



DeMythif AI – Open Science et ressources

January 2026

Delphine le piolet, librarian, trainings and research referente for Laboratories

Spaces, services, and resources for studying and innovating

Exhibitions
and conferences



Services



Books, board games,
relaxation area, materials
library...

Working alone
or in a group



1,000 seats for working
alone or in a group

Extended opening hours



Open 7 days a week
and until 10:30 PM
on weekdays (7:00 PM
on weekends)

Library LUMEN'S services



- Remote reader account, with FOCUS
- Reserve a workgroup room (23 rooms)
- Interlibrary loan
- Training, online tutorials, workshop (Saclay Youtube channel)
- Video recording room



@lumen.upsaclay

<https://www.universite-paris-saclay.fr/lumen>

Lumen, a place of study, culture and innovation

La Diagonale

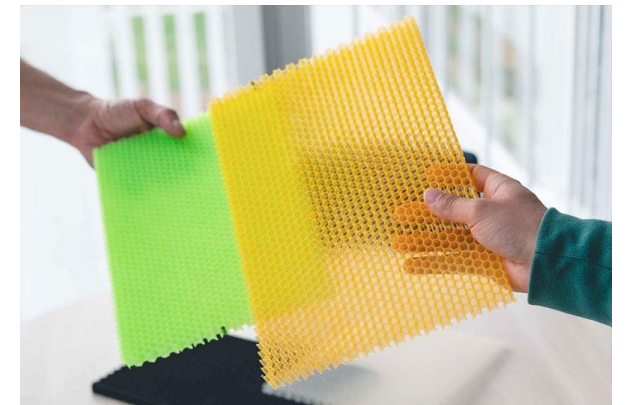
- Scientific mediation for the general public (children and adults)
- Cultural workshops (theater, podcast, oenology, drawing, etc.)
- Events (Fête de la science, Du big bang aux bigbands, ...)



Instagram :
@culture_upsaclay

Le Design Spot

- Support for companies and individuals with design projects
- Design mediation (workshops, exhibitions)
- Matériauthèque :
400 samples and 9000 materials database

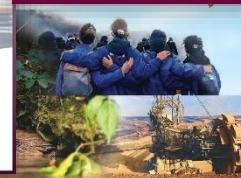
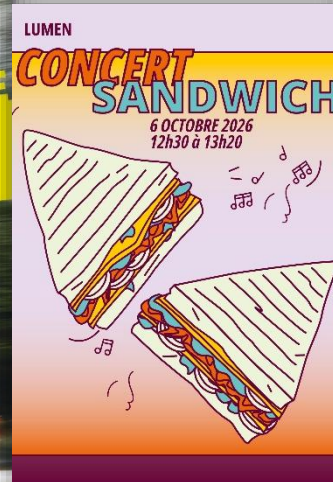
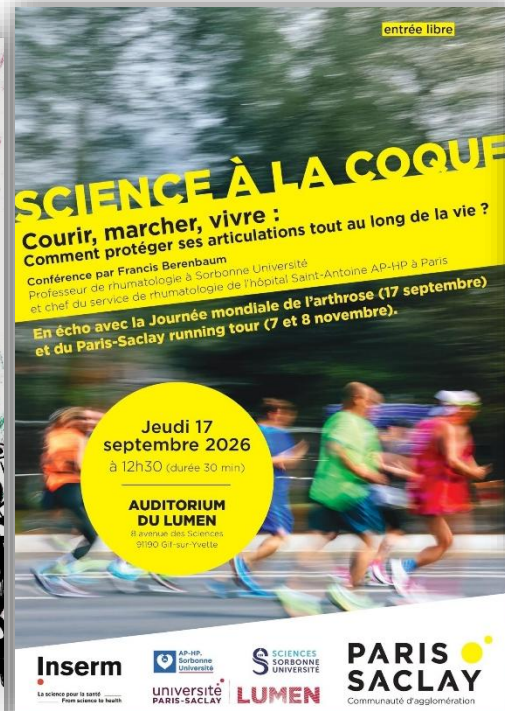


Instagram :
@designsaclay

Exhibition, conferences, workshops, ...



- Saturdays at the Lumen (alternating: screenings / hands-on science experiments / discussions)
- Game nights, murder parties
- Shows (comedy, concerts)
- Conferences, Science diplomacy...



Key highlights 2026-2027 :

- Ecological upheavals (Sept-Oct)
- Violence against women and press freedom (Nov-Jan)
- Agriculture and Food (jan-mar)
- Colors and photography (Apr-Jun)



DeMythif.AI MSCA
COFUND

Tips for you

Find electronic ressources

How to find ressources ?

