

# Repository Workflow For Interlinking Research Data With Grey Literature



8th Conference on Grey Literature and Repositories, 21-Oct-2015, Prague  
Johanna Vompras, Jochen Schirrwagen | Bielefeld University, Germany

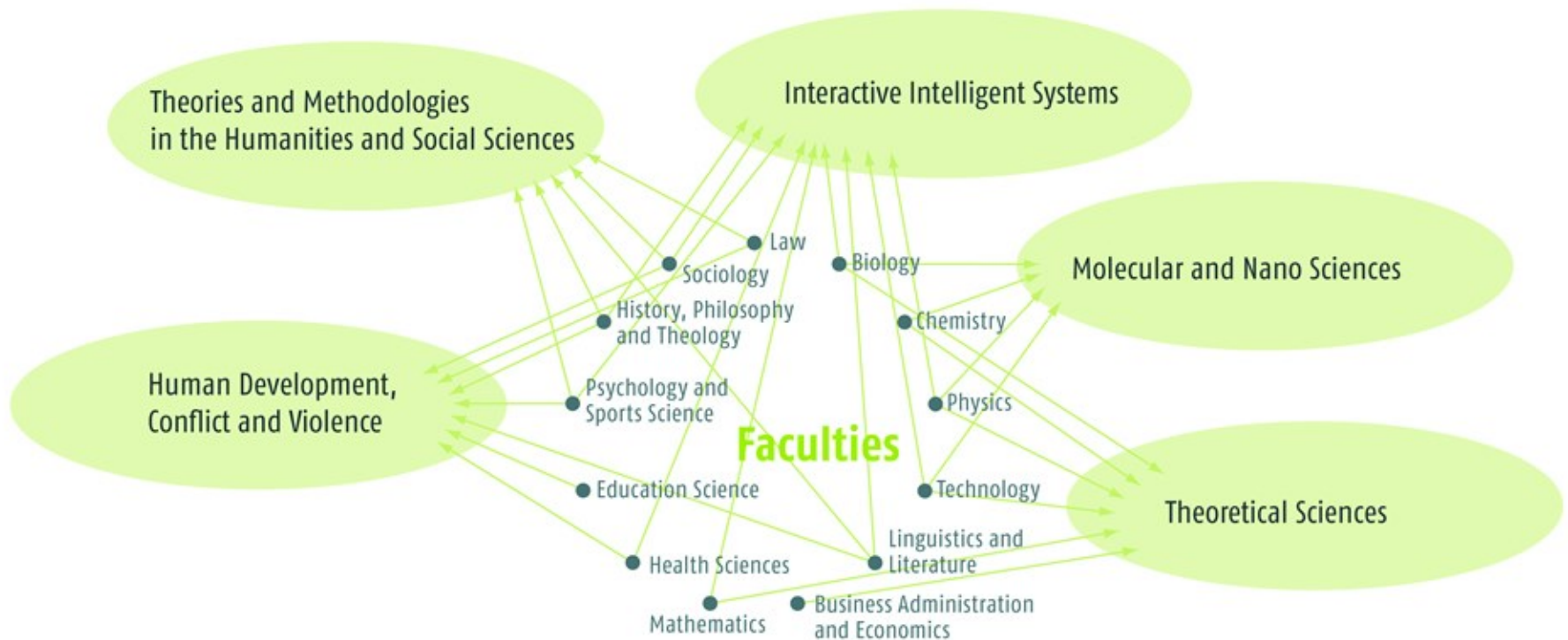
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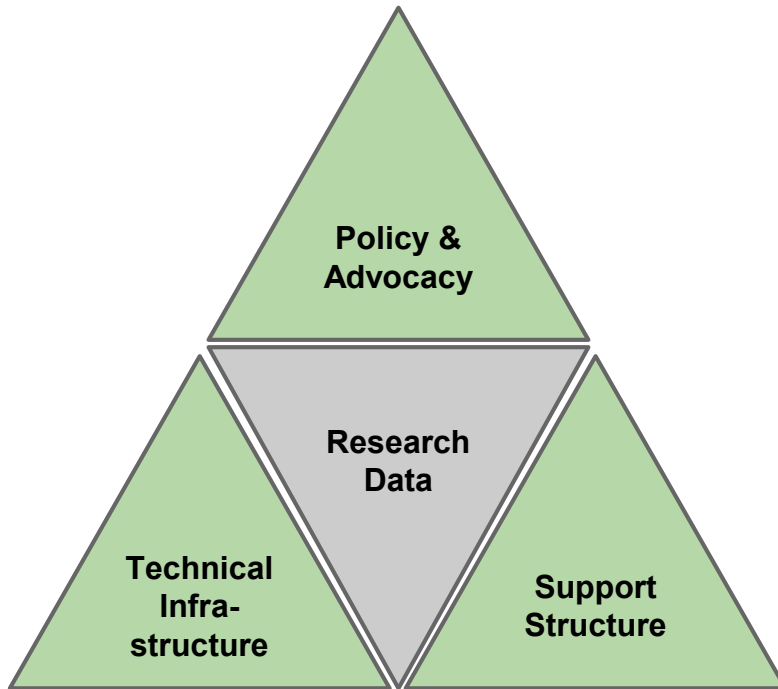
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## Research Areas and Interdisciplinary Research Networking at Bielefeld University





