## **Lars Holm Nielsen**

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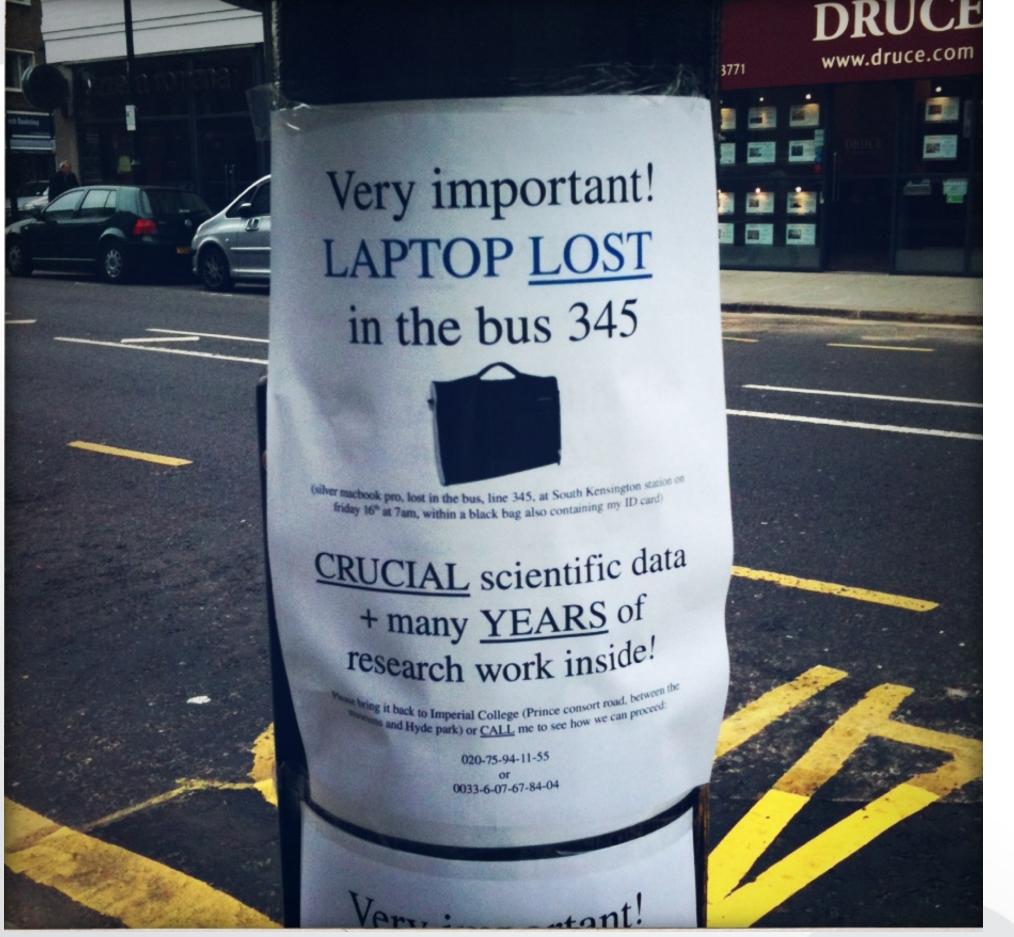








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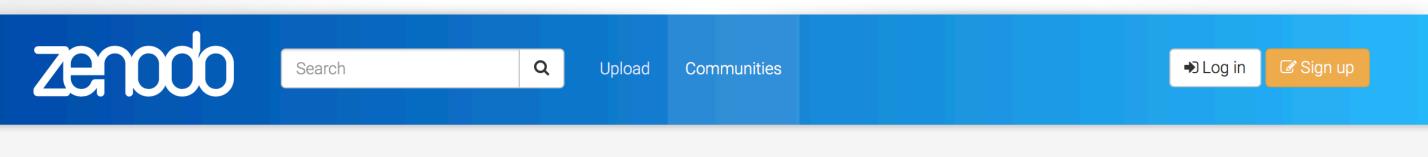
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April 11, 2017 Dataset Restricted Access

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Brovelli Sebastien; Dorogi Yves; Feiner Adam-Scott; Golay Philippe; Stiefel Friedrich; Bonsack Charles; Michaud Laurent;

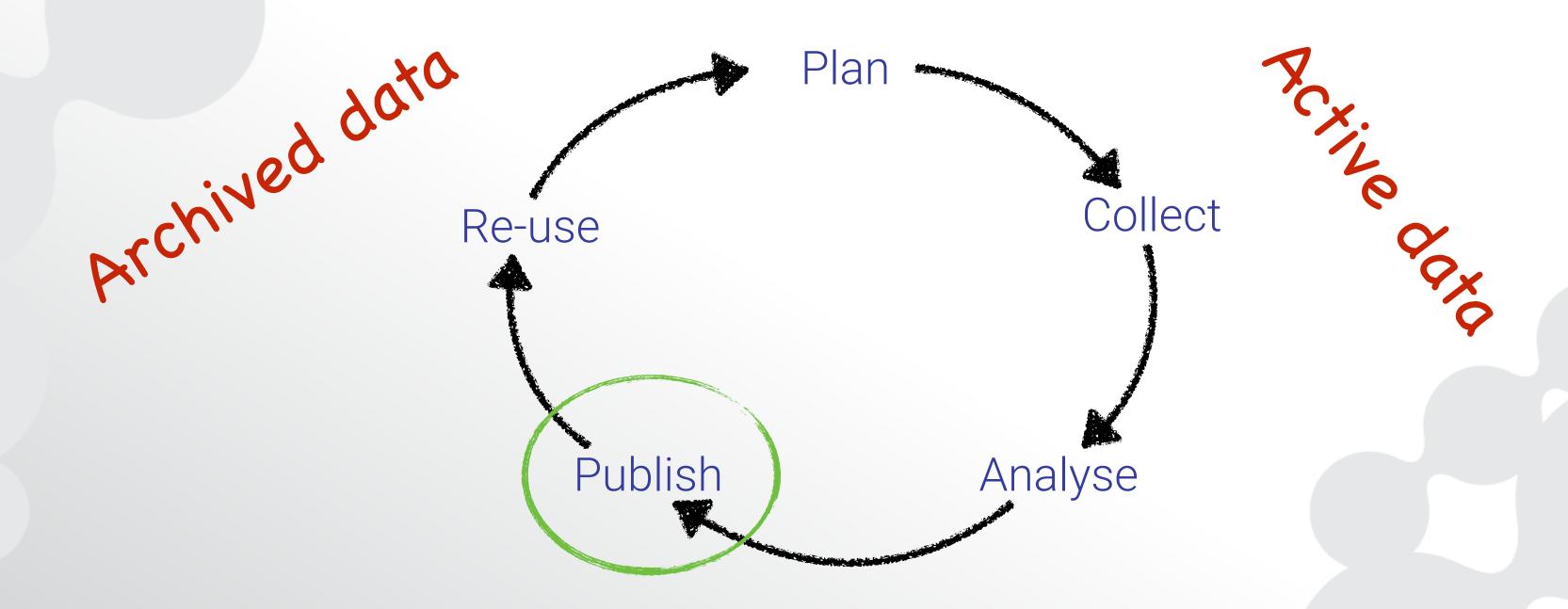
This dataset is related to "Multifaceted intervention for patients admitted to an emergency unit for suicide attempt: an exploratory study" (Brovelli S., Dorogi Y., Feiner A.-S., Golay P., Stiefel F., Bonsack C. & Michaud L.)