<https://www.bibliotheques.universite-paris-saclay.fr/>

FOCUS

Paris-saclay search engine

Le PEB, service de Prêt entre Bibliothèques



Bibliographic research

How to find ressources ?

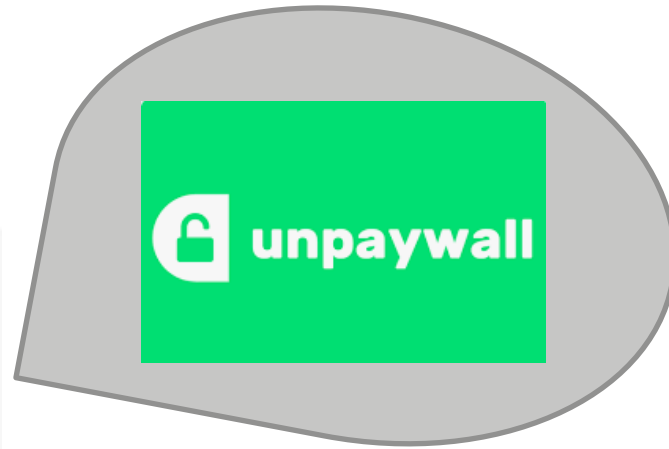
<https://www.bibliotheques.universite-paris-saclay.fr/>



Bibliographic Tools free and open :

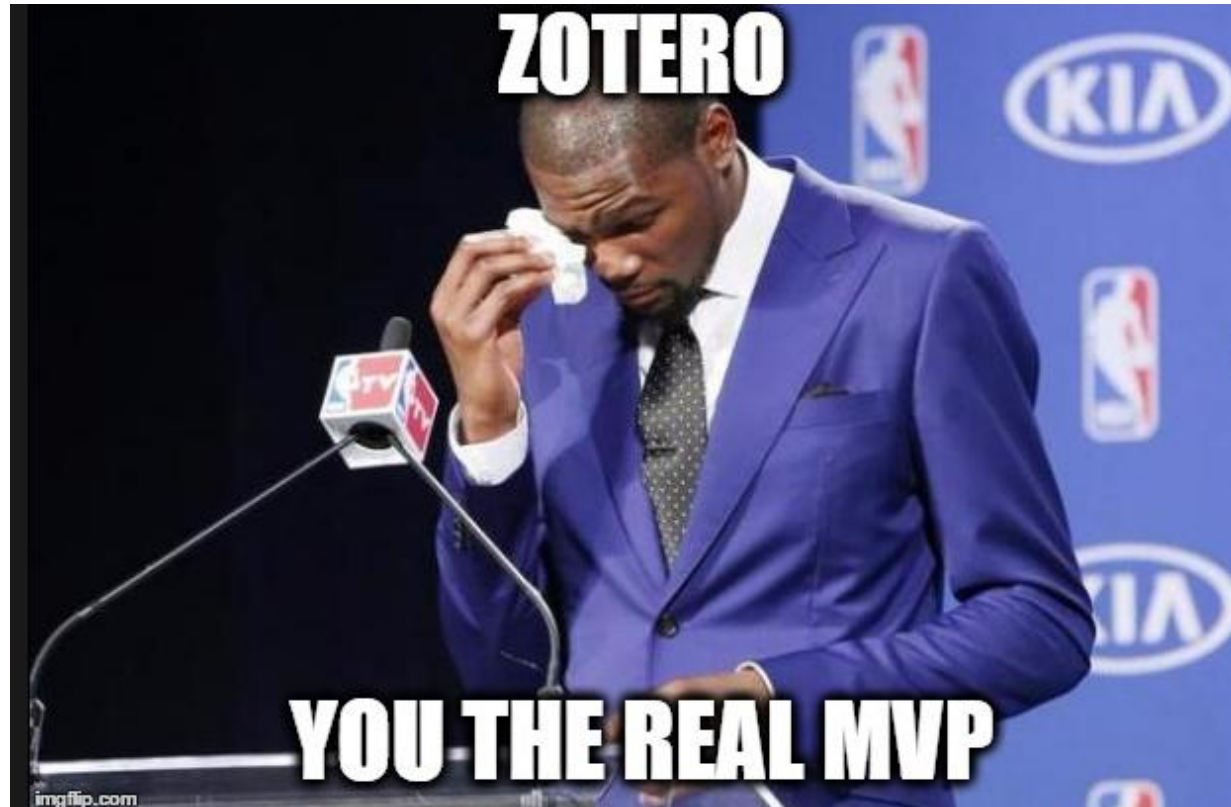


Think about extension to find pdf



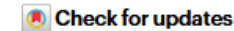
ZOTERO organise your bibliography

👍 Keep your ressources:



Challenges for open science

The future of academic publishing



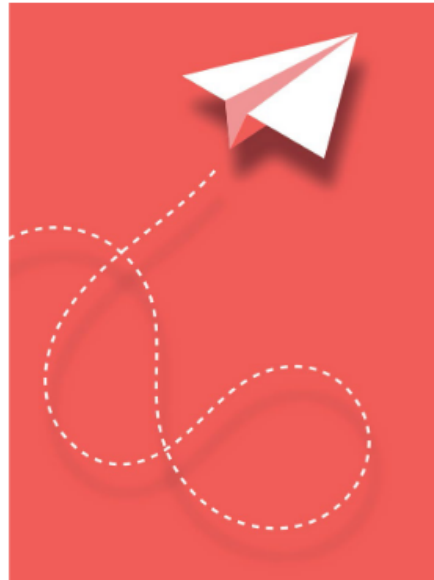
Academic publishing is the backbone of science dissemination – but is the current system fit for purpose? We asked a diverse group of scientists to comment on the future of publishing. They discuss systemic issues, challenges, and opportunities, and share their vision for the future.

We must dismantle access barriers

Humberto Debat. A large portion of traditional academic publishing is unequal, exclusionary, unsustainable and opaque¹. Nearly 70% of scientific journal articles are locked behind paywalls². The publishing industry has sequestered and commoditized scientific literature. It is a scandal.

We need improved and accessible scholarly communications for better science. A recent [UNESCO Recommendation](#) defines open science as an inclusive construct: multilingual, open, accessible, transparent, reusable, shareable, collaborative and oriented to benefit society.

Latin America is taking on a pioneering role in this. In Latin America, scientific outputs are considered a public good. Free-to-publish and free-to-read cooperative publishing is supported by non-commercial and publicly funded infrastructure. [Ninety-five per cent of Latin American journals](#) are diamond open



models (LLMs) become broadly useful¹². Many scientists are already using LLMs to enhance their programming and writing. Although current systems such as GPT-4 are limited by their tendency to generate factually incorrect text, this can be mitigated by using retrieval-augmented LLMs that reference external documents and are less prone to factual error¹³. Tools that combine LLMs and scholarly databases, such as [Elicit](#) and [Semantic Scholar](#), are already facilitating literature search.

LLMs make knowledge work faster and cheaper, and I expect science to accelerate as a result. LLMs are multidisciplinary and can translate jargon and methods across disciplines. This could help to bring together far-flung areas of research in novel ways – a key ingredient in high-impact science¹⁴. LLMs are also tireless: secondary analyses and meta-analyses will be far easier to produce in the future, and this could rapidly lead to

Sustainability

- Collapse, in the 21st century , of the cost of scientific communication, but ...

<i>operating profit</i>	<i>company</i>	<i>industry</i>
7%	Woolworths	supermarkets, pokies
12%	BMW	automobiles
23%	Rio Tinto	mining
35%	Apple	premium computing
34%	Springer	scholarly publishing
36%	Elsevier	scholarly publishing
40%	Wiley	scholarly publishing

Source: The Conversation, Free for all: ARC-funded research now open to the public

Efficiency

Covid19, a textbook case

- Pressure from researchers
- Temporary and partial opening

Deposit in open archive

- Rapid circulation of information
- Acceleration of research
- Proof of anticipation

China

Will the coronavirus kill off the 'dinosaur' world of academic publishing?

- The deadly pandemic has brought back a long-running debate about companies profiting from the publication of research often freely supplied by the author
- As the biggest names in the business respond to academics' demands to bring down paywalls, new platforms are getting fresh studies out to the public