Synergy of policy, infrastructure and support

## ■ Policies, Infrastructure, Support

Research data requirements from funders and publishers



Implementation in institutional Research Data Policy



- Map to local conditions
- Align with institutional RDM services, roles, responsibilities
- Awareness and Guidance for researchers towards research data publication and sharing



2009

- Start of pilot project INFORMIUM (Dec. 2009)

2011

- Principles on handling research data and set up of coordination centre
- <http://data.uni-bielefeld.de>

2012

- DOI Publication Agent
- Participation in pilot projects (CRC882, CITEC, OA-Task Force)

2013

- Resolution on Research Data Management
- Data Management Planning Tool (inhouse)
- Integrated research data repository

2015

- Guidelines for complying with OA and Open Data requirements in Horizon2020

# PUB

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Research Data Management



Support Publication Services

Susanne Riedel


Phone: 0521/106-4058

[publikationsdienste.ub](mailto:publikationsdienste.ub@uni-bielefeld.de)

[@uni-bielefeld.de](mailto:publikationsdienste.ub@uni-bielefeld.de)

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- ✓ 3006 **Individual Author Pages**
- ✓ 76 **Data Publications**
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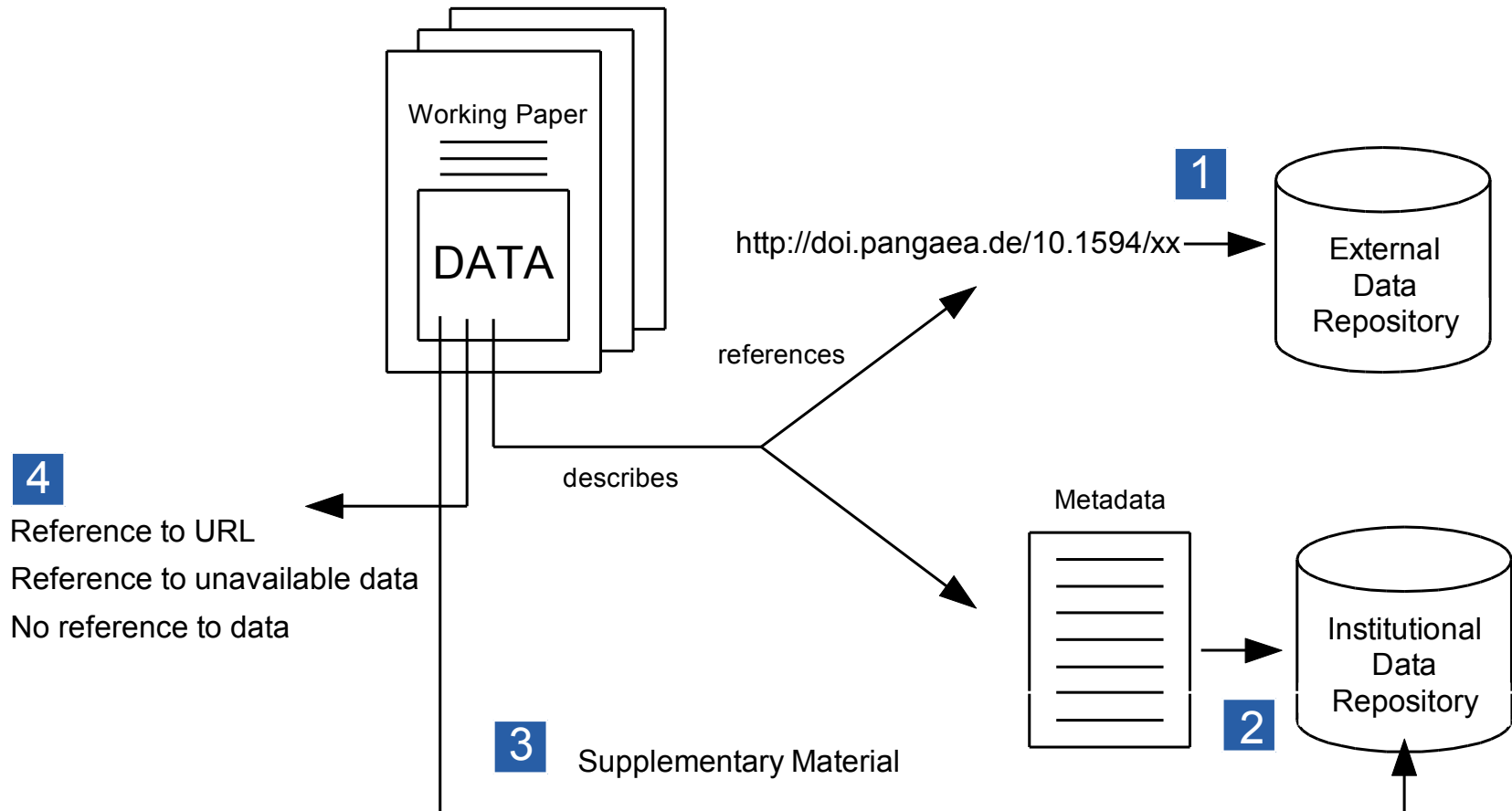
# PUB

