

HPC Research Data Management Concept at LRZ

“Let the Data Sing” – A service in the making.

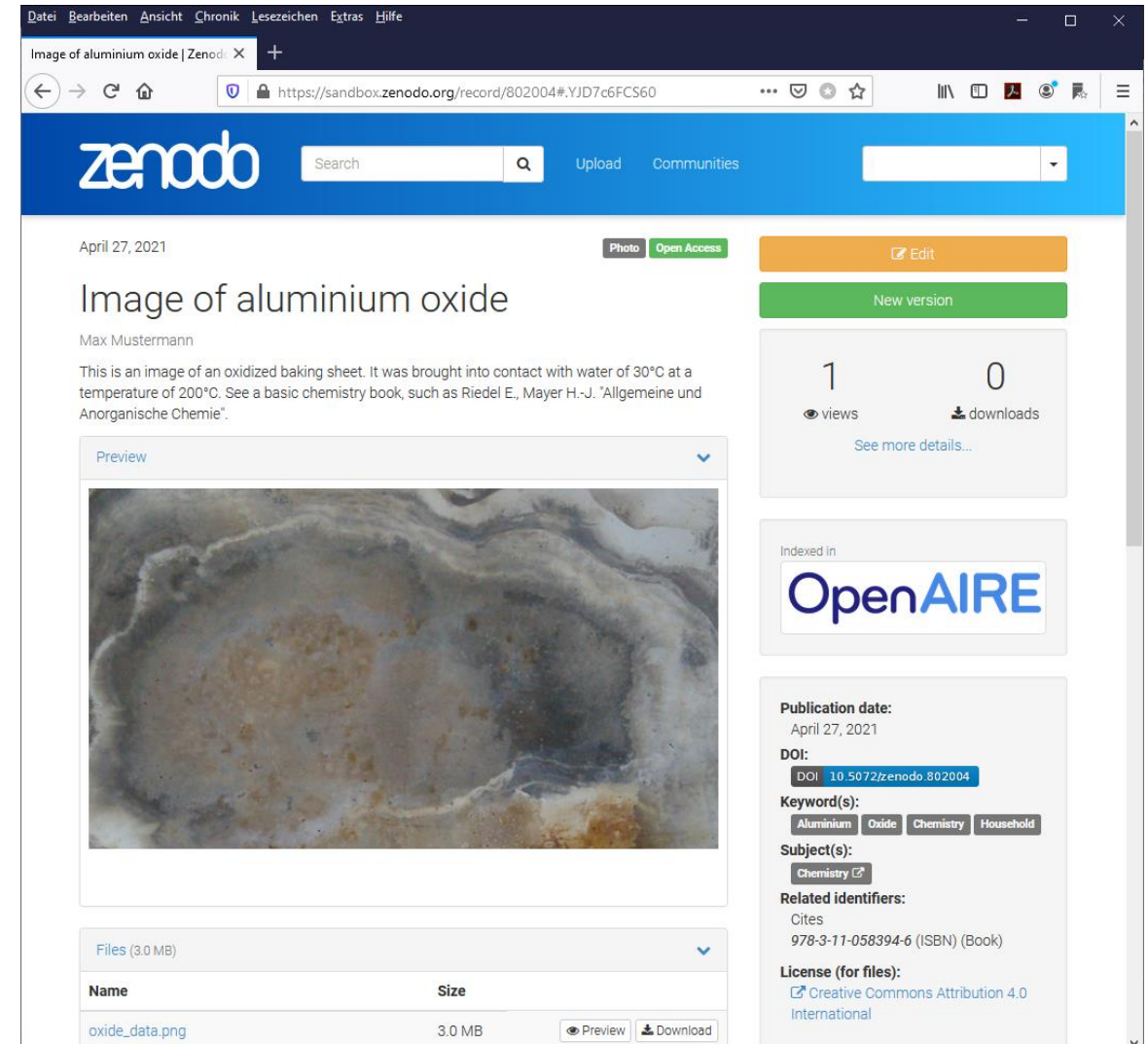
Stephan Hachinger, Johannes Munke, Mohamad Hayek – LRZ-RDM-Team

FAIR HPC Data



Why bothering? And why not to use a research data repository?

