Practicing Open Science: OpenAIRE perspective

Iryna Kuchma (EIFL) Alessia Bardi and Paolo Manghi (CNR-ISTI) Katerina latropoulou, Argiro Kokogiannaki, Konstantina Galouni, Manolis Terrovitis (Athena Research Center)









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Other research products	Publication . Conference Object . Article . Book . 2008 Lecture Notes in Computer Science: Preface Authors: Rothlauf, F.; Corne, D. W.; Machado, P.; Smith, G. D.; Branke, J.; 🔞 Rolf Dree	chsler; Marchior, E.; Squillero, G.; Cagnoni, S.; Jin, Y.;
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Research Type (4) Publications Research data Software Other research products	Other Research Product . Lecture . 2020 Software's Scholarly Communication Life-cycle - The OpenAIRE's View OPEN ACCESS ENGLISH Authors: Manghi, Paolo; DOI: 10.5281/zenodo.3958871 C ¹ , 10.5281/zenodo.3958872 Project: EC OpenAIRE-Advance (777541)	Hosting Content Provider Publication Date Funder Funding Stream
Year range e.g. 1800 - e.g. 2030 > THIS YEAR LAST S YEARS LAST S YEARS	Presentation at WOSSL Workshop on Open Source Software Lyfe-cycles. "The objective of this workshop is to bring together the scientists' communities of Astrophysics, Astroparticle Physics and Particle Physics who are leading the software development within their domain	Funding Substream level 1 Funding Substream level 2 Language
Funder (2) European Commission (31) Weikcome Trust (1) Type (10)	OPEN ACCESS ENGLISH Authors: Paolo Manghi; DOI: 10.5281/zenodo.3432885 [1], 10.5281/zenodo.3432886 Project: EC OpenAIRE-Advance (777541) Presentation at the Workshop "How identifiers can help you in Open Science" at the Open Science Fair 2019 in Porto, Portugal. Organisers & Speakers: Frances Madden - The British Library, Helena Cousijn - DataCite, Paolo Manghi - ISTI-CNR, Jessica Parland-von Essen - CSC	Organization PID Project Type

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and create knowledge. Several discussions are currently on-going on how knowledge infrastructures might be built and a few attempts

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Search Results



Search Results

Publication . Article . Other literature type . 2015 A novel liquid organic hydrogen carrier system based on catalytic peptide formation and hydrogenation

Hu, Peng; Fogler, Eran; Diskin-Posner, Yael; Iron, Mark A.; Milstein, David;

REFERENCES

31



Published: 17 Apr 2015 Journal: Nature Communications, volume 6 (elssn: 2041-1723, 🍑 Copyright policy 🖄) Publisher: Nature Pub. Group

SUPPLEMENTARY

OUTCOMES



Abstract

SUMMARY

Hydrogen is an efficient green fuel, but its low energy density when stored under high pressure or cryogenically, and safety issues, presents significant disadvantages; hence finding efficient and safe hydrogen carriers is a major challenge. Of special interest are liquid organic hydrogen carriers (LOHCs), which can be readily loaded and unloaded with considerable amounts of hydrogen. However, disadvantages include high hydrogen pressure requirements, high reaction temperatures for both hydrogenation and dehydrogenation steps, which require different catalysts, and high LOHC cost. Here we present a readily reversible LOHC system based on catalytic peptide format...

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Transferring data from platform.twitter.com.... related to COVID-19 chatter. Since our first release we have received additional data from

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Interactive and reproducible repositories powered by Zenodo and Binder.

When the Binder project was first launched, we imagined a world in which scientific scholarship and reproducibility could be carried out by the community using a fully-open stack of technology. We're happy to say that this is now possible!



Zenodo DOIs now work with BinderHub

The <u>BinderHub</u> team recently added in support for building Binder links that point to <u>Zenodo repositories</u>. Zenodo is a general purpose open-access repository hosted by CERN that allows researchers to archive and apply a DOI to information that they put up on the web. https://blog.jupyter.org/binder-with-zenodo-af68ed6648a6





https://argos.openaire.eu

ABOUT RESOURCES

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Plan and follow your data

Create machine actionable DMPs.Configure to best fit your discipline.Link to EOSC components out of the box.Share easily in your repository.