- ❑ access point to instit. research output
  - scientific literature and research data
- ❑ build with LibreCat 
  - joint effort of Lund, Gent, Bielefeld libraries
- ❑ provides
  - author publication lists
  - mint of DOI / URN for permanent, reliable citation
  - interfaces (OAI, SRU, CQL)
  - formats (DC, MODS, DataCite, XMetaDissPlus)
  - linking of research data with literature
  - Partner in the SAFE Private LOCKSS Network

- ❑ Use of citation standards for research data
- ❑ Registration of research data
- ❑ Authoring tools supporting data citation
- ❑ Institutional policies covering grey literature  
and research data
- ❑ Cross-disciplinary generic RDM solutions
- ❑ Promote awareness about research data  
publication and sharing - a Libraries role



## Linking Grey Literature with Research Data as Discrete Resources



## □ *PhD thesis as Enhanced Publication (2011):*

- thesis in TU Delft inst. repository with datasets deposited in 3TU.Datacentrum  
(<http://t1p.de/ep-dissertation-tudelft> )

## □ *Working Paper in Economics and Management (2015):*

- metadata relate to source code and data publication
- data publication also cited by other publications  
(<http://pub.uni-bielefeld.de/publication/2723277> )

## □ *Data Literature Interlinking service:*

- collaboration of data centres, publishers, research organisations
- provide “authoritative” links between datasets and research literature

(<http://dliservice.research-infrastructures.eu> )

## □ *OpenAIRE:*

- scholarly communication infrastructure supporting contextualization of research results
- aggregation and knowledge extraction from literature and data repositories

(<https://www.openaire.eu> )

## Methodological Report Employee and Partner Surveys of the Linked Employer-Employee Panel (LEEP-B3) in Project B3 "Interactions Between Capabilities in Work and Private Life: A Study of Employees in Different Work Organizations"

Abendroth A, Melzer SM, Jacobebbinghaus P, Schlechter F (2014)

SFB 882 Technical Report Series, 12. Bielefeld: DFG Research Center (SFB) 882 From Heterogeneities to Inequalities.

Download  [SFB\\_882\\_TechnicalReport\\_12\\_B3.pdf](#) 2.08 MB

URN [urn:nbn:de:0070-pub-27008660](https://nbn-resolving.org/urn:nbn:de:0070-pub-27008660)

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Linking LEEP-B3 Survey Data  
with Administrative IAB Data

Peter Jacobebbinghaus  
Stefan Seth  
Martin Diewald  
Reinhard Schunck  
Anja-Kristin Abendroth  
Silvia Maja Melzer  
Stephanie Pausch  
Mareike Reimann  
Björn Andernach

## Working Paper Example in PUB

- Refereed scholarly paper
- Reviewed submissions  
two stages: internal and external
- For presenting technical work,  
e.g. data documentation, field reports  
questionnaires, data processing

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# Working Paper Example in PUB

## Appendix 1: Employee Questionnaire

### Part 0: Introduction and identity check

**INT02:** Hello, my name is <INT> from the SOKO-Institute for empirical social research and communication in Bielefeld. Do I speak with <NAME>? Some days ago we have sent you a letter with information about our current survey. In association with Bielefeld University we are surveying the achievement of goals in private and working life. Did you receive this letter?