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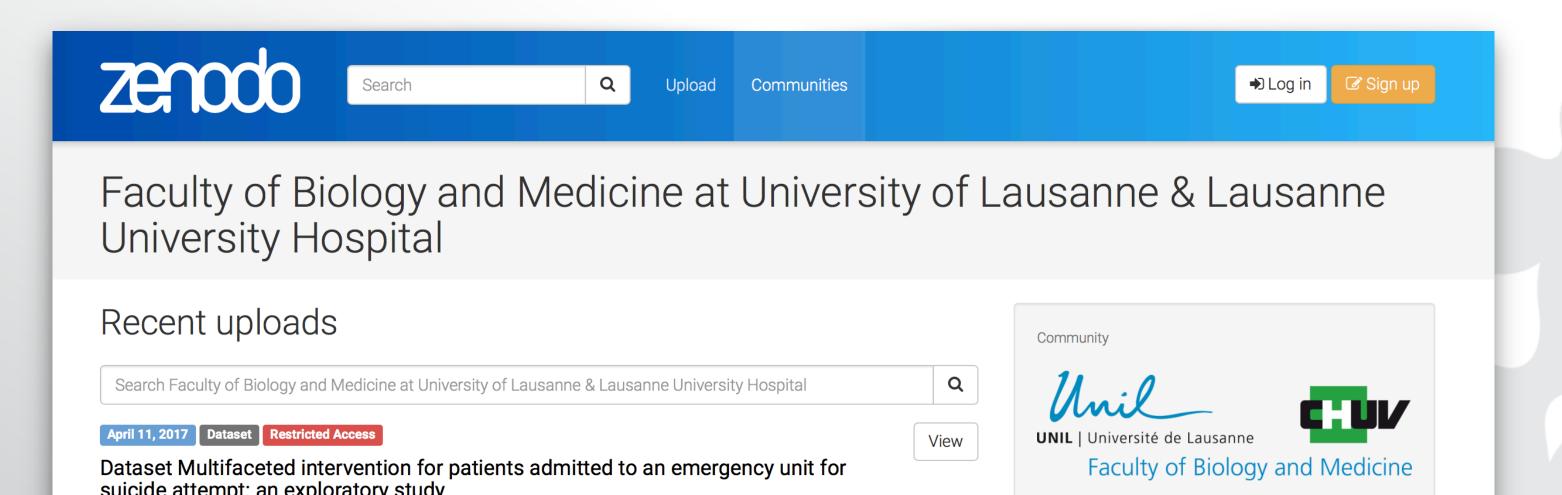
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RESEARCH ARTICLE

## Development of a duplex real-time PCR for the letection of Rickettsia spp. and typhus group rickettsia in linical samples

Stefano Giulieri<sup>1</sup>, Katia Jaton<sup>2</sup>, Alain Cometta<sup>3</sup>, Laurence T. Trellu<sup>4</sup> & Gilbert Greub<sup>1,2</sup>

<sup>1</sup>Infectious Diseases Service, Centre Hospitalier Universitaire Vaudois, University of Lausanne, Lausanne, Switzerland; <sup>2</sup>Institute of Microbiology, Centre Hospitalier Universitaire Vaudois, University of Lausanne, Lausanne, Switzerland; <sup>3</sup>Service of Internal Medicine, Yverdon Hospital, Yverdon, Switzerland; and <sup>4</sup>Service of Dermatology, University Hospital, Geneva, Switzerland

Correspondence: Gilbert Greub, Institute of Microbiology, Centre Hospitalier Universitaire Vaudois and University of Lausanne, Rue du Bugnon 46, CH-1011 Lausanne, Switzerland. Tel.: +41 21 314 49 79; fax: +41 21 314 40 60; e-mail: Gilbert.Greub@chuv.ch

Received 15 August 2011; revised 31 October 2011; accepted 11 November 2011. Final version published online 12 December

DOI: 10.1111/j.1574-695X.2011.00910.x

EUITOI: AGEITIGE GINGS

#### Keyword

rickettsia; polymerase chain reaction; spotted fever; typhus.

#### Abstract

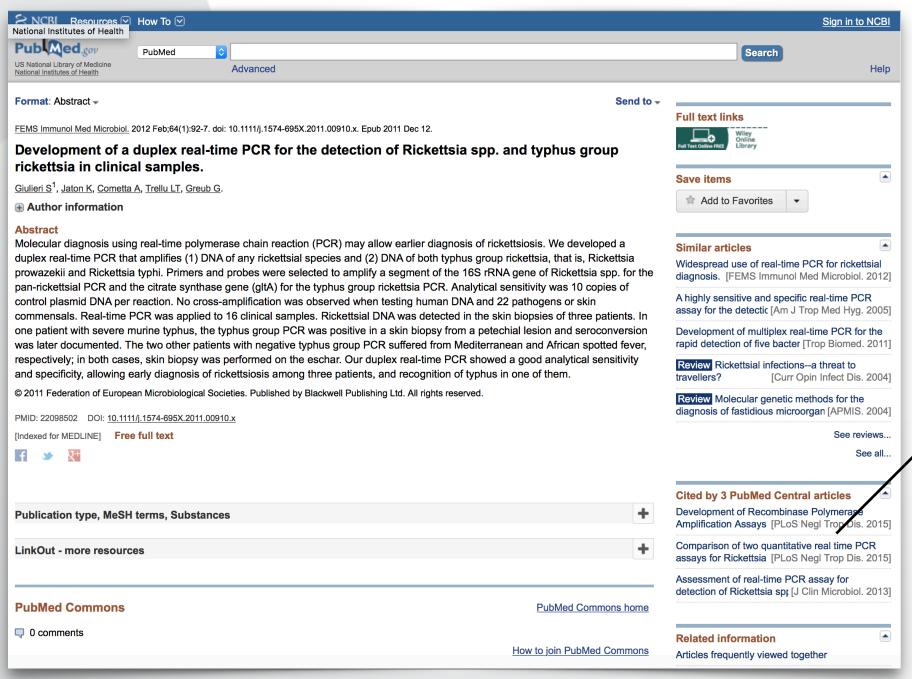
Molecular diagnosis sing real-time polymerase chain reaction (PCR) may allow earlier diagnosis rickettsiosis. We developed a duplex real-time PCR that amplifies (1) D) A of any rickettsial species and (2) DNA of both typhus group rickettsia, thans, Rickettsia prowazekii and Rickettsia typhi. Primers and probes were selected to amplify a segment of the 16S rRNA gene of Rickettsia spp. for the pan-kettsial PCR and the citrate synthase gene (gltA) for the typhus group kettsia PCR. Analytical sensitivity was 10 copies of control plasmid DNA per reaction. No cross-amplification was observed when testing human and 22 pathogens or skin commensals. Real-time PCR was applied to 1 sacal samples. Rickettoial DNI streeted in the skin biopsies of three patients. In one patient with severe murine typhus, the typhus group PCR was stive in a skin biopsy from a petechial lesion and seroconversion was later documented. The two other patients with negative typhus group PCR suffered from Mediterranean and African spotted fever, respectively; in both cases, skin biopsy was performed on the eschar. Our duplex real-time PCR showed a good analytical sensitivity and specificity, allowing early diagnosis of rickettsiosis among three patients, and recognition of typhus in one of them.

