

University of Luxembourg

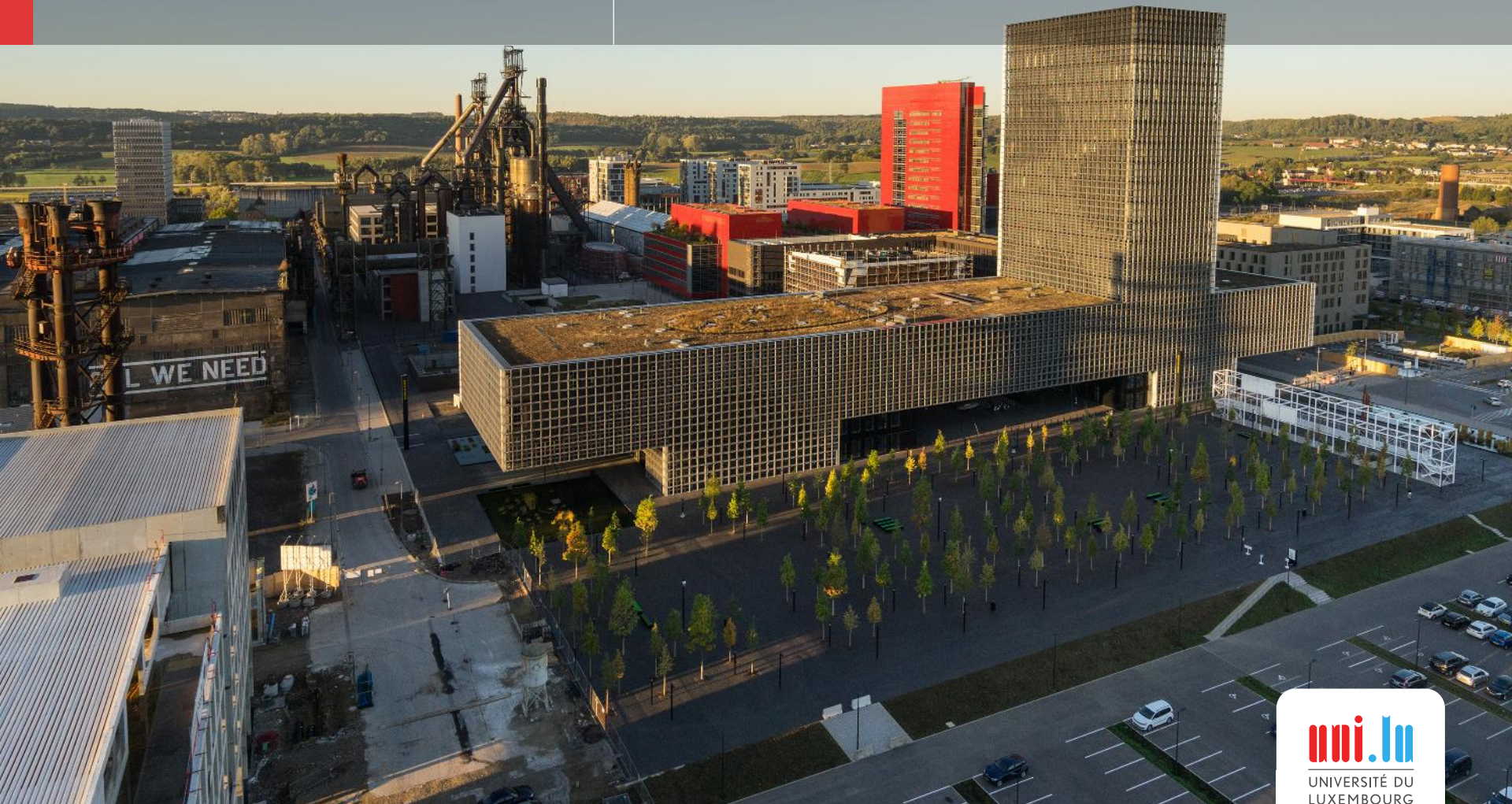
Multilingual. Personalised. Connected.

# Persistent Identifiers

What? Why? How?