Bring your Data Management Plans closer to where data are generated, analysed and stored.

Start your DMP



Start your **ARGOS experience**

Horizon 2020	

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ABOUT

DOWNLOAD

High accuracy Data Anonymization.

Perform research and share your results that satisfy GDPR guidelines by using data anonymization algorithms.



https://amnesia.openaire.eu

Features

Guarantees exceptional results in the field of Privacy Preserving Data Publishing.



CONTACT

Why Amnesia

Anonymization provides a statistical guaranty about the risk of information leakage

Works locally, no data transfer risk

Allows user to customize the solution

User friendly

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The only tool to offer anonymization for setvalued data

It is the most suitable way to give information to third parties, without revealing personal data



The only tool to support k^m -anonymity



Easy to incorporate to third party information systems



Covid-19

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Health data for COVID-19 demand anonymization since they contain sensitive personal patients information. Amnesia for Covid-19 is a use case developed for demonstration purposes during the European Commission's EUvsVirus Hackathon.

Become GDPR compliant

Amnesia is used in various training courses in data privacy, including the Masters on <u>Business Analytics of</u> <u>AUEB</u>.

High Usability & Flexibility

Amnesia was used in the EU "My Health My Data" project, to support an ecosystem for safely exchanging medical data. Data included personal details and ICD10 and ICD9 codes for diagnoses. More details <u>here</u>.

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https://www.openaire.eu/data-reuse-use-cases

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Data reuse

stories & use cases

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https://www.openaire.eu/data-reuse-use-cases

In OpenAIRE we are collecting a series of stories, use cases and other relevant resources that report the process of data reuse, trying to demonstrate and describe experiences (successful or not) of reuse of a variety of research data, as well as associated assumptions and implications. This work is being developed by the RDM Task Force - Data Reuse Working Group. The number of use cases will expand over time.





Climate Change

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BACK

Timeline JS

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OTHER VISUALISATIONS

Clima

CLIMATE CHANGE



1600

1700 - 2100

Climate Change

This timeline presents the result of a data preparation and processing of Climate Change forecasts by AquaMaps and NASA through the CNR DataMiner Cloud Computing platform.

Forecasting environmental parameters in the far future requires complex modelling, large computational resources, fluid-dynamics processing applied to air and ocean currents information, correlating physical parameters (e.g. temperature, pressure, and wind), and involving human-related factors, e.g. greenhouse gases emission, energy resources exploitation etc. Thus, longterm forecasts data are rare and published by few organisations.

The history of Climate Change due to human activity can be dated back to the beginning of 1700 when the British ironmonger Thomas Newcomen invents the first widely

*

https://dlnarratives.eu/timeline/climate.html

1800

Narrated by Gianpaolo Coro — Narrative Building Tool developed by Digital Libraries group, ISTI-CNR, Pisa, Italy. Licensed under the Creative Commons BY-SA 4.0 International License. Visualized with TimelineJS 3.

1690 1700

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computer interface. This was possible because the Web service was WPS standardised and used

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Enhancing ARGO floats data re-usability

Automatic Zoom 🗸

Q Search

Gianpaolo Coro, ISTI-CNR (Italy), <u>gianpaolo.coro@isti.cnr.it</u> Paolo Scarponi, ISTI-CNR (Italy), <u>scarponi@isti.cnr.it</u> Pasquale Pagano, ISTI-CNR (Italy), <u>pasquale.pagano@isti.cnr.it</u>

Many research communities in a great variety of fields are interested in accessing collections of reliable environmental data. These data are typically used in environmental monitoring systems, data processing workflows, ecological models, societal and economical analyses, etc. Research communities need to carry out their studies in a fast and efficient manner and thus require data to be well structured, well described, and possibly represented in standard formats that allow direct access and usage. In this context, reducing data preparation and pre-processing time is crucial.