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### References

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- 2. Bavaro MF, Kelly DJ, Dasch DA, Hale BR, Olson P (2005) History of U. S. Military Contributions to the study of Rickettsial Diseases. Military Medicine 170:49–60. PMID: 15916283
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- Prakash JAJ, Reller IVIE, Barat M, Dumler JS (2000) Assessment of a quantitative multiplex 5' nuclease real-time PCR for spotted fever and typhus group rickettsioses and *Orientia tsutsugamushi*. Clin Microbiol Infect Suppl. 2:292–3.
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## Cited by 3 PubMed Central articles



Development of Recombinase Polymerase Amplification Assays [PLoS Negl Trop Dis. 2015]

Comparison of two quantitative real time PCR assays for Rickettsia [PLoS Negl Trop Dis. 2015]

Assessment of real-time PCR assay for detection of Rickettsia spr [J Clin Microbiol. 2013]

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Data Principles



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Dataset Multifaceted intervention for patients admitted to an emergency unit for suicide attempt: an exploratory study

Brovelli Sebastien; Dorogi Yves; Feiner Adam-Scott; Golay Philippe; Stiefel Friedrich; Bonsack Charles; Michaud Laurent;

This dataset is related to "Multifaceted intervention for patients admitted to an emergency unit for suicide attempt: an exploratory study" (Brovelli S., Dorogi Y., Feiner A.-S., Golay P., Stiefel F., Bonsack C. & Michaud L.)

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## Virtual Machine and dataset for Multi-channel MRI segmentation of eye structures and tumors using patient-specific features

Carlos Ciller; Sandro De Zanet; Konstantinos Kamnitsas; Philippe Maeder; Ben Glocker; Francis L. Munier; Daniel Rueckert; Jean-Philippe Thiran; Meritxell Bach Cuadra; Raphael Sznitman;

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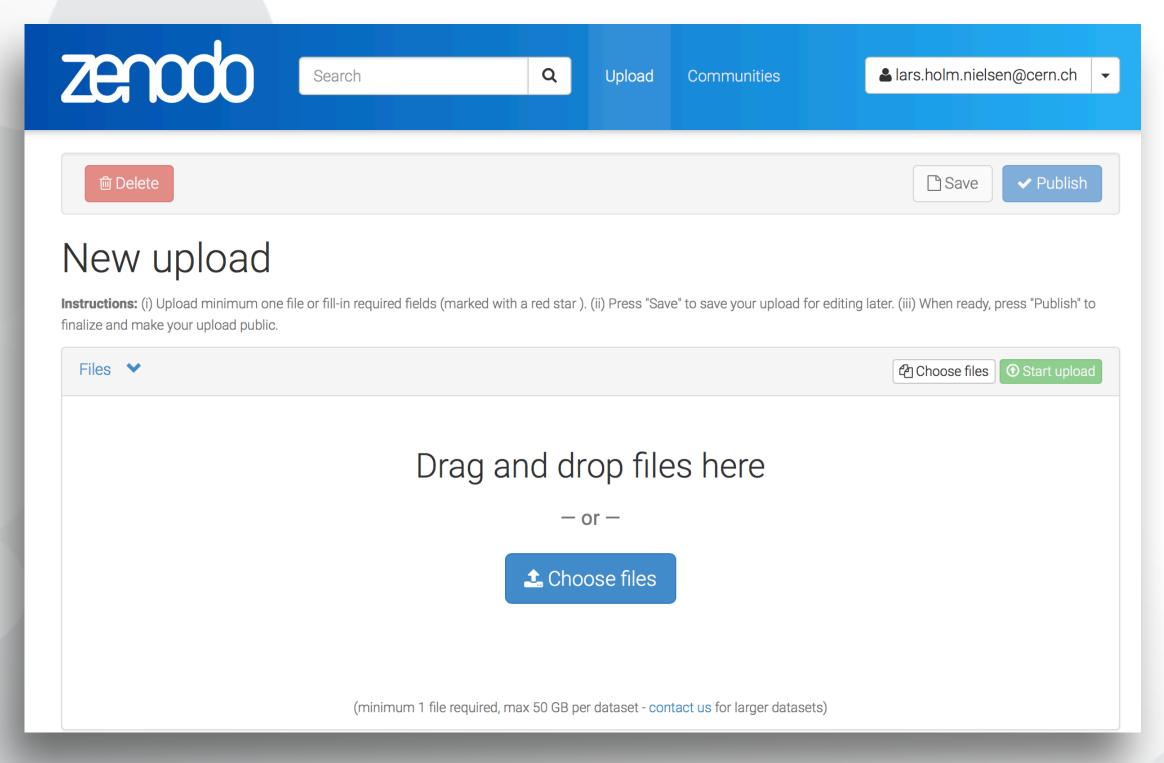
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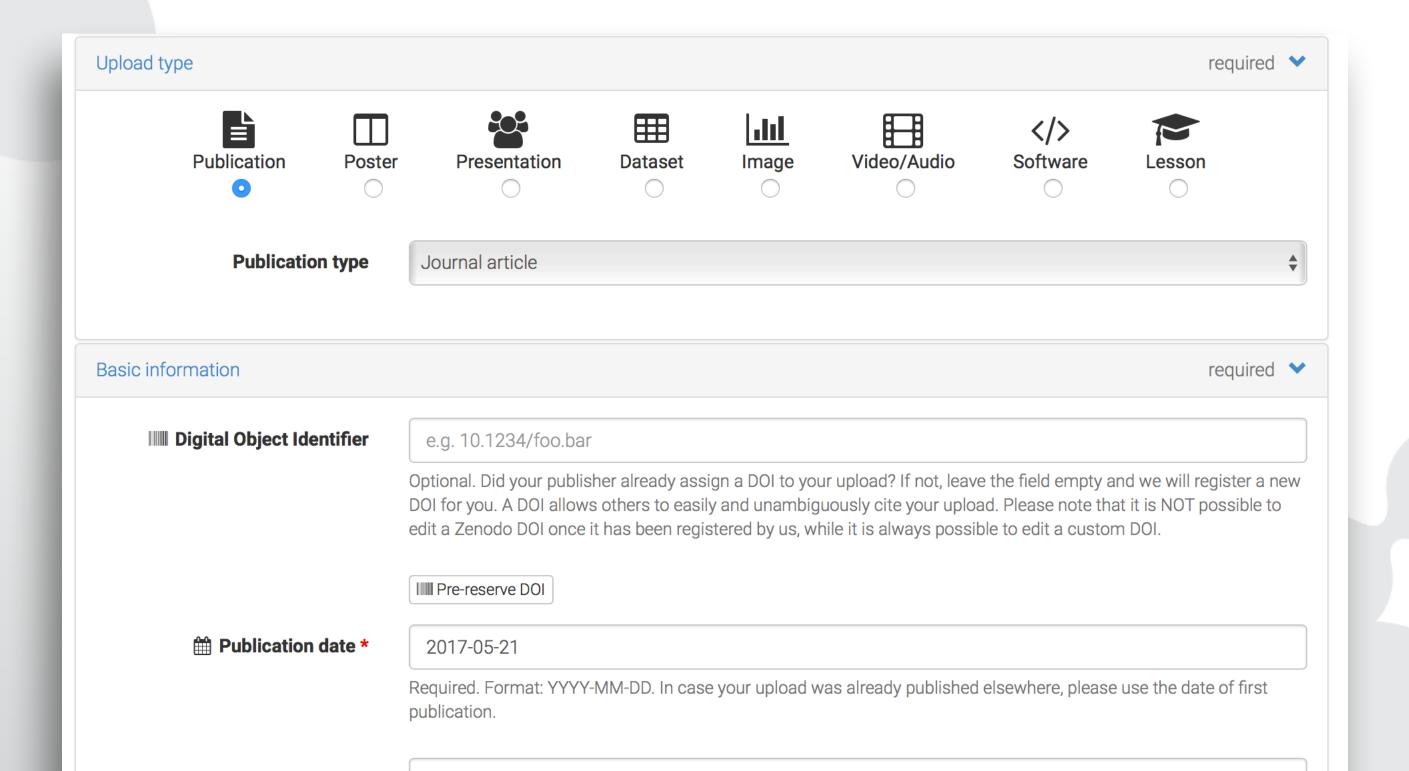
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Virtual Machine and dataset for Multichannel MRI segmentation of eye structures and tumors using patientspecific features