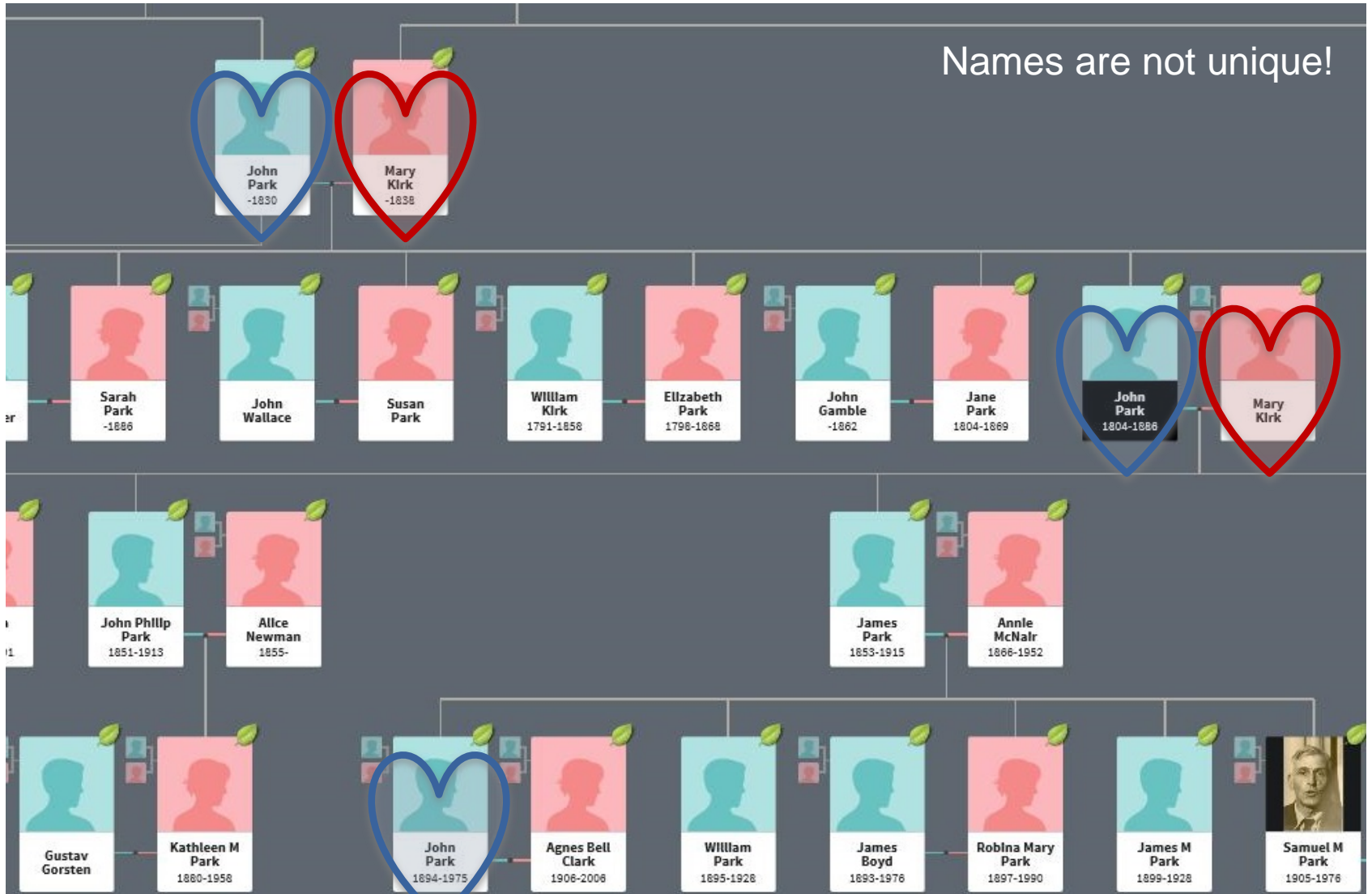
Beth PARK

Open Science Forum – November 2018



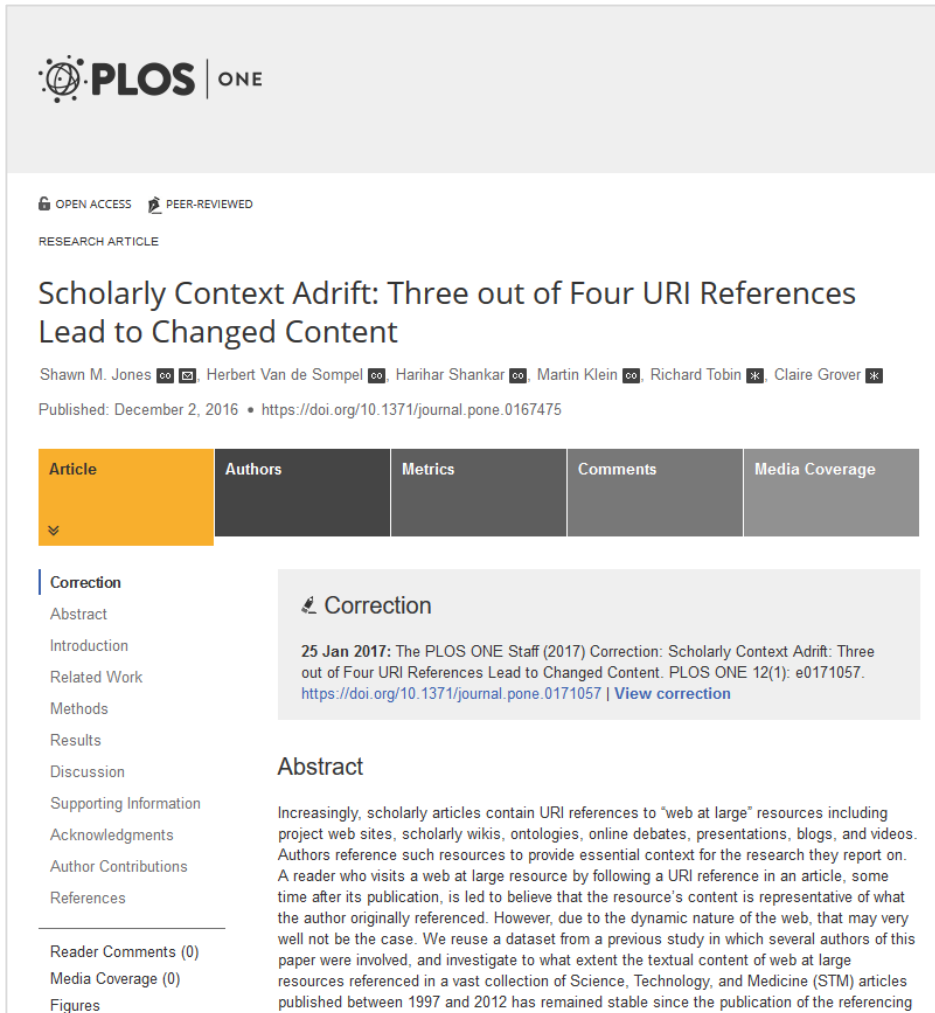
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# What problem are we trying to solve?



# What problem are we trying to solve?

## Information changes over time















**PLOS** ONE


OPEN ACCESS PEER-REVIEWED

RESEARCH ARTICLE

### Scholarly Context Adrift: Three out of Four URI References Lead to Changed Content

Shawn M. Jones  , Herbert Van de Sompel  , Harihar Shankar  , Martin Klein  , Richard Tobin  , Claire Grover  

Published: December 2, 2016 • <https://doi.org/10.1371/journal.pone.0167475>

Article	Authors	Metrics	Comments	Media Coverage
				

**Correction**

- Abstract
- Introduction
- Related Work
- Methods
- Results
- Discussion
- Supporting Information
- Acknowledgments
- Author Contributions
- References

Reader Comments (0)  
Media Coverage (0)  
Figures

#### Correction

**25 Jan 2017:** The PLOS ONE Staff (2017) Correction: Scholarly Context Adrift: Three out of Four URI References Lead to Changed Content. PLOS ONE 12(1): e0171057. <https://doi.org/10.1371/journal.pone.0171057> | [View correction](#)