Linda Lew

Published: 11:00pm, 16 Mar, 2020

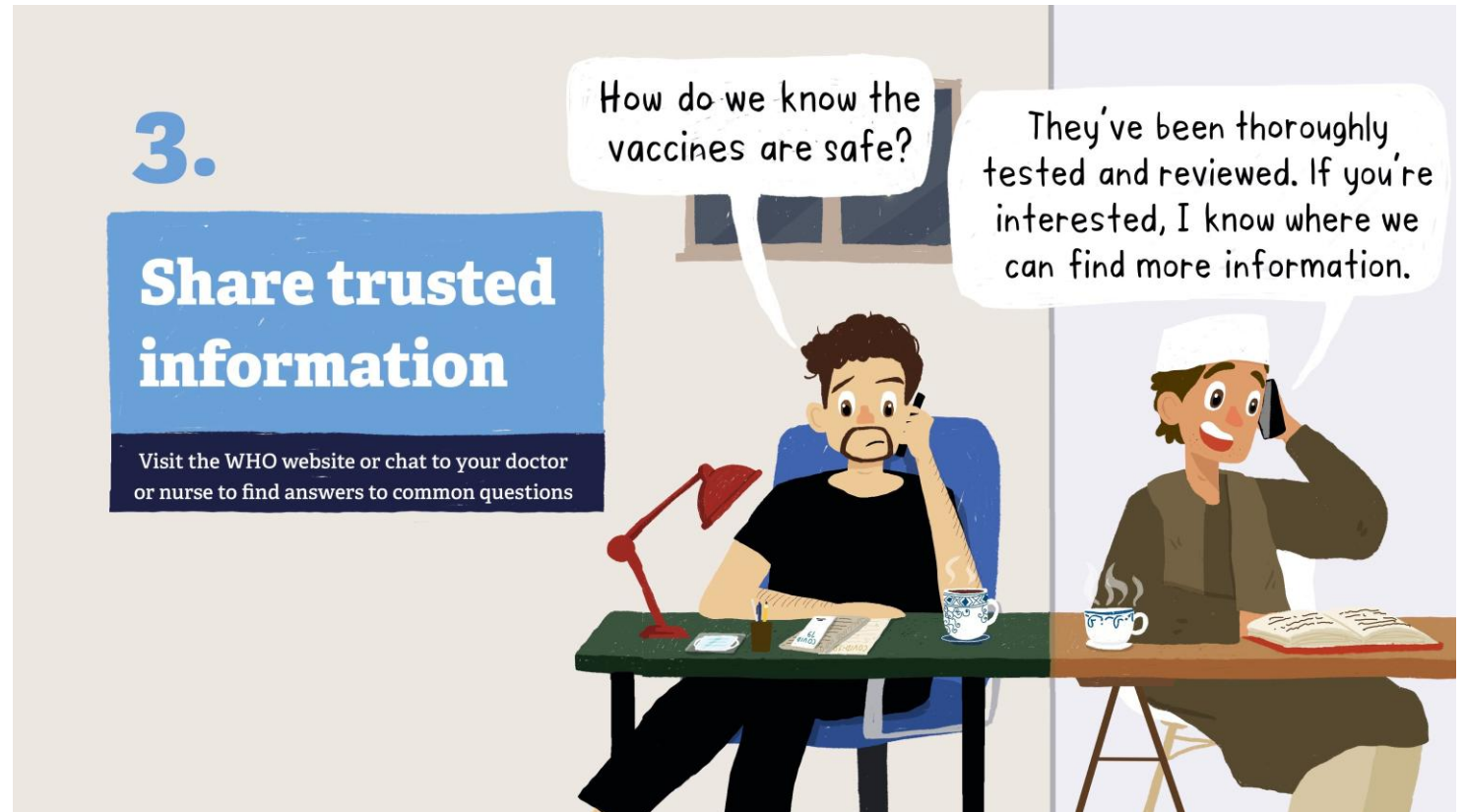
[Why you can trust SCMP](#)