Carlos Ciller; Sandro De Zanet; Konstantinos Kamnitsas; Philippe Maeder; Ben Glocker; Francis L. Munier; Daniel Rueckert; Jean-Philippe Thiran; Meritxell Bach Cuadra; Raphael Sznitman

% Plos One Journal - http://dx.doi.org/10.1371/journal.pone.0173900

% "Multi-channel MRI segmentation of eye structures and tumors using

% patient-specific features"

% C. Ciller, S.I. De Zanet, K. Kamnitsas, P. Maeder, B. Glocker,

% F.L. Munier, D. Rueckert, J-P. Thiran, M.B. Cuadra\* and R. Sznitman\*

\*Equally contributed authors

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The content of these folders include all the necessary steps for computing the automatic segmentation of eye structures and tumors in 3D MRI. Upon acceptance of this manuscript, all the experiments and a working

## **Publication date:**

March 20, 2017

DOI:

DOI 10.5281/zenodo.400920

## Keyword(s):

**Ocular tumors** 

**Magnetic Resonance Imaging** 

Image segmentation Eye modelling

### **Related identifiers:**

Part of:

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Supplement to:

10.1371/journal.pone.0173900

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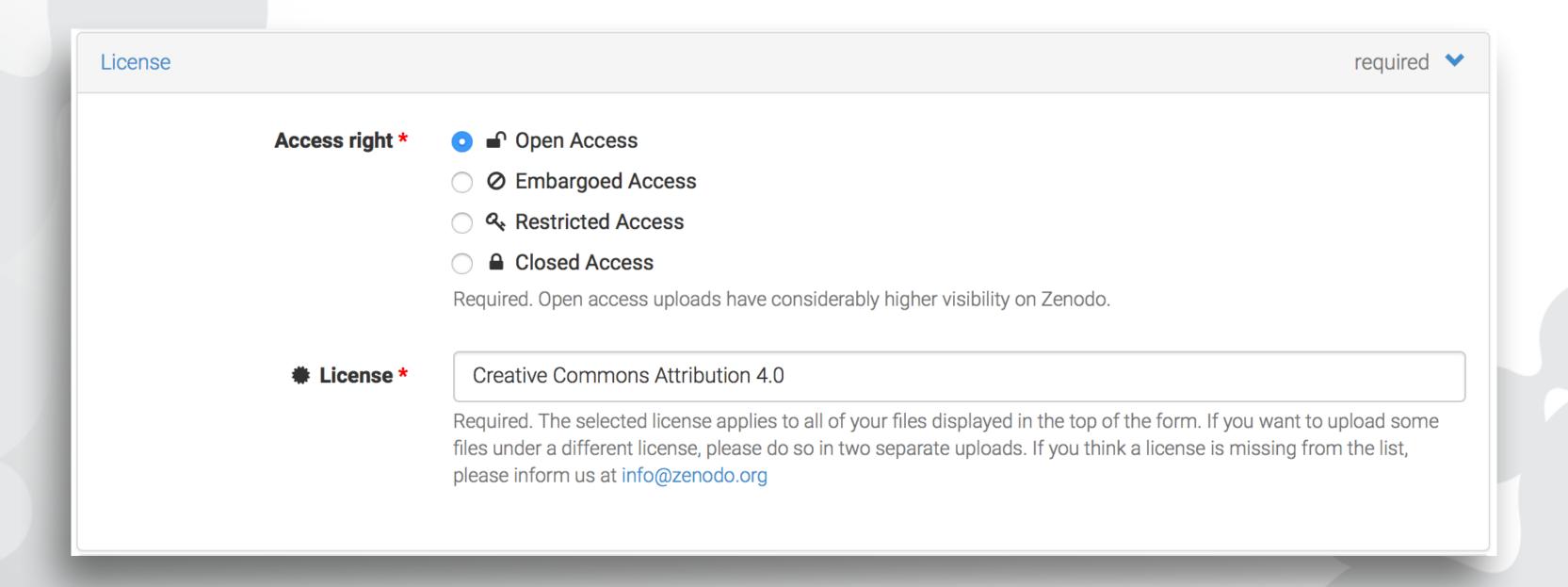
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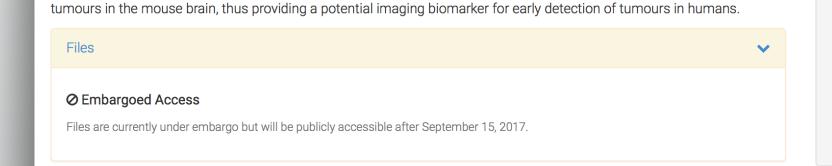
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Glioma models have provided important insights into human brain cancers. Among the investigative tools, MRI has allowed their characterization and diagnosis. In this study, we investigated whether diffusion MRI might be a useful technique for early detection and characterization of slow-growing and diffuse infiltrative gliomas, such as the proposed new models, LN-2669GS and LN-2540GS glioma sphere xenografts. Tumours grown in these models are not visible in conventional T2 weighted or contrast-enhanced T1 -weighted MRI at 14.1 T. Diffusion-weighted imaging and diffusion tensor imaging protocols were optimized for contrast by exploring long diffusion times sensitive for probing the microstructural alterations induced in the normal brain by the slow infiltration of glioma sphere cells. Compared with T2 -weighted images, tumours were properly identified in their early stage of growth using diffusion MRI, and confirmed by localized proton MR spectroscopy as well as immunohistochemistry. The first evidence of tumour presence was revealed for both glioma sphere xenograft models three months after tumour implantation, while no necrosis, oedema or haemorrhage were detected either by MRI or by histology. Moreover, different values of diffusion indices, such as mean diffusivity and fractional anisotropy, were obtained in tumours grown from LN-2669GS and LN-2540GS glioma sphere lines. These observations highlighted diverse tumour microstructures for both xenograft models, which were reflected in histology. This study demonstrates the ability of diffusion MRI techniques to identify and investigate early stages of slow-growing, invasive