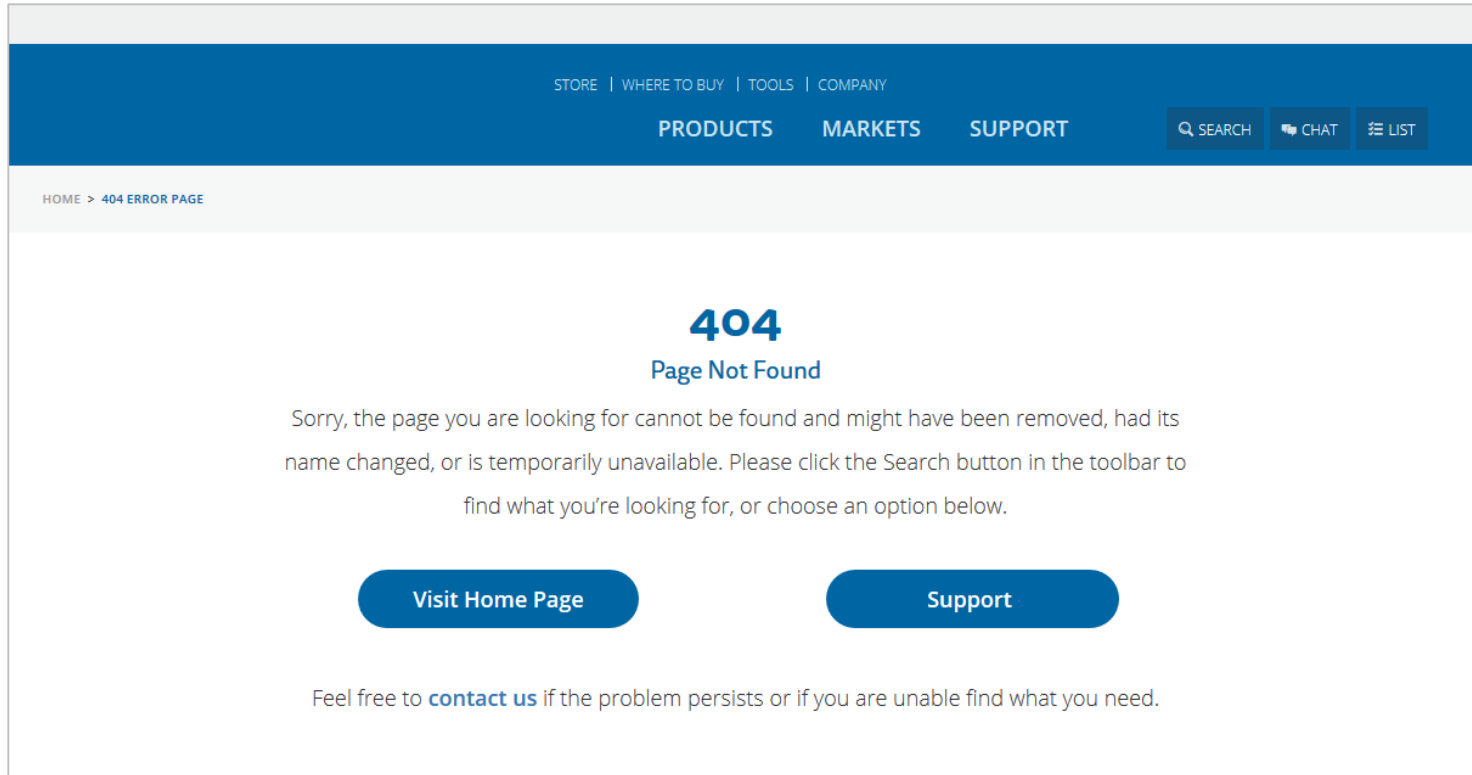
#### Abstract

Increasingly, scholarly articles contain URI references to "web at large" resources including project web sites, scholarly wikis, ontologies, online debates, presentations, blogs, and videos. Authors reference such resources to provide essential context for the research they report on. A reader who visits a web at large resource by following a URI reference in an article, some time after its publication, is led to believe that the resource's content is representative of what the author originally referenced. However, due to the dynamic nature of the web, that may very well not be the case. We reuse a dataset from a previous study in which several authors of this paper were involved, and investigate to what extent the textual content of web at large resources referenced in a vast collection of Science, Technology, and Medicine (STM) articles published between 1997 and 2012 has remained stable since the publication of the referencing

<https://doi.org/10.1371/journal.pone.0167475>

# What problem are we trying to solve?

or disappears all together



STORE | WHERE TO BUY | TOOLS | COMPANY

PRODUCTS MARKETS SUPPORT

SEARCH CHAT LIST

HOME > 404 ERROR PAGE

## 404

### Page Not Found

Sorry, the page you are looking for cannot be found and might have been removed, had its name changed, or is temporarily unavailable. Please click the Search button in the toolbar to find what you're looking for, or choose an option below.

[Visit Home Page](#) [Support](#)

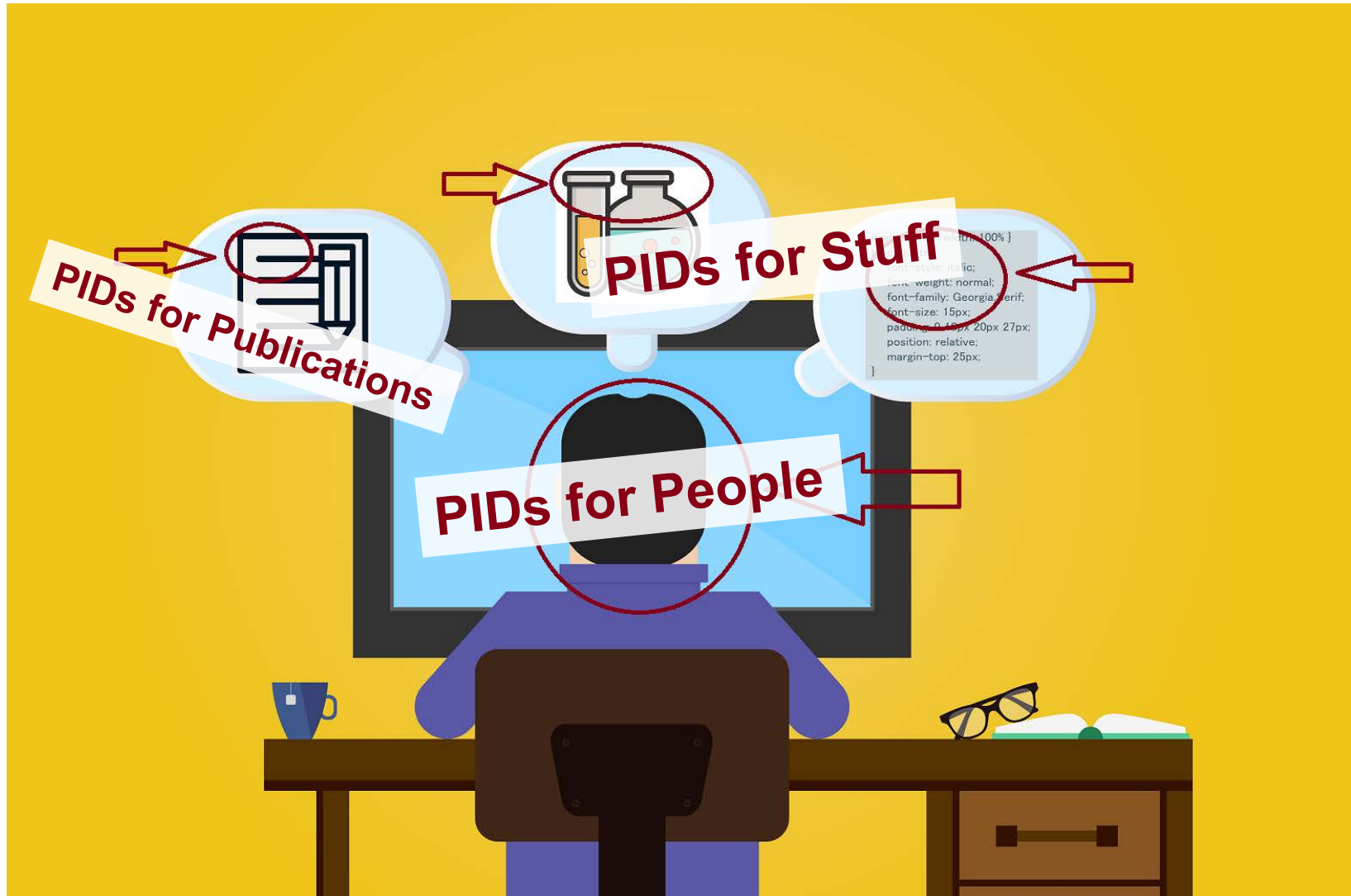
Feel free to [contact us](#) if the problem persists or if you are unable find what you need.