Source: The South China Morning Post, 2020

Trust

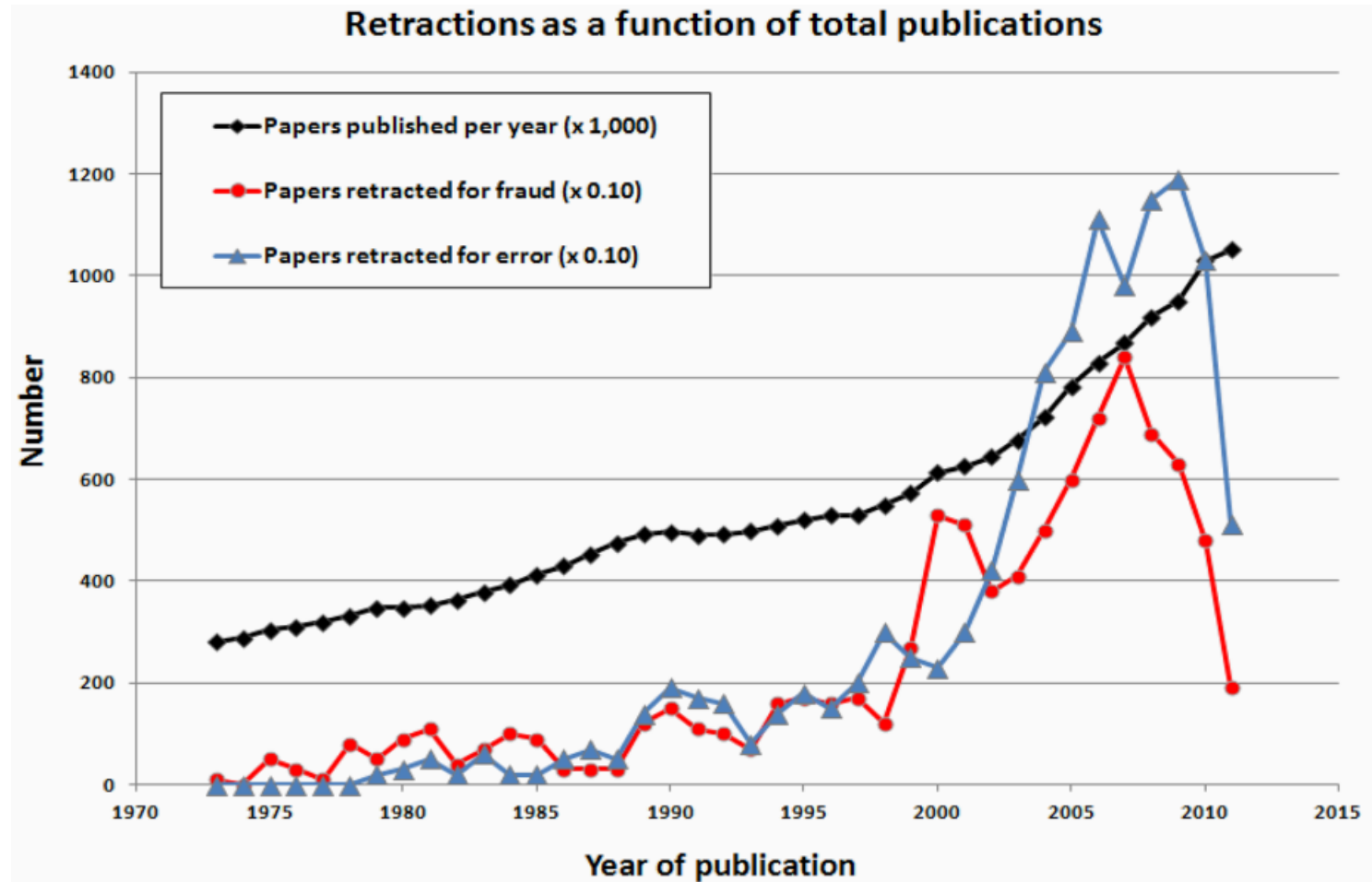
Transparency of research mechanisms



Source: *The Conversation*, *Free for all*: ARC-funded research now open to the public

Integrity

Thousands of scientists publish a paper every five days



Accessibility

Dissemination of articles

- Visibility
- Widespread accessibility
- SMEs
- Southern countries
- Ourselves
- Facilitating collaborations
- Open Access Citation Advantage

An alternative to SciHub



Source Unesco

Accessibility & perenity

Science confronted with geopolitical downs

NEWS EXPLAINER | 27 March 2025

How Trump is following Project 2025's radical roadmap to defund science

Much of the Trump administration's agenda for research is laid out in the 900-plus-page blueprint. *Nature* read it so you don't have to.

By [Dan Gristo](#)



Project 2025 is a 900-plus-page playbook aimed at conservative policymakers. Credit: Mike Segar/Reuters

Open access journals disappear with their articles ...

NEWS • 10 SEPTEMBER 2020

More than 100 scientific journals have disappeared from the Internet

Researchers have identified dozens of open-access journals that went offline between 2000 and 2019, and hundreds more that could be at risk.

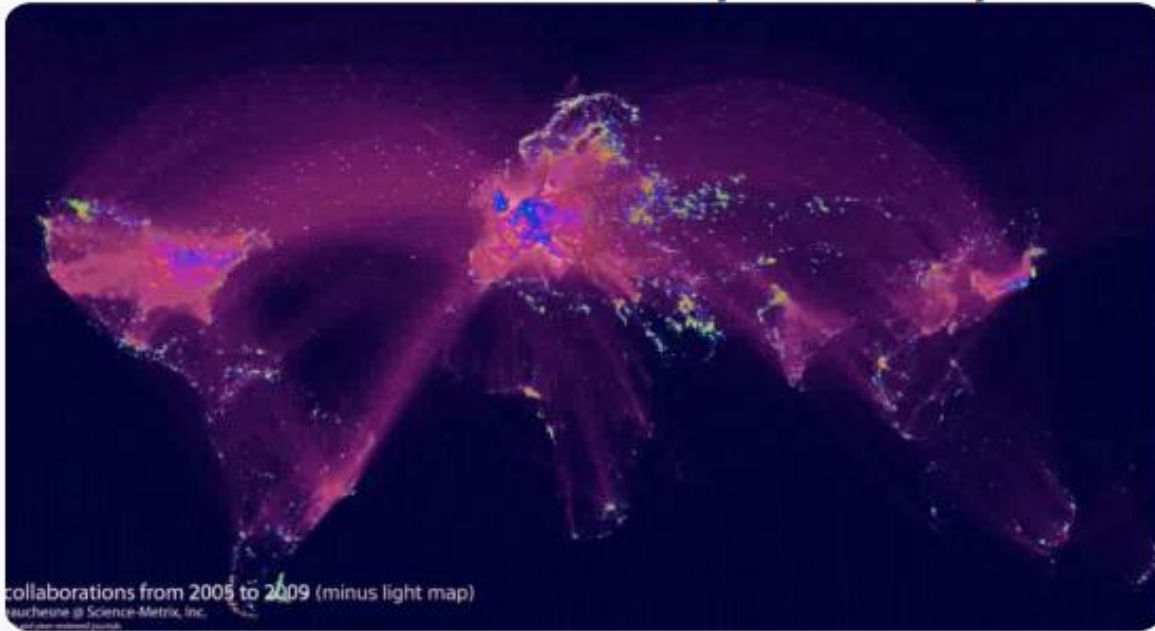
<https://www.nature.com/articles/d41586-020-02610-z>