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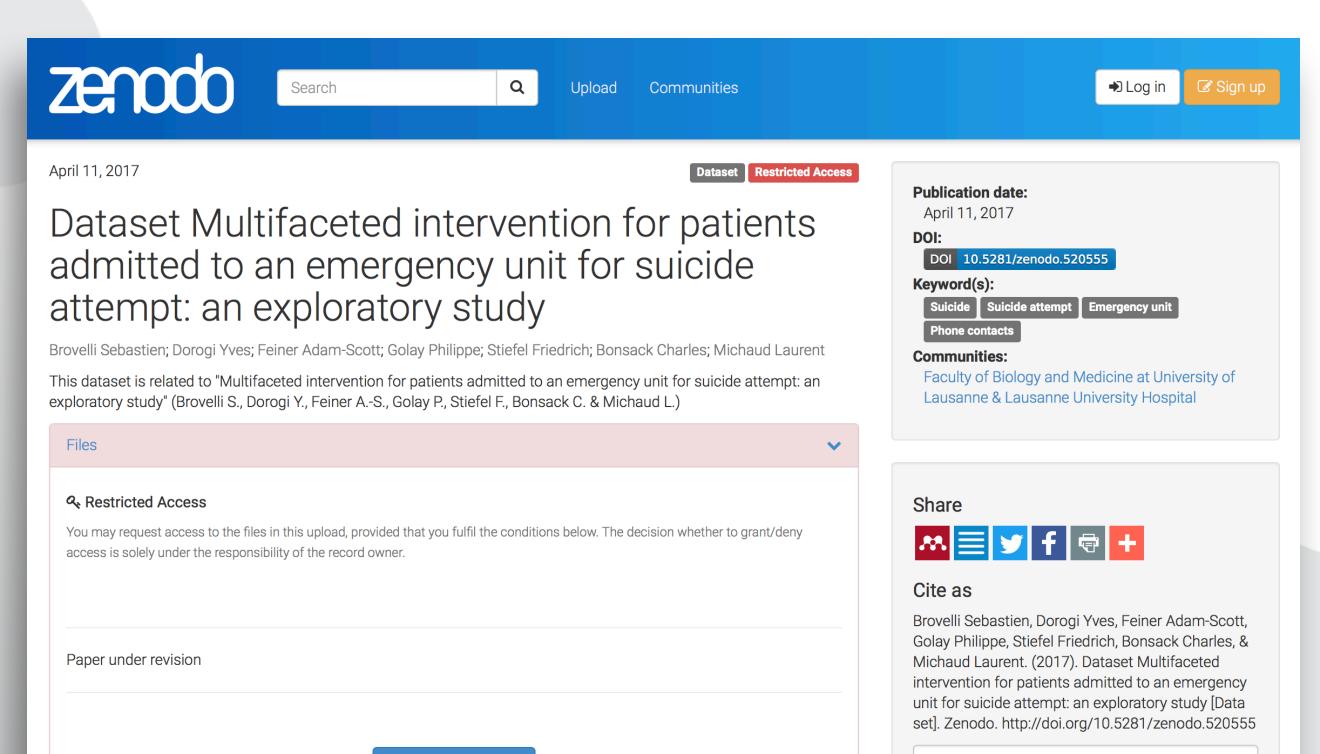
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Porcari, P, Hegi, M E, Lei, H, Hamou, M-F, Vassallo, I, Capuani, S, ... Mlynarik, V. (2016). Early detection of human glioma sphere xenografts in mouse brain using diffusion MRI at 14.1 T. Nmr in Biomedicine, 29(11), 1577-1589.