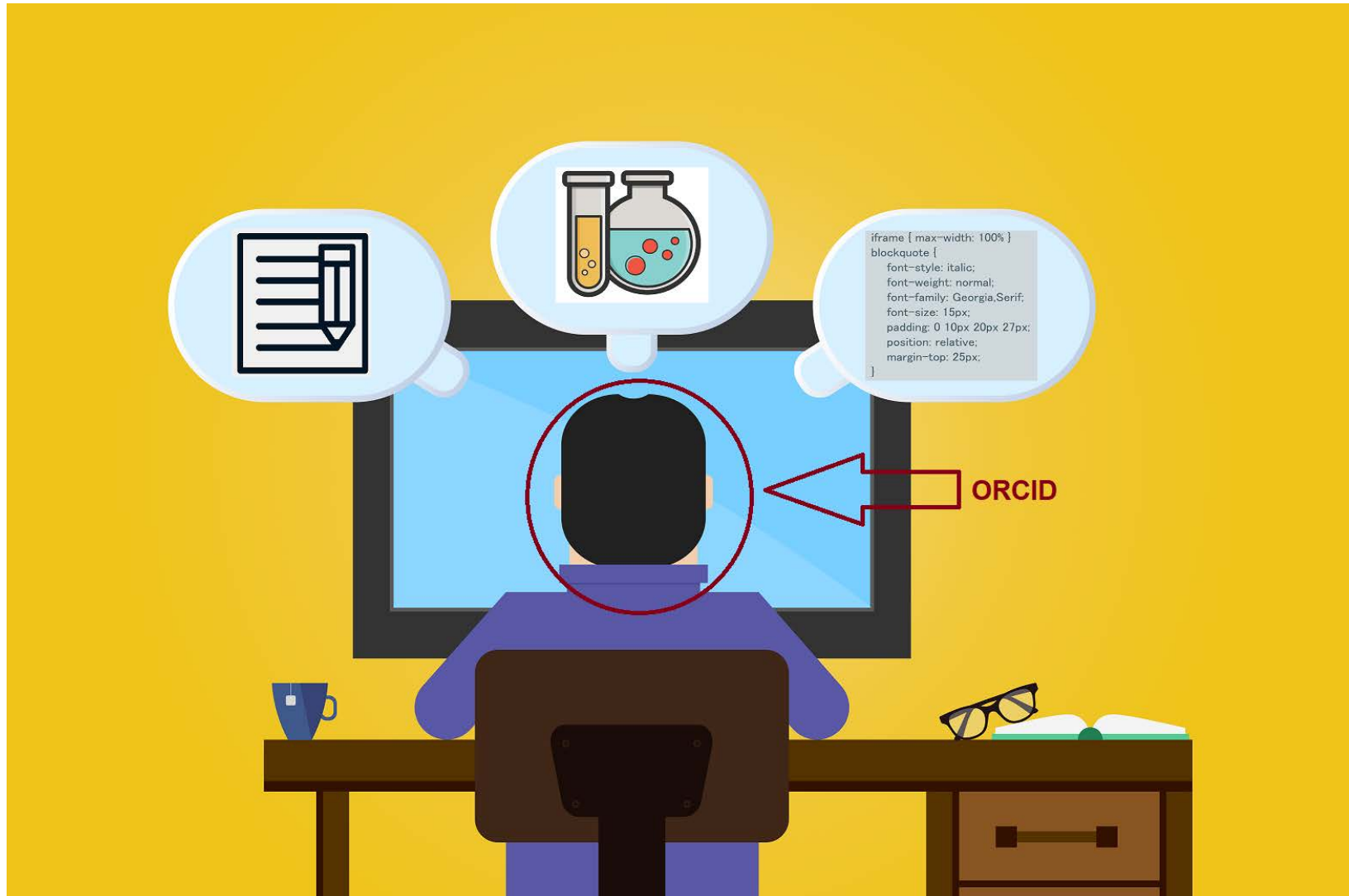
# What problem are we trying to solve?

- You and your work must be properly identified:
  - **Persistent:** now and in the future;
  - **Unique:** no mismatches;
  - **Actionable:** links work best;
  - **Machine-readable:** “DJL789354DKS”.

And the answer is ....


**PERSISTENT IDENTIFIERS or PIDs**





Emma Schymanski

ORCID ID

 <https://orcid.org/0000-0001-6868-8145>

 Print view?