Multilingualism

The almost exclusive use of English induces an international bias

- to the disadvantage of certain disciplines
- in favor of part of the world

Collaborations vues par Scopus



Collaborations vues par Redalyc

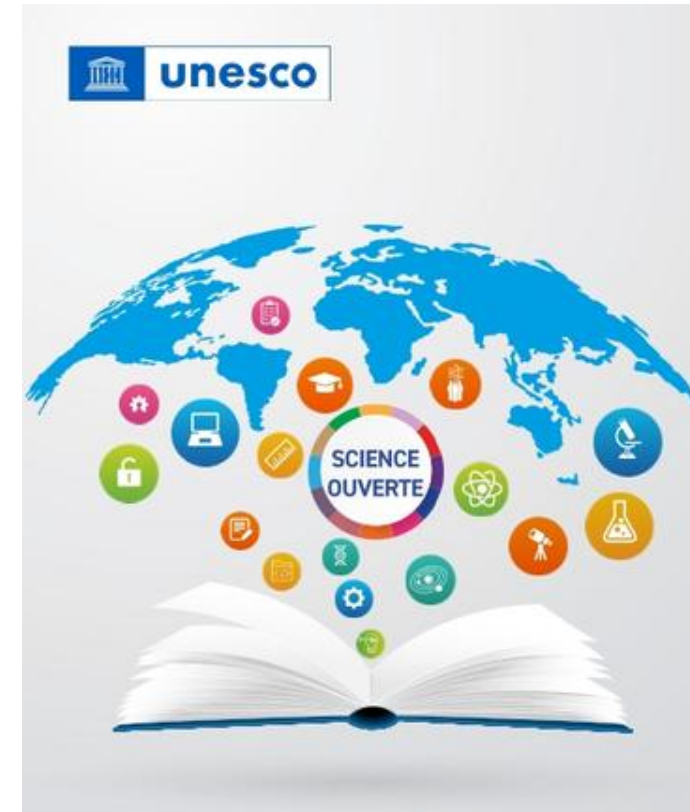


Source : Arianna BECERRIL, deuxièmes Journées Nationales de la Science Ouverte

Funder Requirements for Open Access

World: UNESCO recommendations

“establish regional and international funding mechanisms for open science and to ensure that all publicly funded research respects the principles and core values of open science.”



**Recommandation de l'UNESCO
sur une science ouverte**

Coalition S an alliance of public funders supporting OA



BILL & MELINDA
GATES foundation



anr[®]

hhmi | Howard Hughes
Medical Institute

Marie Skłodowska-Curie Actions

35 billion euros / year. 150,000 articles / year

= * a European alliance of 11 public research funders

Its primary objective : the publication of scientific articles in open access journals or platforms by 2021.

Implementation of Plan S

The three paths to Open Access

Pathway 1: Open access journals and platforms

- Publication in a journal indexed by the DOAJ
- cOAlition S member agency

Path 2: Subscription journals

- Publications in a subscription journal must be directly available in an open archive
- Authors must use the **non-assignment of rights strategy**

Path 3: Reviews under transformative agreements

- Publication in a journal under Transformants agreement is authorized.
- In this case, it is the libraries which pay the publication costs of their authors

The peer-reviewed Author Accepted Manuscript (AAM) is your intellectual creation, your valuable asset. Don't give it away.

