data infrastructure and accessibility.

Current Professional Affiliations

2023
Germany

Metadata Specialist
DataCite

- Conduct Data Analysis and Quality Checks and metric analysis to elevate metadata quality.
- Champion the promotion, refinement, and integration of the DataCite metadata schema across broader PID infrastructures.
- Provide expert training, guidance, and support.
- Contribute to the strategic planning and concept development within the PID4NFDI project.

Co-founder
FAIRPoints

- Initiated and currently co-lead FAIRPoints, a pivotal platform fostering discussions and training on FAIR principles globally.
- Organize international webinars and workshops aimed at advancing data management standards implementation.

Steering Committee Member
FAIR Digital Objects Forum

- Engage in strategic planning and initiative execution to promote FAIR Digital Objects' adoption in research and data management.
- Develop guidelines and standards to boost digital objects' interoperability, accessibility, and reusability.

Governance Committee Member
Open Life Science

- Advising on policy and direction within Open Life Science to promote ethical and inclusive open science practices.
- Mentor and guide early-career researchers in implementing effective open science principles within their projects.

Technical Advisor
Africa PID Alliance

- Offer strategic and technical advice for PID management and integration across African research institutions, enhancing discoverability and access to the continent's cultural heritage and innovation.

Ambassador
Research Data Alliance (RDA) and European Open Science Cloud (EOSC)

- Represent the interests of the RDA and EOSC, promoting the integration of their standards and practices within various scientific communities across Europe.

Current Professional Affiliations

- Organize and lead community engagement events that discuss and promote the implementation of FAIR principles across European research communities.

Awardee
FAIR Impact for Signposting and ROCRATE

- Contributed to initiatives aimed at enhancing the findability and accessibility of research outputs through improved signposting and the use of ROCRATE metadata standards.

Previous Experience

Sweden

Project Lead: Metadata & Curation
SciLifeLab-DataCentre

- Directed the implementation of multiple open-source technical solutions, notably the Digital Research Hub for Biosamples metadata handling.
- Promoted Open & FAIR practices extensively through strategic outreach and training programs.
- Managed a dynamic team as Agile Product Owner, comprising developers and data stewards.

Open Data Module Lead
NASA Transform to Open Science

- Led the development of the Open Data module within the NASA OpenCore project, enhancing data accessibility and openness.
- Courses are in the official offerings for professional development available to the staff of the Executive Office of the President.

Berlin

Team lead: Research Data Management
Max Delbrück Center for Molecular Medicine (MDC)

- Established and led the research data management unit, crafting policies and strategies that strengthened research data governance and support.
- Supported and advised researchers, providing training and workshops.

Cambridge, UK

Scientific Database Curator
European Bioinformatics Institute (EMBL-EBI)

- Managed bioinformatics resources for protein biology at Pfam.
- Curated extensive protein sequence datasets, and engaged in regulatory processes.
- Awarded the Wellcome Genome Campus Award for Best Practice in Supporting Equality and Diversity in Science 2019.

Germany

Scientific Data Editor
EMBO (European Molecular Biology Organization)

- Conducted in-depth analysis and interpretation of scientific content to create structured and machine-readable metadata.
- Coordinated activities with software and bioinformatics teams to develop databases and user interfaces.
- Developed workflows for editorial and production processes and created new avenues for promoting the SourceData project.

Education

Bern, Switzerland

Molecular Biology | PhD
University of Bern

Research Focus: Investigated metabolic cell signaling pathways and amino acid transporters in colon cancer progression.

Education

London, UK

Molecular Pathology and Genomics | MSc
Queen Mary University of London
Focus: Explored cancer-related inflammation in skin carcinogenesis. Recipient of the Cancer Research UK bursary.

Lund, Sweden

Molecular Biology | BSc
Lund University
Coursework: Covered essential topics in cell biology, genetics, microbiology, and molecular biology techniques.

Conferences and Public Speaking

Washington, United States

AAAS Conference Panelist
Actively participated as a panelist, discussing strategies to enhance data inclusivity in scientific research. This involved presenting innovative methods to integrate diverse data sources and promote equitable access to scientific information.

Lyon, France

Keynote Speaker at Bioinformatics Open Source Conference (BOSC)
Delivered the keynote address on the impact of community-driven development and the potential of open-source resources in fostering innovation and collaboration in the field.

Regular Participant at RDA and EOSC Conferences
Engaged in multiple international conferences organized by the Research Data Alliance and the European Open Science Cloud, speaking on topics such as data management, bioinformatics, and the implementation of FAIR data principles.