Works (35 of 35)

Sort

Dark matter in host-microbiome metabolomics: Tackling the unknowns—A review

[orcid.org/0000-0001-6868-8145](https://orcid.org/0000-0001-6868-8145)

DOI: [10.1016/j.jaca.2017.12.034](https://doi.org/10.1016/j.jaca.2017.12.034)

Source: Crossref

Preferred source

Critical Assessment of Small Molecule Identification 2016: automated methods

Journal of Cheminformatics

2017-12 | journal-article

DOI: [10.1186/s13321-017-0207-1](https://doi.org/10.1186/s13321-017-0207-1)

Source: Crossref

Preferred source

Nontarget Screening with High Resolution Mass Spectrometry in the Environment: Ready to Go?

Environmental Science & Technology

2017-10-17 | journal-article

DOI: [10.1021/acs.est.7b02184](https://doi.org/10.1021/acs.est.7b02184)

Source: Crossref

Preferred source

Open Science for Identifying “Known Unknown” Chemicals

Environmental Science & Technology

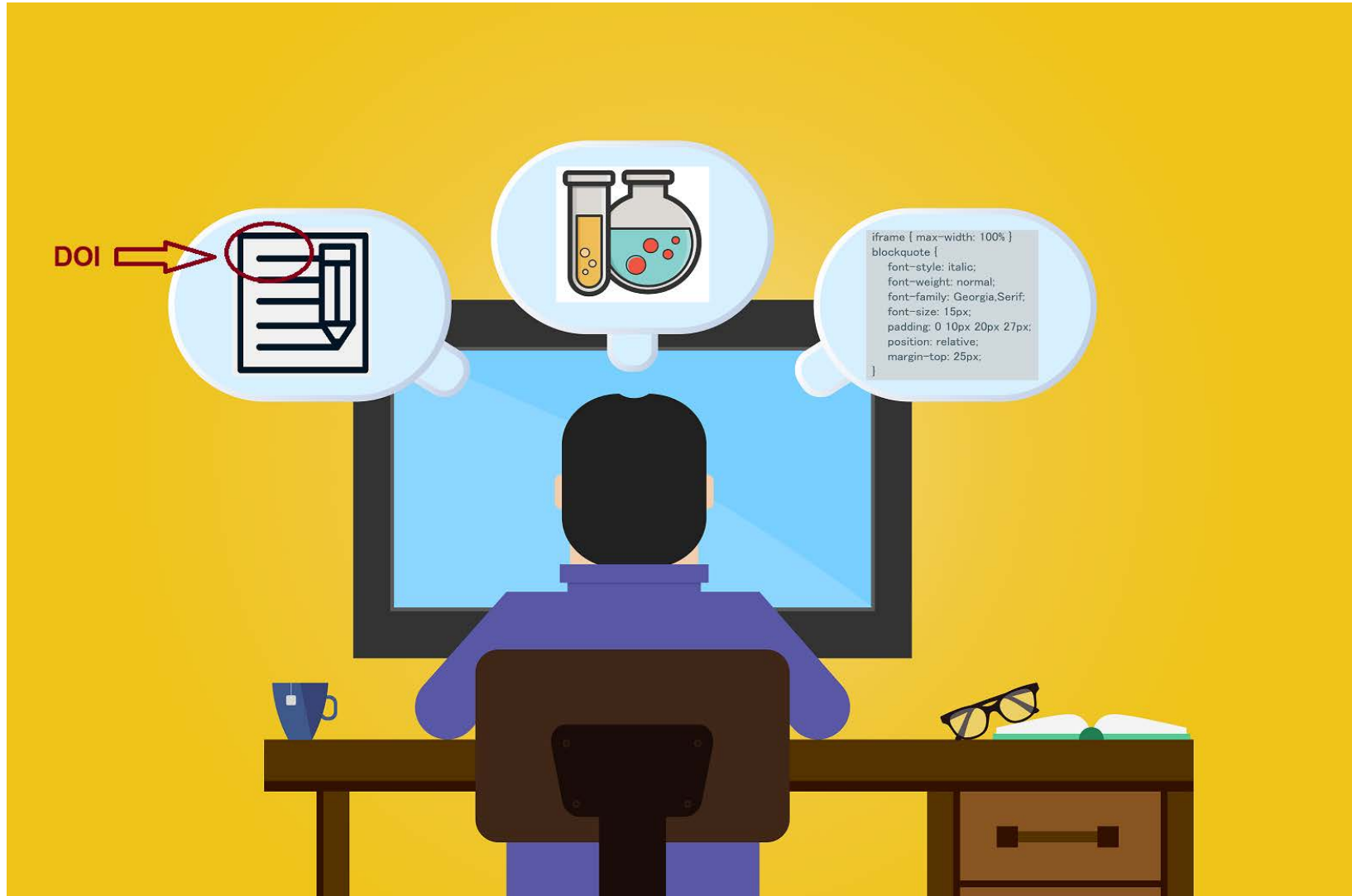