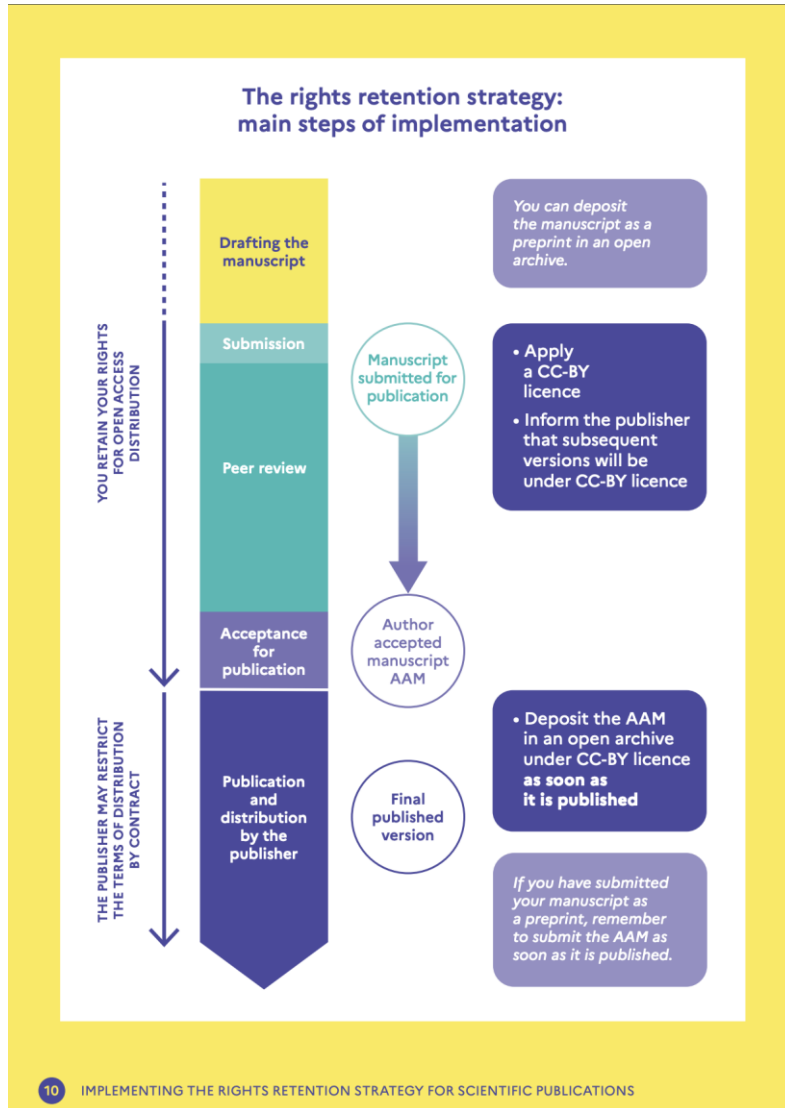
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Protect your Rights.**

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All research articles resulting from projects funded by the ANR or the EC must be available in open access and **under a free licence (CC by)** from the date of publication.

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A boiling hot context on OPEN SCIENCE

Born in the 2000s from the initiative of committed researchers, open science is now rooted in public policy.



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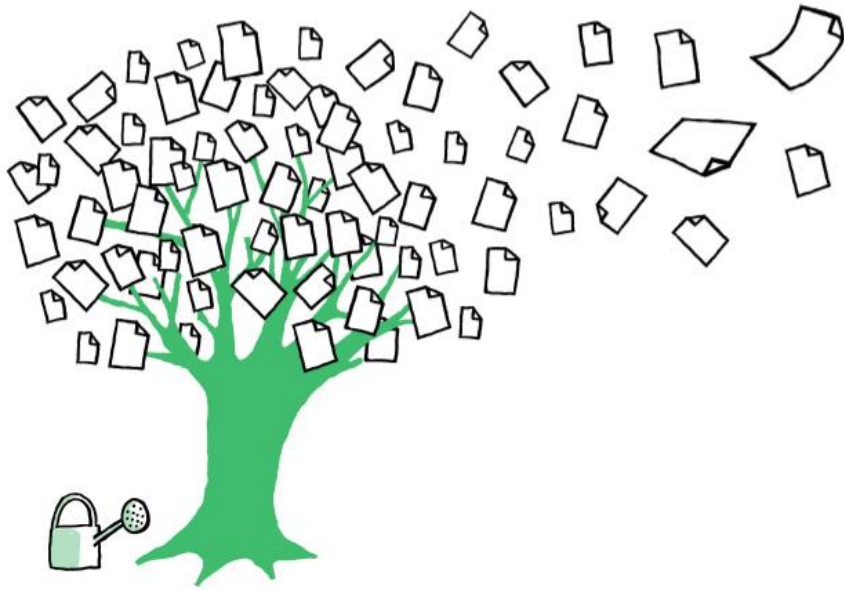
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<https://www.ouvriirlascience.fr/>