Yes..... ☐

No ..... ☐

**INT:** If „no“: This letter gave you basic information about the survey. Using telephone interviews we try to identify life goals in the private and work domain employees pursue, and which conditions ease or hinder their achievement. For this survey employees had been chosen randomly from the central register of the "Federal Employment Agency" in Nuremberg, and you are one of them.

**INT03:** The survey will take around 40 minutes.

Your cooperation is voluntary. The SOKO Institute guarantees that all information will be processed strictly confidential and anonymously without using your name and address. Our staff is bound to secrecy. The data will be used exclusively in terms of this research project. Do you have the time to take part in this survey, or would you like to make an appointment?

Appointment for the interview: \_\_\_\_\_

Start right now..... ☐

Send the letter again..... ☐

Refusal of interview..... ☐

**INT:** Which appointment has been made? Please check the correspondent box!

**Notes:** In the following text the categories „Don't know“ and „Refusal“ will only be shown, if they are related to the filtering of questions.

**Q003A:** Please name your year of birth.

Year: \_\_\_\_\_

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## Working Paper Example in PUB

### Code Scheme

**R219:** How often do the following points happen to you? Please answer again according to the scale from 1 to 5. The 1 means „always“, 2 means „often“, 3 „sometimes“, 4 „rarely“ and 5 „never“.

	always	often	sometimes	rarely	never
	1	2	3	4	5
<b>R219A:</b> I often am already thinking about work-related problems when I wake up.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>R219B:</b> When I come home, it is very easy to switch off from thinking about work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>R219C:</b> Those closest to me say I sacrifice myself too much for my career.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>R219D:</b> Work seldom lets go of me; it stays in my head all evening.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>R219E:</b> If I put off something that needs to be done that day, I can't sleep at night.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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## Working Paper Example in PUB

### Description of data with DOI reference

Uni Bielefeld » Fakultät für Soziologie » SFB 882 » Datenpublikationen » 10.4119/unibi/sfb882.2014.12

**10.4119/unibi/sfb882.2014.12**

**Suggested citation:**

Diewald, Martin; Schunck, Reinhard; Abendroth, Anja-Kristin; Melzer, Silvia Maja; Reimann, Mareike; Pausch, Stephanie (2014): LEEP-B3. SFB 882.  
[doi:10.4119/unibi/sfb882.2014.12](https://doi.org/10.4119/unibi/sfb882.2014.12)

**Creators:**

Diewald, Martin  
Schunck, Reinhard  
Abendroth, Anja-Kristin  
Melzer, Silvia Maja  
Reimann, Mareike  
Pausch, Stephanie

**Title:**

**LEEP-B3**

**Publisher:**

SFB 882

**Year of publication:**

2014

**Subjects:**

Sociology

# III SFB 882

From Heterogeneities to Inequalities

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## Working Paper Example in PUB

Metadata at landing page referenced by the DOI

Uni Bielefeld » Fakultät für So  
/sfb882.2014.12

10.4119/unibi/sfb882

### Suggested citation:

Diewald, Martin; Sch  
Maja; Reimann, Mar  
doi:10.4119/unibi/sfb

### Creators:

Diewald, Martin  
Schunck, Reinhard  
Abendroth, Anja-Kris  
Melzer, Silvia Maja  
Reimann, Mareike  
Pausch, Stephanie

### Title:

LEEP-B3

### Publisher:

SFB 882

### Year of publication:

2014

### Subjects:

Sociology

### Resource type:

Dataset (Stata dataset)

### Size:

10000 kb

### Formats:

application/x-stata-dta

### Version:

1.0

### Rights (license):

Confidential data.

### Abstract:

Der LEEP-B3 Datensatz wurde im Rahmen  
"Wechselwirkungen zwischen Verwirklich  
Privatleben" erstellt. Mit Hilfe des Datens  
Kontexte bei der Genese sozialer Ungleich  
wechselseitiger Beeinflussung von Berufs  
Neben der Befragung von Beschäftigten u  
Verwirklichungschancen in beiden Lebens  
Maßnahmen befragt, die Arbeitnehmern e  
Berufs-, sondern auch im Privatleben erm  
Betrieben als Verhandlungspartner und G  
untersucht. Durch die Verknüpfung der Be  
Arbeitnehmern entsteht ein Datensatz im



## Principle:

- ❑ discipline-independent model for interlinking grey literature with data sets

## Use Cases we consider:

- A. Supplementary material attached to main manuscript
- B. Discrete data publication in PUB
- C. Linking to external data publications

- ❑ Advisory support for thesis publication
  - sensitizing PhD candidates for data publication & data citation used in their thesis publication
  - incorporate **data publication workflows** to thesis submission process
- ❑ Submission and linking process in PUB
  - enter of basic bibliographic information
  - association with
    - registered data publication
    - external resources or
    - reference to software repository, e.g. on GitHub

## Linking Data to Grey Literature (taking thesis as example) Step 1: submission form

### Add new Dissertation

Dissertation ▼

Basic Fields

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ⓘ Make Public

Next »

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## Step 2: Associate related material

### Related Material

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Related material is...