2017-05-16 | journal-article

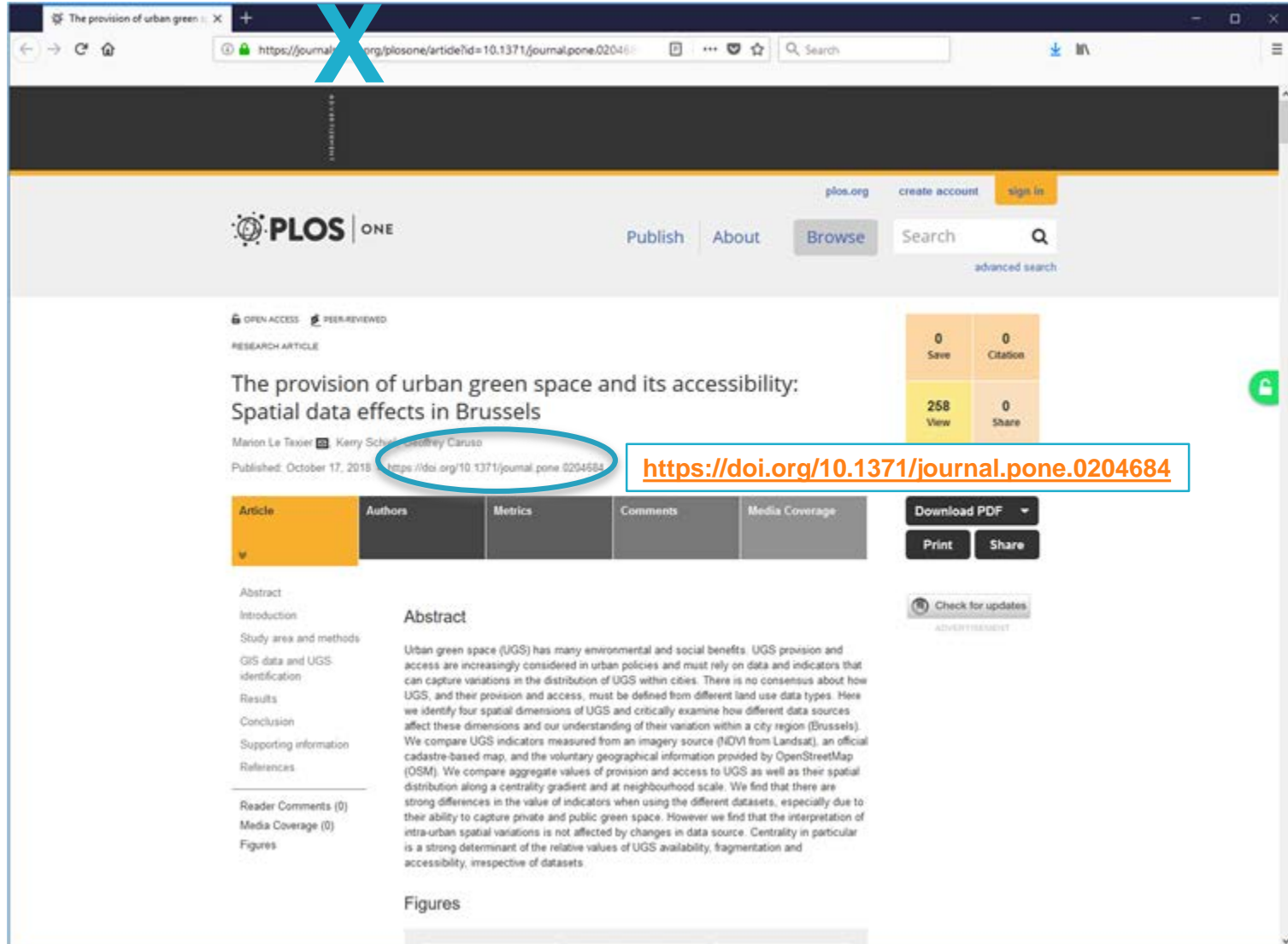
DOI: [10.1021/acs.est.7b01908](https://doi.org/10.1021/acs.est.7b01908)

Source: Crossref

Preferred source







The screenshot shows a web browser displaying a PLOS ONE article. A large blue 'X' is drawn over the browser's address bar, which contains the URL <https://journal.plosone.org/plosone/article?id=10.1371/journal.pone.0204684>. A blue oval highlights the DOI link <https://doi.org/10.1371/journal.pone.0204684> in the article's metadata. A red box highlights the same DOI link in a separate text box on the right. The article title is "The provision of urban green space and its accessibility: Spatial data effects in Brussels". The authors listed are Marion Le Taxer, Kerry Schmitt, and Geoffrey Caruso. The article is categorized as "RESEARCH ARTICLE" and "OPEN ACCESS". The abstract text is visible below the article information.