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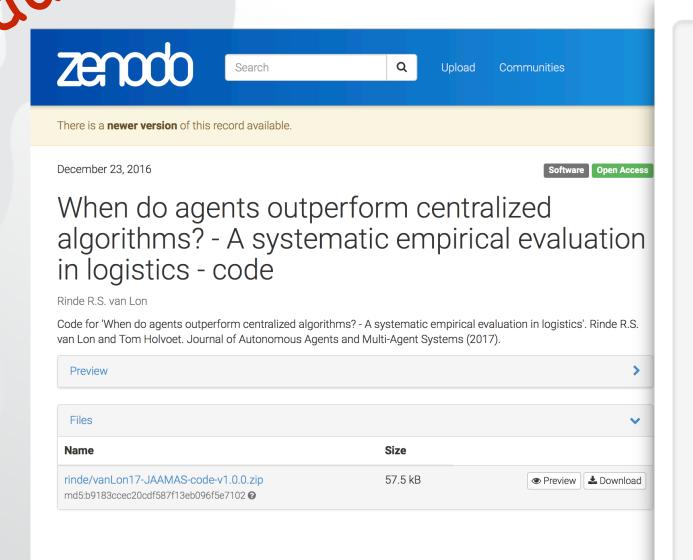
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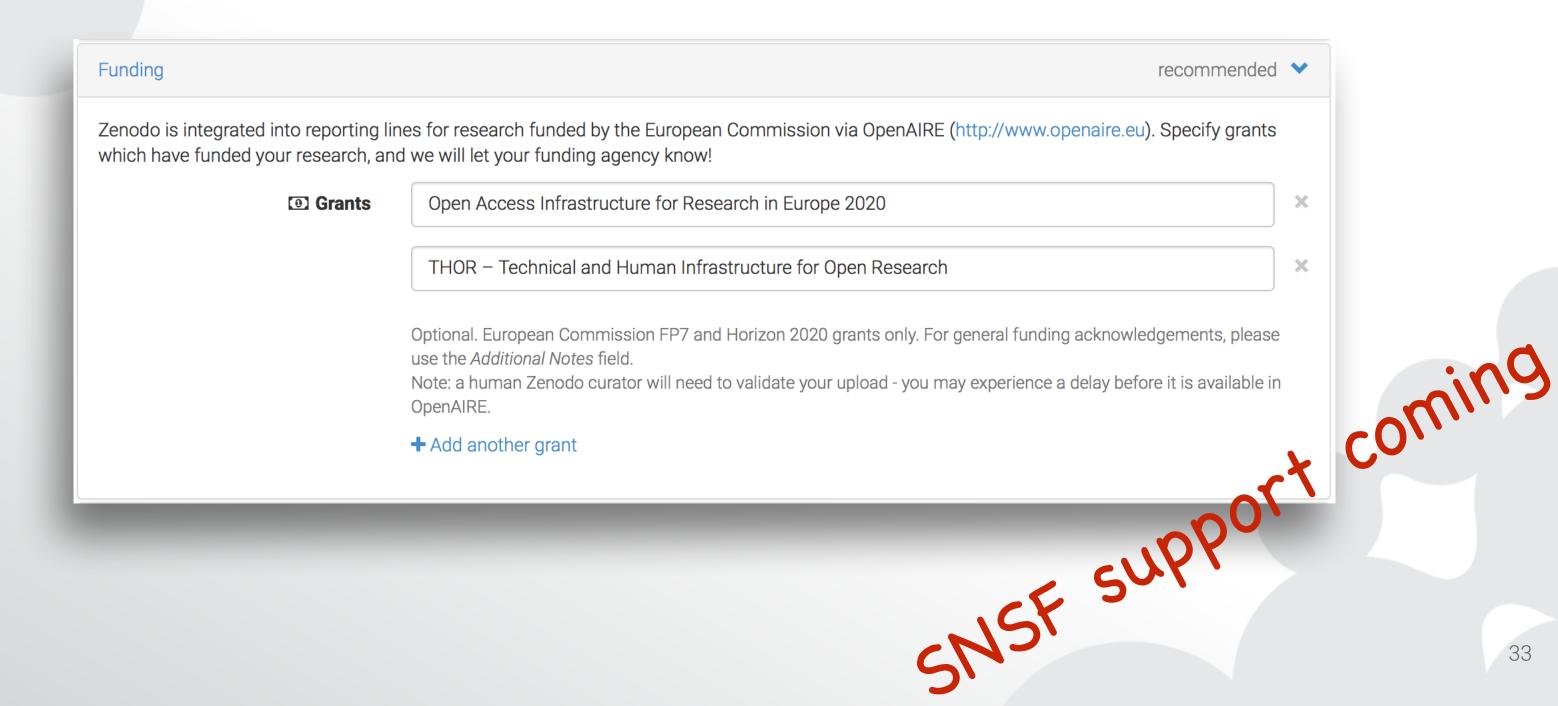
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Version 1 10.5281/zenodo.220892

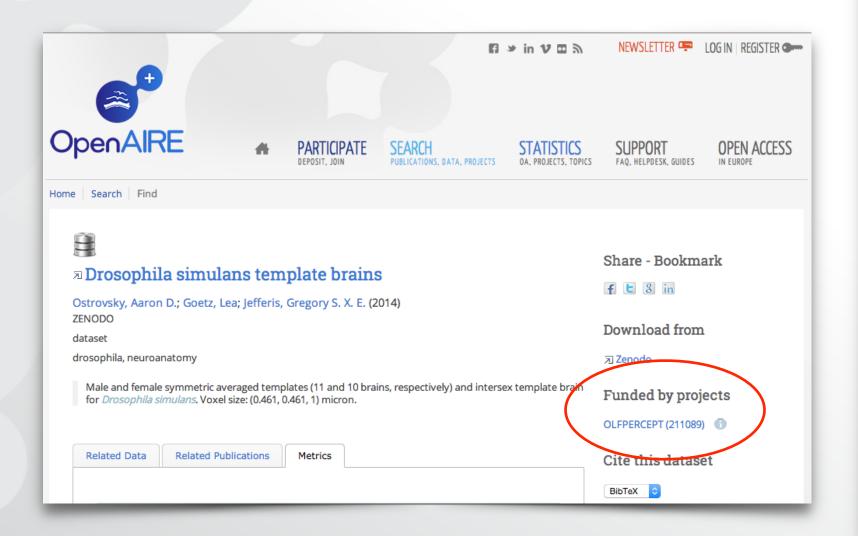
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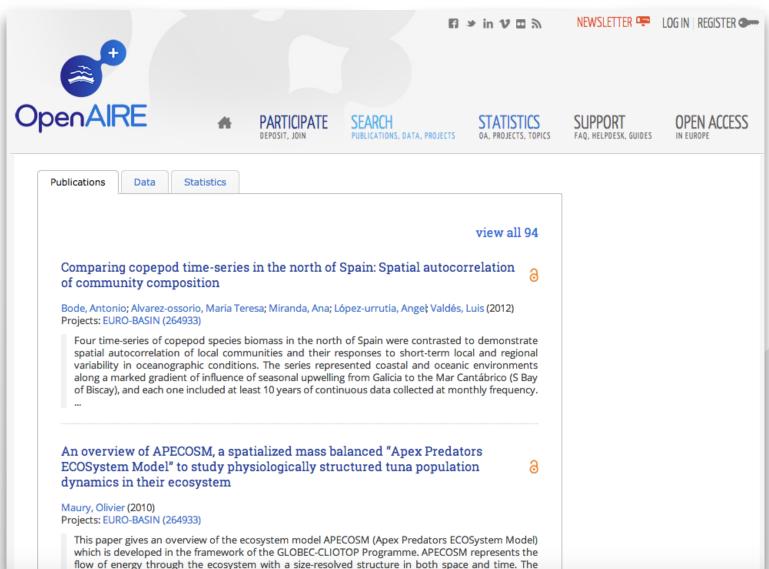
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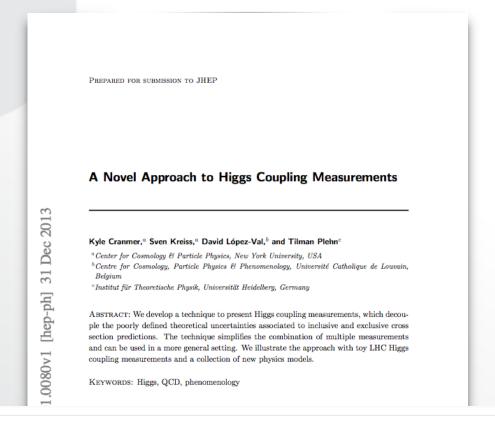