ARGO data have been long-used by marine science communities in global oceans observing systems. These data are collected using a large network of floats, monitored by the ARGO Information Center (AIC) and are sent to Global Data Assembly Centers (GDACs). The datasets are available for download on the official ARGO website (www.argo.ucsd.edu), as Network Common Data Format (NetCDF) *Pointfeature* files and CSV files through FTP sites and online tools. However, these formats present many challenges from a technical point of view, especially in terms of re-usability. Every dataset has dimension ranging from SMB to 3GB and contains measurements in time of different physical parameters recorded at different locations. Every file corresponds to one month and the overall repository time-span ranges from January 1999 to today. An overall CSV repository is available (<u>ftp://ftp.ifremer.fr/ifremer/coriolis/c00547-bigdata-archive/</u>) where a JSON file stores metadata about the parameters, e.g. the unit of measure, the full name, the reliability of the measurement, etc. Although accessing this unique endpoint is convenient, every dataset is not a standalone object and requires continuously parsing the JSON file to be fully understood. Further, managing a 3GB CSV file can be memory demanding, especially for processes that need to combine this dataset with other data.



IMDIS_2018_submission_17 - IMDIS_ ×



In this paper, we present a workflow to convert ARGO observation data into a standard raster file. This workflow has been



makers-on-open-science-and-open-access



5. GET INSIGHTS FROM DATA

6. PARTICIPATE IN Hackquake(s)

4. EXPLORE-RUN Data in Helix

3. STORE DATA IN Helix

2. COLLECT Seismic Data

1. INSTALL THE Seismograph OpenAIRE EXPLORE

zenodo

7. BUILD NEW APPLICATIONS I.E. EARLY WARNING SYSTEMS

> 8. PUBLISH YOUR WORK IN OPEN Schools Journal

> > 9. PARTICIPATE In Zenodo Community

New discovery!

Κυνήγι Εξωπλανητών

Ανδρέας Βατίστας Βατίστας, Θανάσης Βασίλαινας Βασίλαινας, Εμμέλεια Βουτιέρου, Φωτεινή-Μαρία Δραβίλλα, Γιώργος Καλπαξής, Ρένια Μενέγου, Παναγιώτης Μιχάλαινας, Ιάσονας Παυλόπουλος, Δήμητρα Πίνα, Θωμάς Πιτσαργιώτης, Γιώργος Τσακίρης, Στέλιος Φραγκουδάκης, Δρ. Σωτήριος Τσαντίλας

DOI: https://doi.org/10.12681/osj.22398

Abstract

Από το 2009 το διαστημικό τηλεσκόπιο Kepler καταγράφει τις μικρές ελαττώσεις (εκλείψεις) στο φως μακρινών αστέρων που οφείλονται στη διάβαση (transit) πλανητών από μπροστά τους. Σκοπός μας είναι να εντοπίσουμε πλανήτες σε τροχιά γύρω από μακρινά άστρα από τα δεδομένα της αποστολής Kepler, χρησιμοποιώντας τη Μέθοδο των Διαβάσεων με τη βοήθεια δύο προγραμμάτων που έχει γράψει η ομάδα μας σε γλώσσα C. Εφόσον εντοπιστούν και επιβεβαιωθούν οι διαβάσεις, προχωρούμε στην ανάλυση των χαρακτηριστικών του πλανήτη: Ακτίνα, κλίση, απόσταση από το αστέρι, και κυρίως αν βρίσκεται στη λεγόμενη «κατοικήσιμη ζώνη» πράγμα που θα κάνει δυνατή τη διατήρηση ζωής. Λόγω του πολύ μικρού μεγέθους των πλανητών σε σχέση με το αστέρι τους, ο εντοπισμός αυτός είναι εξαιρετικά δύσκολος. Παρόλα αυτά έχουμε ήδη εντοπίσει έναν τέτοιο εξωπλανήτη σε τροχιά γύρω από τον αστέρα ΚΙC 1432789 τα χαρακτηριστικά του οποίου ανέλυσε η ομάδα μας για πρώτη φορά.

Since 2009, Kepler Space Telescope has been recording small reductions (eclipses) in the light of distant stars due to the transit of planets in front of them. Our goal is to detect planets in orbit around distant stars from Kepler's mission data, following the Reading Method using two programs written by our team in programme language C. If the readings are detected and confirmed, we proceed to their analysis. characteristics of the planet: Ray, inclination, distance from the star, and especially if it is in the so-called "habitable zone" which will make it possible to maintain life.

However, we have already identified such an exoplanet in orbit around the star KIC 1432789, the characteristics of which our team analyzed for the first time.



Views: 64 Downloads:

Thank you!

Iryna Kuchma



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