Article | Authors | Metrics | Comments | Media Coverage

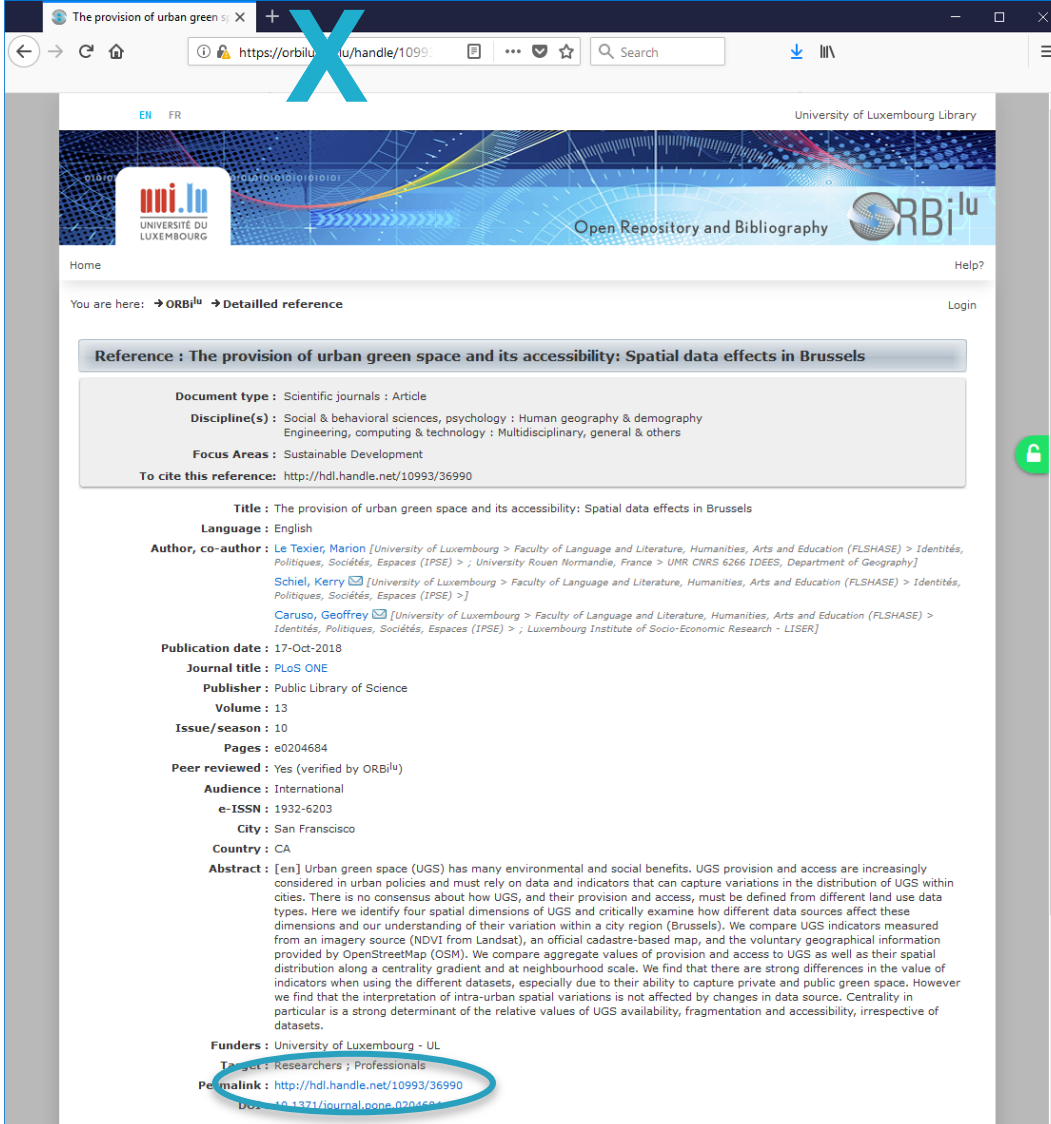
Abstract

Urban green space (UGS) has many environmental and social benefits. UGS provision and access are increasingly considered in urban policies and must rely on data and indicators that can capture variations in the distribution of UGS within cities. There is no consensus about how UGS, and their provision and access, must be defined from different land use data types. Here we identify four spatial dimensions of UGS and critically examine how different data sources affect these dimensions and our understanding of their variation within a city region (Brussels). We compare UGS indicators measured from an imagery source (iDVI from Landsat), an official cadastre-based map, and the voluntary geographical information provided by OpenStreetMap (OSM). We compare aggregate values of provision and access to UGS as well as their spatial distribution along a centrality gradient and at neighbourhood scale. We find that there are strong differences in the value of indicators when using the different datasets, especially due to their ability to capture private and public green space. However we find that the interpretation of intra-urban spatial variations is not affected by changes in data source. Centrality in particular is a strong determinant of the relative values of UGS availability, fragmentation and accessibility, irrespective of datasets.

Figures

# PIDs for Publications

Where's the PID?



The provision of urban green space and its accessibility: Spatial data effects in Brussels

EN FR University of Luxembourg Library

Open Repository and Bibliography ORBi.lu

Home Help?

You are here: → ORBi.lu → Detailed reference Login

**Reference : The provision of urban green space and its accessibility: Spatial data effects in Brussels**

**Document type :** Scientific journals : Article

**Discipline(s) :** Social & behavioral sciences, psychology : Human geography & demography  
Engineering, computing & technology : Multidisciplinary, general & others

**Focus Areas :** Sustainable Development

**To cite this reference :** <http://hdl.handle.net/10993/36990>

**Title :** The provision of urban green space and its accessibility: Spatial data effects in Brussels

**Language :** English

**Author, co-author :** [Le Texier, Marion](#) [University of Luxembourg > Faculty of Language and Literature, Humanities, Arts and Education (FLSHASE) > Identités, Politiques, Sociétés, Espaces (IPSE) > ; University Rouen Normandie, France > UMR CNRS 6266 IDEES, Department of Geography]  
[Schiel, Kerry](#) [University of Luxembourg > Faculty of Language and Literature, Humanities, Arts and Education (FLSHASE) > Identités, Politiques, Sociétés, Espaces (IPSE) > ]  
[Caruso, Geoffrey](#) [University of Luxembourg > Faculty of Language and Literature, Humanities, Arts and Education (FLSHASE) > Identités, Politiques, Sociétés, Espaces (IPSE) > ; Luxembourg Institute of Socio-Economic Research - LISER]

**Publication date :** 17-Oct-2018

**Journal title :** [PLoS ONE](#)

**Publisher :** Public Library of Science

**Volume :** 13

**Issue/season :** 10

**Pages :** e0204684

**Peer reviewed :** Yes (verified by ORBi.lu)

**Audience :** International

**e-ISSN :** 1932-6203

**City :** San Francisco

**Country :** CA

**Abstract :** [en] Urban green space (UGS) has many environmental and social benefits. UGS provision and access are increasingly considered in urban policies and must rely on data and indicators that can capture variations in the distribution of UGS within cities. There is no consensus about how UGS, and their provision and access, must be defined from different land use data types. Here we identify four spatial dimensions of UGS and critically examine how different data sources affect these dimensions and our understanding of their variation within a city region (Brussels). We compare UGS indicators measured from an imagery source (NDVI from Landsat), an official cadastre-based map, and the voluntary geographical information provided by OpenStreetMap (OSM). We compare aggregate values of provision and access to UGS as well as their spatial distribution along a centrality gradient and at neighbourhood scale. We find that there are strong differences in the value of indicators when using the different datasets, especially due to their ability to capture private and public green space. However we find that the interpretation of intra-urban spatial variations is not affected by changes in data source. Centrality in particular is a strong determinant of the relative values of UGS availability, fragmentation and accessibility, irrespective of datasets.