# Horizon 2020

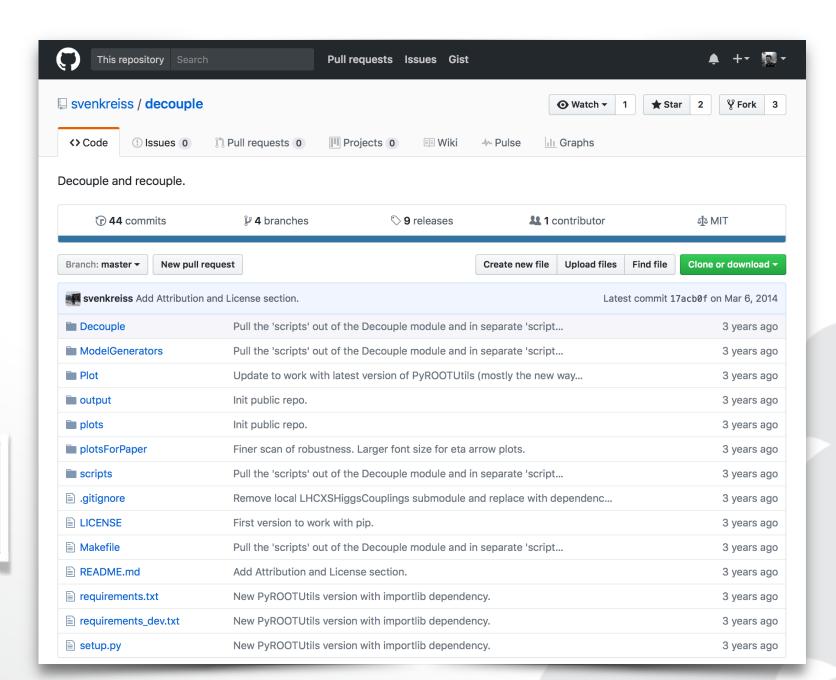




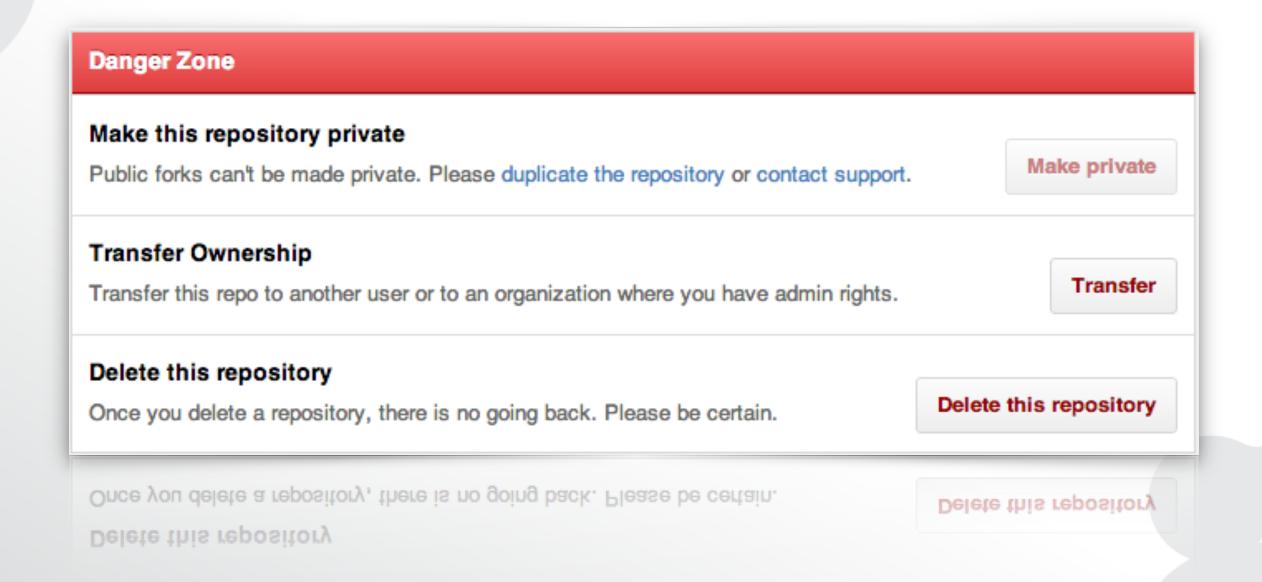
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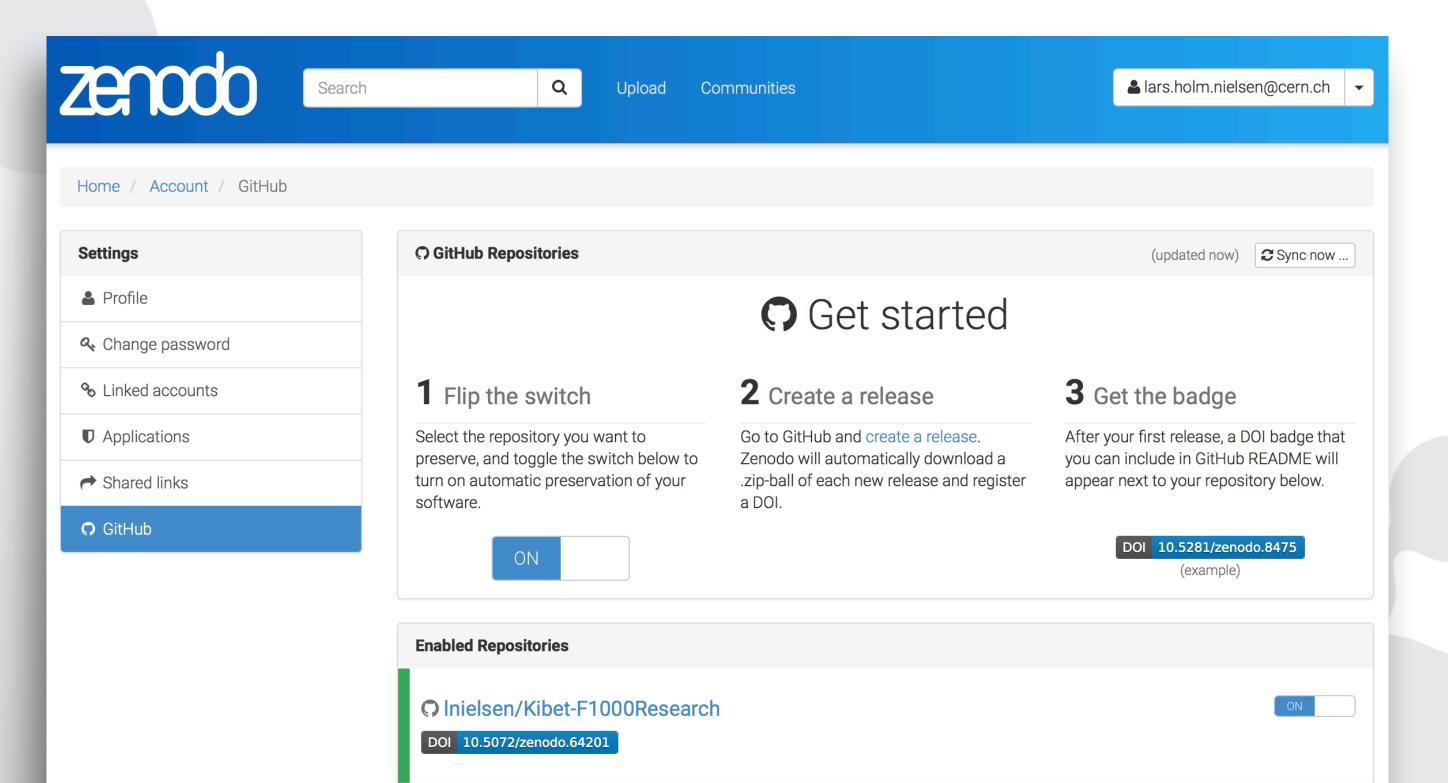
[25] K. Cranmer, S. Kreiss, D. López-Val, T. Plehn, https://github.com/svenkreiss/decouple.