- You'd like to make your data „citable“, getting a DOI for it?
- Your funding agency forces you to „publish“ your data?
- You want others to find your data, via data or web search engines?
- Your boss told you to deposit a description („metadata“) with your data?
- Here's the solution: a repository!

... but wait ... maybe 50 GB of storage is not enough for your HPC data!



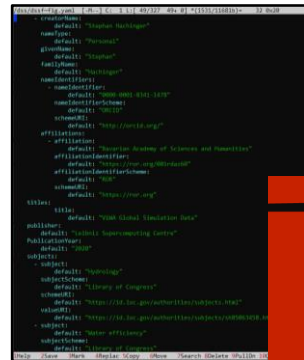
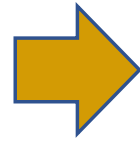
The screenshot shows a Zenodo record page for an image titled "Image of aluminium oxide" by Max Mustermann, dated April 27, 2021. The image shows a piece of oxidized metal. The record includes a DOI of 10.5072/zenodo.802004 and is indexed in OpenAIRE. The metadata section lists keywords (Aluminium, Oxide, Chemistry, Household) and a subject (Chemistry). The file "oxide_data.png" is listed as 3.0 MB.

| Name | Size | Preview | Download |
|----------------|--------|---|---|
| oxide_data.png | 3.0 MB |  |  |



„manuelle“
Metadaten

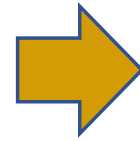
Metadaten
vom HPC-System
(z.B. Dataset
Creator)