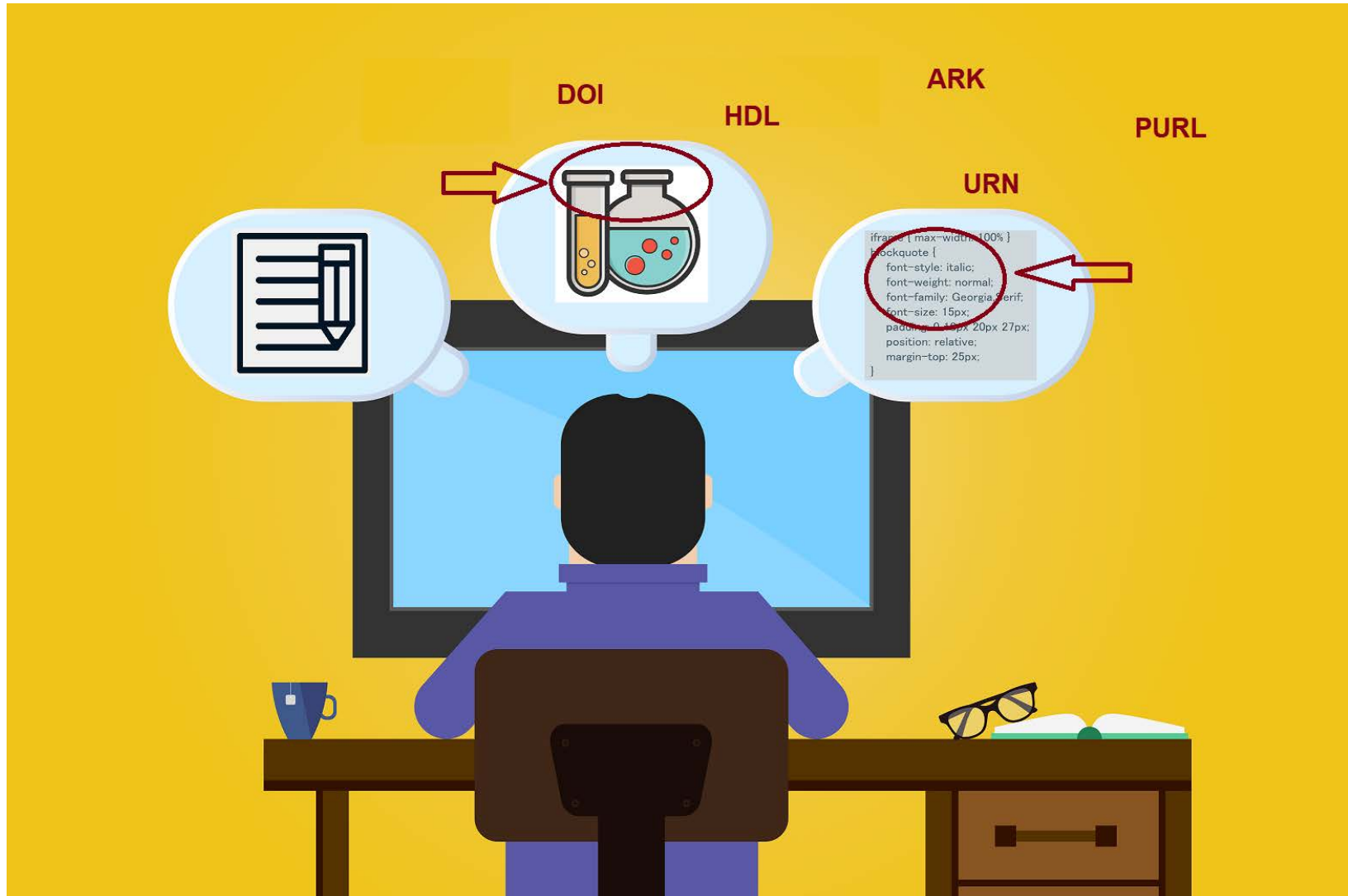
**Funders :** University of Luxembourg - UL

**Target :** Researchers ; Professionals

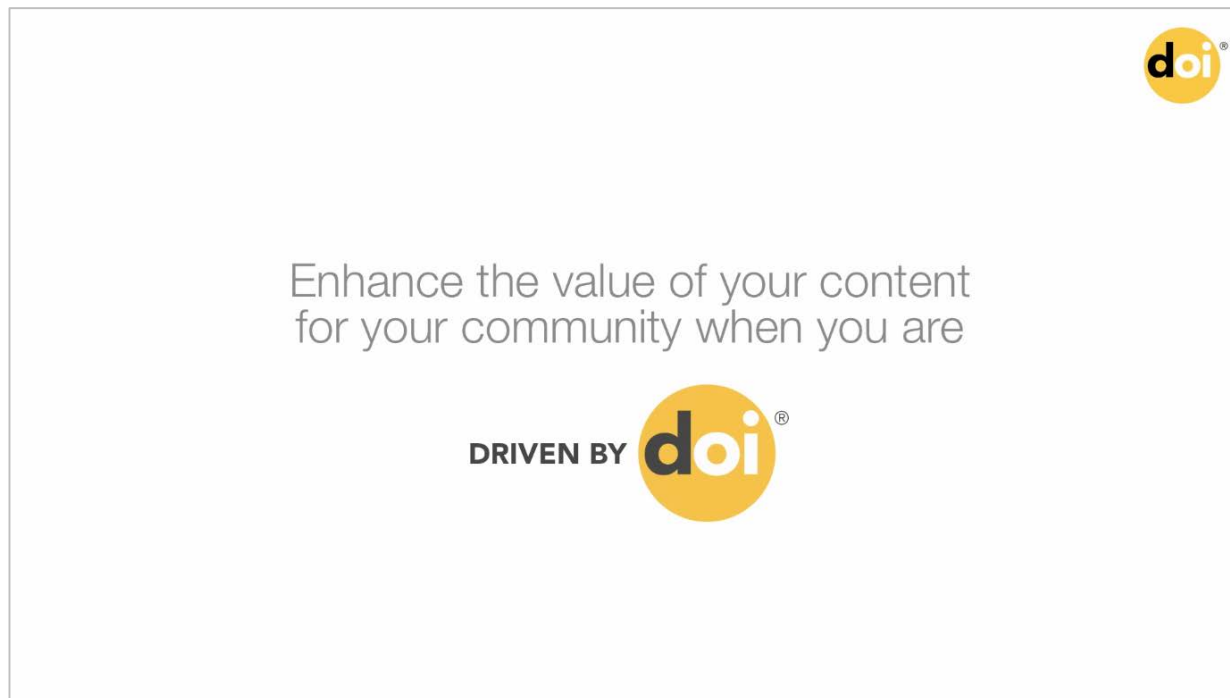
**Permalink :** <http://hdl.handle.net/10993/36990>

**DOI :** [10.1371/journal.pone.0204684](https://doi.org/10.1371/journal.pone.0204684)

# PIDs for Stuff – Data, Source Code, ...



- **PIDS for Scientific Articles, Papers, etc.**
  - DOI = Digital Object Identifier;
  - Can be used for datasets too;
- TIP: Use a DOI shortener: <http://shortdoi.org/>



Learn more at [https://www.doi.org/driven\\_by\\_DOI.html](https://www.doi.org/driven_by_DOI.html)

- **If you build a management system:**
  - Handle (HDL);
  - DOIs are a subset of Handles;
  - ORBi<sup>lu</sup> uses Handles: <http://hdl.handle.net/10993/36990>

## ■ Other Options:

### ■ Archival Resource Key (ARK)

- ARK is an identifier scheme conceived by the California Digital Library (CDL), aiming to identify objects in a persistent way.

### ■ Persistent Uniform Resource Locator (PURL)

- PURLs are URLs is a permanent web address which contains the command to redirect to another page, one which can change over time.

### ■ Universal Resource Name (URN)

- URNs are persistent, location-independent identifiers, allowing the simple mapping of namespaces into a single URN namespace.

Learn more at

<https://www.dpconline.org/handbook/technical-solutions-and-tools/persistent-identifiers>

and

<https://www.ands.org.au/guides/persistent-identifiers-awareness>

- Give yourself a PID;
- Give your stuff PIDs;
- Use PIDs whenever possible;
- Web addresses don't last;
- Machines understand PIDs.