Software



Research Data



**Fluorescence micrograph segmentation Algorithms**

**Test Data for KM and GC Segmentation**



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## Towards increased efficiency and automation in fluorescence micrograph analysis based on hand-labeled data

Held CH (2013)

Bielefeld: Universität Bielefeld.

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URN

urn:nbn:de:hbz:361-26521679

Bielefeld Thesis | English



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☐ Mark/Unmark publication

Author

Held, Christian Hans

Supervisor

Nattkemper, Tim Wilhelm ; Wittenberg, Thomas

Department

**Technische Fakultät**  
**Biodata Mining**

Abstract

In the past decade, automation in fluorescence microscopy has strongly increased, particularly in regards to image acquisition and sample preparation, which results in a huge volume of data. The amount of time required for manual assessment of an experiment is hence mainly determined by the amount of time required for data analysis. In addition, manual data analysis is often a task with poor reproducibility and lack of objectivity. >> more

Keywords

**Watershed ; Graph Cut ; Fluorescence Microscopy ; Image Analysis ; Segmentation ; Fast Marching**

Year

**2013**

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Software

Fluorescence micrograph segmentation Algorithms

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Abstract

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Technische Universität Bielefeld

In the past, the amount of data generated by fluorescence microscopy has increased significantly. This has led to a need for efficient and automated methods for analyzing large amounts of data. In this thesis, we present a novel method for analyzing fluorescence micrographs. The method is based on a deep learning approach and is able to segment and classify objects in the micrographs. The results of the segmentation and classification are used to analyze the micrographs and to extract relevant information. The method is evaluated on a large dataset of fluorescence micrographs and is shown to be highly efficient and accurate. The results of the evaluation show that the method is able to segment and classify objects in the micrographs with a high degree of accuracy. The method is also able to handle large amounts of data and is therefore suitable for analyzing large datasets. The method is implemented in a software package and is available for download. The software package is written in Python and is easy to use. The software package is also able to handle large amounts of data and is therefore suitable for analyzing large datasets. The method is evaluated on a large dataset of fluorescence micrographs and is shown to be highly efficient and accurate. The results of the evaluation show that the method is able to segment and classify objects in the micrographs with a high degree of accuracy. The method is also able to handle large amounts of data and is therefore suitable for analyzing large datasets. The method is implemented in a software package and is available for download. The software package is written in Python and is easy to use. The software package is also able to handle large amounts of data and is therefore suitable for analyzing large datasets.

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DOI

GitHub Repository

## Relations of a PhD Thesis to Associated Material

Resource	Relations	Identifier	Resource Type	Target Example
Related Material	suppl. material	PUB-ID, File-ID	any	any uploaded file
Publications in PUB	is-part-of, earlier- version, cites, is-cited- by...	PUB-ID	(data) publication	PUB landing page
External Data	is-part-of, earlier- version, cites, is-cited- by, uses...	DOI, URL	software, data sets	link to gitHub, thematic repositories

- ❑ Alignment, implementation and promotion of institutional research data policy, technical infrastructure organizational support
- ❑ As next: DFG-funded CONQAIRE project:
  - exploring and implementing new methodologies for managing research
  - catalogue of criteria to verify formal data quality
  - enabling analytical reproducibility

## Find out more about:

- ❑ Research Data Management at Bielefeld University  
<https://data.uni-bielefeld.de/en>
- ❑ Open Access at Bielefeld University  
<http://oa.uni-bielefeld.de/en/index.html>
- ❑ PUB - Publications at Bielefeld University  
<http://pub.uni-bielefeld.de/>

Contact: [data@uni-bielefeld.de](mailto:data@uni-bielefeld.de)

# Resolution on Research Data Management

(adopted by the Rektorat, 12 Nov 2013)

- to take advantage of university's **advisory services** for research data management
- to **publish** research data through registered research data repositories or through the university's research data repository;  
Publication should take the interests of persons and companies into account and be based on binding licensing conditions.