FOSDEM 2023
Highlighted pragmatic measures for implementing FAIR data principles, discussing their importance in the context of global data sharing and interoperability.

Teaching and Mentoring

Bioinformatics Hub of Kenya Initiative (BHKI)
Led severak training sessions data management, helping to build research capacity within the Kenyan research community.

Research Data Management (RDM) Material on Zenodo
Developed and shared a comprehensive set of RDM training materials on Zenodo, which are used globally by researchers and data managers to improve their data stewardship practices. These resources include guidelines, best practices, and templates that facilitate the adoption of FAIR principles.

Open Life Science (OLS) Mentoring
Actively mentored several cohorts through the OLS program, guiding participants through the process of establishing and maintaining open science projects. This mentorship focused on empowering researchers with the tools and knowledge needed to effectively implement open science practices.

Cambridge, United Kingdom

Cambridge University, Guest lecturer, MSc Courses
Delivered lectures and practical sessions on protein sequence analysis to MSc students at Cambridge University.

The Carpentries, Instructor
Conducted multiple certified Carpentries and Carpentries-style workshops in Basic Bash and Research Data Management.

Volunteer Work and Community Engagement

Greece

Volunteer at Refugee Camps in Lesvos, Greece
Contributed to humanitarian efforts by volunteering at refugee camps, providing support and aid to displaced individuals.

Establishing Open Science Community Egypt
Played a pivotal role in establishing the Open Science Community in Egypt. Provided strategic advice and support, facilitating workshops and seminars to train local researchers in open science methodologies, thereby promoting open science practices among Egyptian researchers.

Honors and Awards

eLife Innovation Leaders 2020 Mentorship Program
Recognized as a mentor in the eLife Innovation Leaders program, providing guidance and support to up-and-coming researchers in open science practices.

Wellcome Genome Campus Award for Best Practice in Supporting Equality and Diversity in Science (2019)
Awarded for outstanding contributions to promoting equality and diversity within the scientific community, highlighting efforts to create an inclusive environment that fosters diversity in scientific research and education.

Brave the Shave Campaign (2017)
Participated in the Brave the Shave campaign, raising significant funds for MacMillan Cancer Support, and also contributed to the Little Princess Trust by donating hair for wigs for children undergoing cancer treatment.

Podcasts and Media Appearances

FAIR Data Podcast
Engaged in a deep dive into the evolving landscape of FAIR data practices, discussing their pivotal role in advancing scientific research. The conversation addressed how these practices enhance the accessibility and usability of research data across various scientific fields.

Podbean Interview on Open Science
Explored the crucial aspects of data interoperability and envisioned the future of scientific collaboration. This discussion emphasized the need for seamless data exchange and integration to foster collaborative research efforts globally.

RSEng Dev Stories
Shared personal insights and professional experiences regarding the challenges and triumphs in the realm of data management. This narrative highlighted how strategic data management practices contribute to the efficiency and effectiveness of scientific research.

Science Business Article
Discussed the pressing challenges and innovative solutions in data sharing aimed at enhancing open access. The article covers strategic approaches to overcoming barriers to data sharing that can stifle scientific innovation and collaboration.

RDA EOSC Future Spotlight
Highlighted my significant contributions to the research data community, emphasizing the impact of my work on promoting and implementing FAIR principles across various research settings.

📖 *Selected Publications*

03/2024 — **Harmonizing metadata across disciplines – bioschemas and the datacite metadata schema**
DataCite
El-Gebali, S.; Stathis, K. https://datacite.org/blog/bioschemas_2024/

11/2017 — **SourceData: A semantic platform for curating and searching figures**
Nature Methods
Liechti, R., George, N., Götz, L., El-Gebali, S., Chasapi, A., Crespo, I., Xenarios, I., & Lemberger, T. https://doi.org/10.1038/nmeth.4471

01/2024 — **DataCite metadata training**
Zenodo
Stathis, K., Chen, X., & El-Gebali, S. https://zenodo.org/doi/10.5281/zenodo.10950234

12/2023 — **NASA TOPS open science 101**
Zenodo
Adams, A., Almarzouq, B., Lacerda, A., Alwood, J., Alzahawi, S., Azevedo, F., Barry, R. K., Batalha, N., Bayer, J. M. M., Bell, T., Black, M., Blanchette, K., Bremner, P., Brown, S. V., Bugbee, K., Burt, J., Toro, C., Campitelli, E., Chandler, M., … Yuen, K. https://zenodo.org/doi/10.5281/zenodo.10161527