## GitHub + Research



# GitHub + Zenodo



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## Article II

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1. The Organization shall provide for collaboration among European States in nuclear research of a pure scientific and fundamental character, and in research essentially related thereto. The Organization shall have no concern with work for military requirements and the results of its experimental and theoretical work shall be published or otherwise made generally available.

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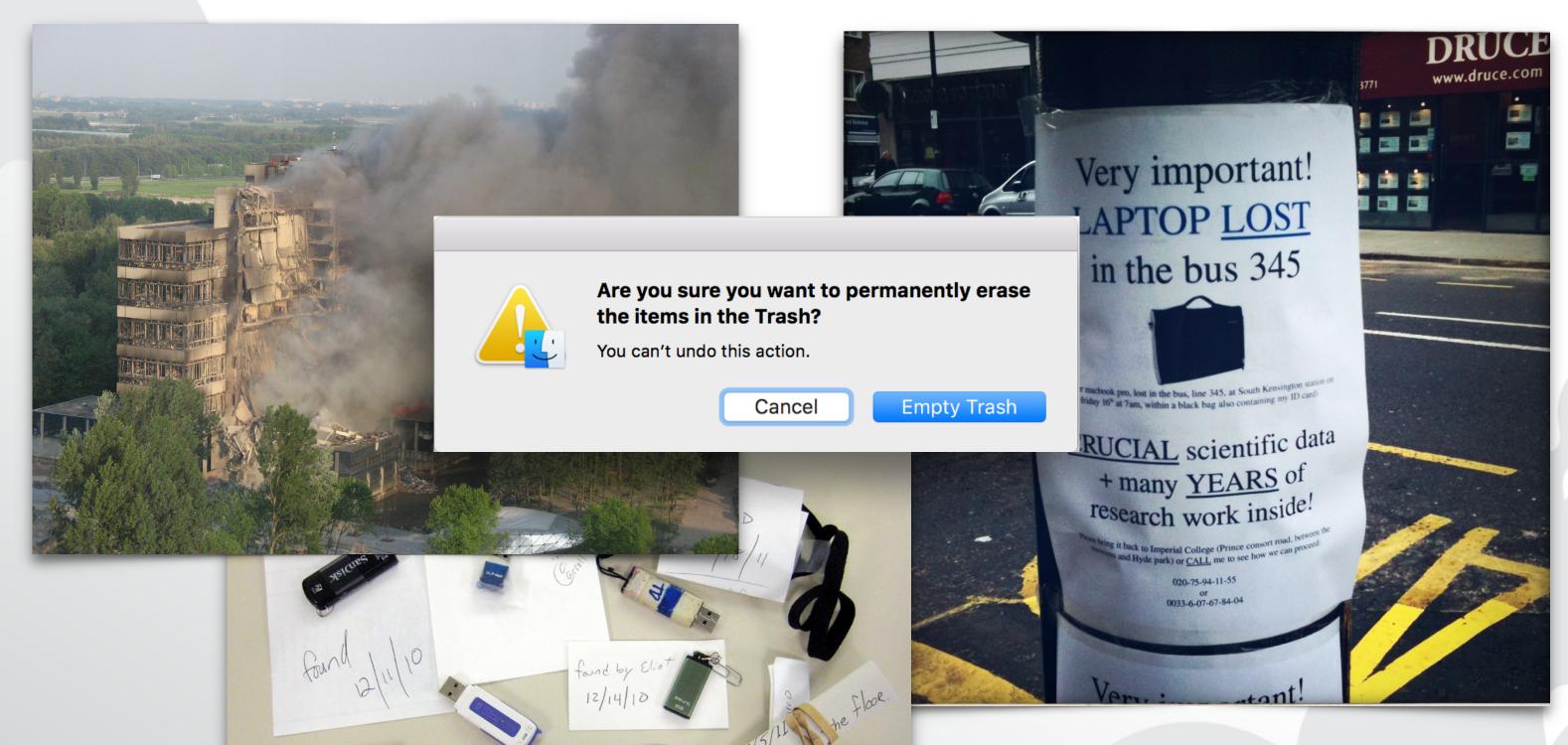
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