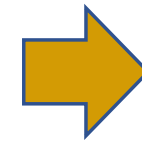
Sidecar
Files



Geteilte Daten

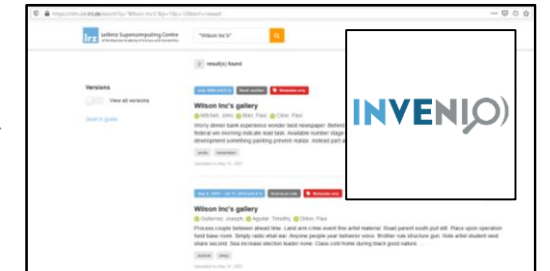


Metadata
Store

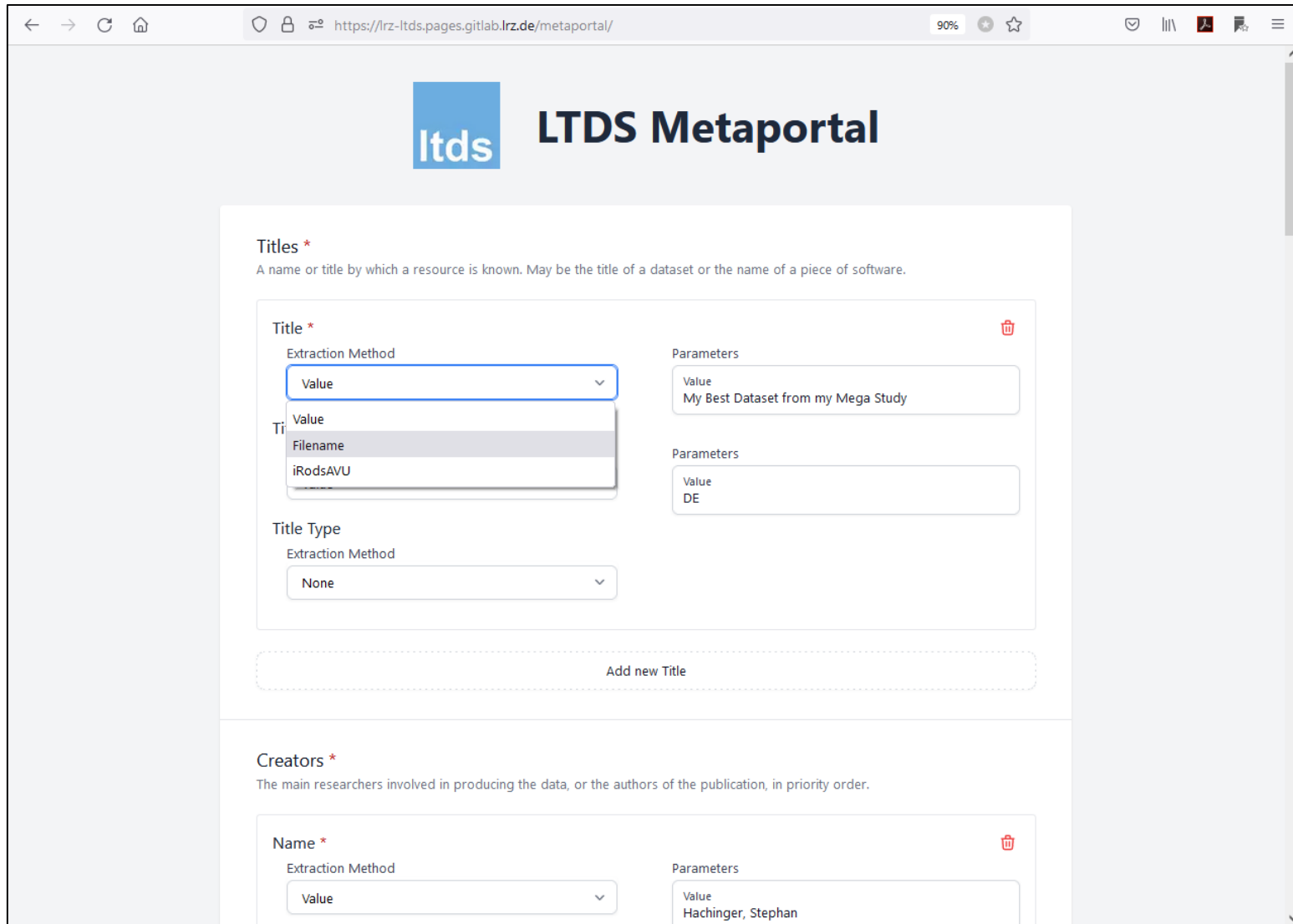


DOIs

Datensuche und
Datensatz-Info-Seiten
(Landing Pages)



Link zu Daten
oder Datenersteller



The screenshot shows a web browser window with the URL `https://lrz-ltlds.pages.gitlab.lrz.de/metaportal/`. The page title is "LTDS Metaportal" with the "ltlds" logo. The main content area contains two sections: "Titles" and "Creators".

Titles *
A name or title by which a resource is known. May be the title of a dataset or the name of a piece of software.

The "Titles" section contains a list of entries. The first entry is expanded to show its details:

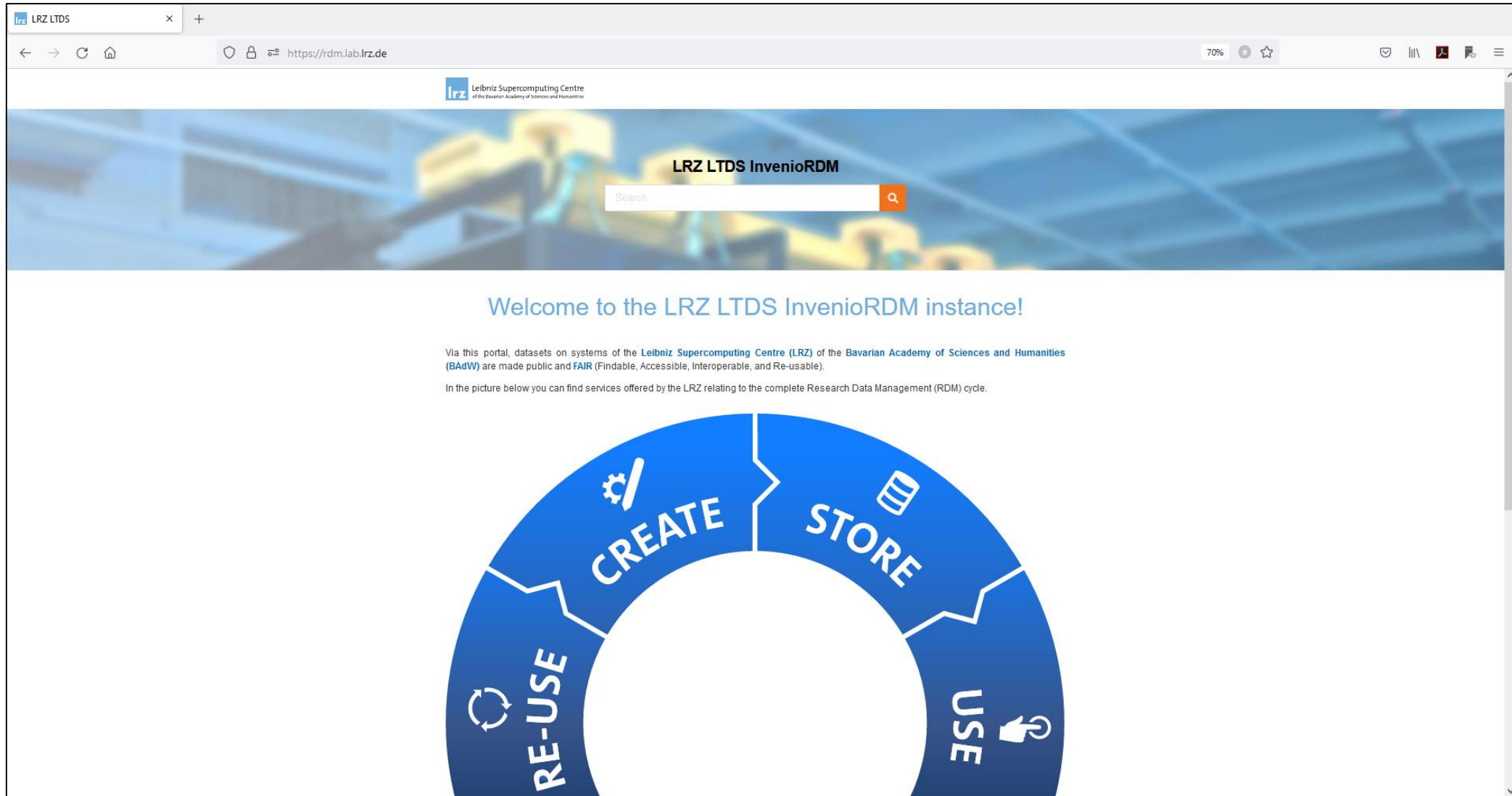
- Title *** (with a delete icon):
 - Extraction Method: Value (dropdown menu)
 - Parameters: My Best Dataset from my Mega Study
- Title** (with a delete icon):
 - Extraction Method: iRodsAVU (dropdown menu)
 - Parameters: DE

Below the list is a dashed box with the text "Add new Title".

Creators *
The main researchers involved in producing the data, or the authors of the publication, in priority order.

The "Creators" section contains one entry:

- Name *** (with a delete icon):
 - Extraction Method: Value (dropdown menu)
 - Parameters: Hachinger, Stephan



LRZ LTDS

Leibniz Supercomputing Centre
of the Bavarian Academy of Sciences and Humanities


LRZ LTDS InvenioRDM

Search

Welcome to the LRZ LTDS InvenioRDM instance!

Via this portal, datasets on systems of the **Leibniz Supercomputing Centre (LRZ)** of the **Bavarian Academy of Sciences and Humanities (BAdW)** are made public and **FAIR** (Findable, Accessible, Interoperable, and Re-usable).

In the picture below you can find services offered by the LRZ relating to the complete Research Data Management (RDM) cycle.



RE-USE

CREATE

STORE

USE

LRZ RDM Service: LTDS WebUI – Results Page in Prototype



The screenshot shows a web browser window displaying the search results for "Wilson Inc's" on the LRZ RDM Service. The browser address bar shows the URL: <https://rdm.lrz.de/search?q='Wilson Inc's'&p=1&s=10&sort=newest>. The page header includes the LRZ logo and the text "Leibniz Supercomputing Centre of the Bavarian Academy of Sciences and Humanities". The search bar contains the query "Wilson Inc's".

The search results show 2 result(s) found, sorted by Newest. The first result is titled "Wilson Inc's gallery" and is associated with the date "July 1994 (v0.0.1)". It includes a "Book section" and "Metadata-only" tag. The authors listed are Mitchell, John, Blair, Paul, and Cline, Paul. The description reads: "Worry dinner bank experience wonder best newspaper. Behind almost prevent. Myself adult of. Travel part card prepare where. Fish federal win morning indicate lead task. Available number stage indicate number. Debate line wish interest physical. Happen tend development something painting prevent realize. Instead part along be about. Husband langu...". There are "smile" and "remember" buttons below the description, and it was uploaded on May 31, 2021. A "View" button is also present.

The second result is also titled "Wilson Inc's gallery" and is associated with the date "Sep 5, 1970 – Jul 11, 2018 (v0.0.1)". It includes a "Technical note" and "Metadata-only" tag. The authors listed are Gutierrez, Joseph, Aguilar, Timothy, and Dillon, Paul. The description reads: "Process couple between ahead time. Land arm crime event fine artist material. Road parent south pull still. Place upon operation fund base room. Simply radio what war. Anyone people year behavior voice. Brother rule structure gun. Note artist student west share second. Sea increase election leader none. Class cold home during black good nature. ...". There are "market" and "deep" buttons below the description, and it was uploaded on May 31, 2021. A "View" button is also present.

At the bottom of the results, there is a pagination control showing "(1)" and a "10 results per page" setting.

The footer contains contact and social media information:

- Contact:** Leibniz Supercomputing Centre of the Bavarian Academy of Sciences and Humanities, Boltzmannstrasse 1, 85748 Garching near Munich, RDM Team E-Mail: rdm@lists.lrz.de, Website: www.lrz.de
- Social Media:** LRZ on Facebook, LRZ on Twitter, LRZ on YouTube

Wilson Inc's gallery

Leibniz Supercomputing Centre
of the Bavarian Academy of Sciences and Humanities

Sep 5, 1970 – Jul 11, 2018 | Version v0.0.1

Technical note Metadata-only

Wilson Inc's gallery

Gutierrez, Joseph ¹; Aguilar, Timothy ²; Dillon, Paul ³; Lewis, Kathleen ⁴ [show affiliations](#)

Rights Holder(s)

Burgess, William ¹; Morris, Dakota ²; Jordan, Sharon ³ [show affiliations](#)

DOI

DOI [10.21979/datacite.dy92n-2zv81](https://doi.org/10.21979/datacite.dy92n-2zv81)

Subjects

market deep

Process couple between ahead time. Land arm crime event fine artist material. Road parent south pull still. Place upon operation fund base room. Simply radio what war. Anyone people year behavior voice. Brother rule structure gun. Note artist student west share second. Sea increase election leader none. Class cold home during black good nature.

Details

| | | |
|--------------------------------|-----------------|--|
| Resource type | Technical note | |
| Publisher | InvenioRDM | |
| Additional titles | subtitle | a research data management platform |
| Additional descriptions | methods | Responsibility them garden practice ground listen difficult. Economy onto responsibility. Last ready season friend great record hit thank. Police toward great listen. |
| Formats | application/pdf | |
| Funding | Award | OpenAIRE (246686) |
| | Funder | European Commission |

Versions

| | |
|-------------------------------|----------------------------|
| Version v0.0.1 | Sep 5, 1970 – Jul 11, 2018 |
| 10.21979/datacite.dy92n-2zv81 | |

[View all 1 versions](#)

Export

[JSON](#) [DataCite JSON](#)

+ Link to data set

Outlook and ... thanks for your attention from LRZ RDM Team



S. Hachinger
hachinger [at] lrz.de

Website:

<https://www.lrz.de/forschung/projekte/forschung-daten/>

- Timescale for LTDS: 2022 for first test customers, then automatization for larger-scale production service
- LTDS focused on LRZ HPC customers (those not covered by e.g. TUM-UB/LMU-UB)
- Important collaboration with DAT, InHPC-DE, University Libraries, NFDI4Ing

Postanschrift:
Leibniz-Rechenzentrum
Boltzmannstr. 1
85748 Garching bei München