your librarians assist you to make Open Science

In Paris-Saclay's University

A website

<https://www.universite-paris-saclay.fr/recherche/science-ouverte>

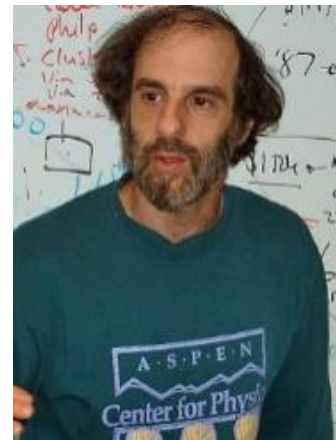
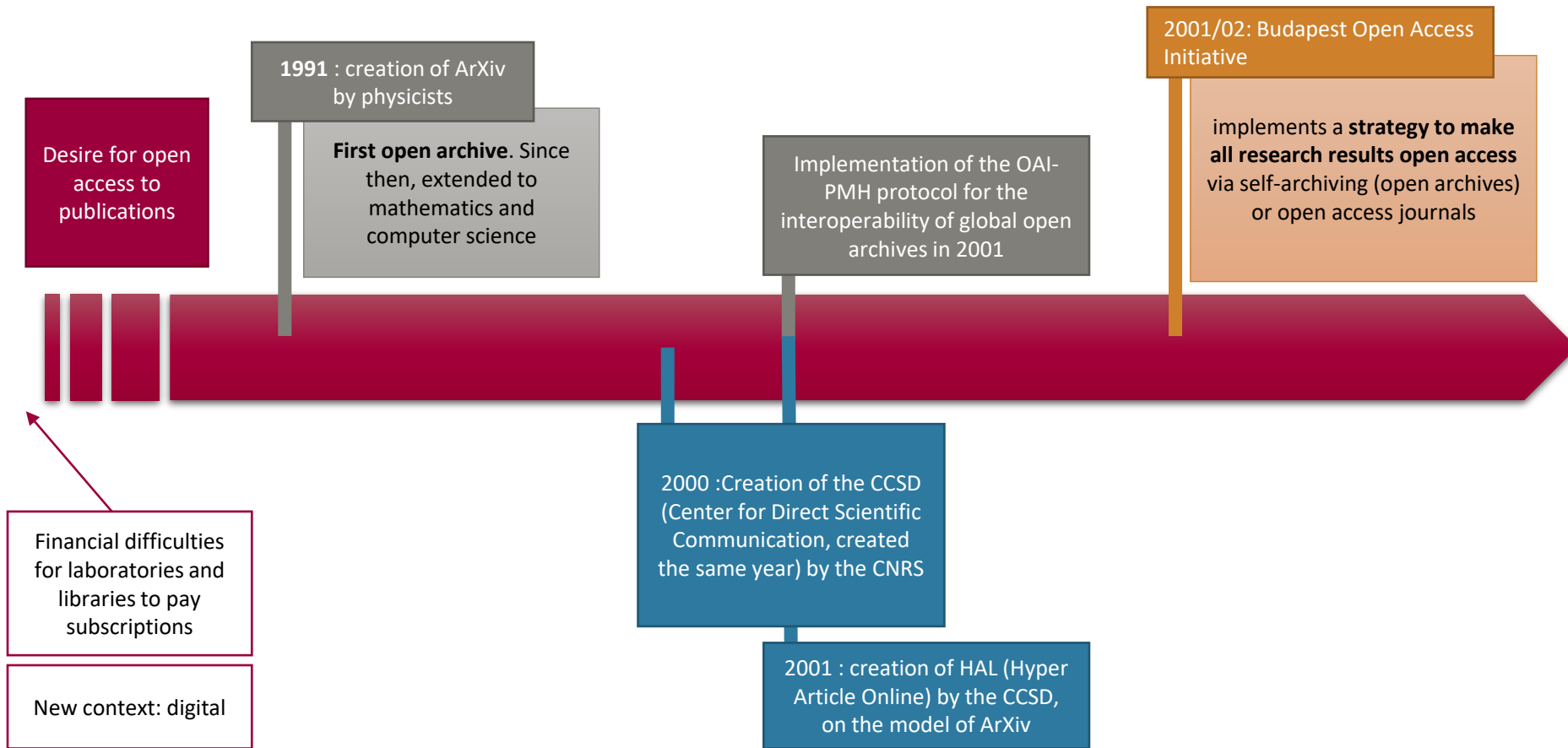


A newsletter FIL SO



Le document Unique : action plan

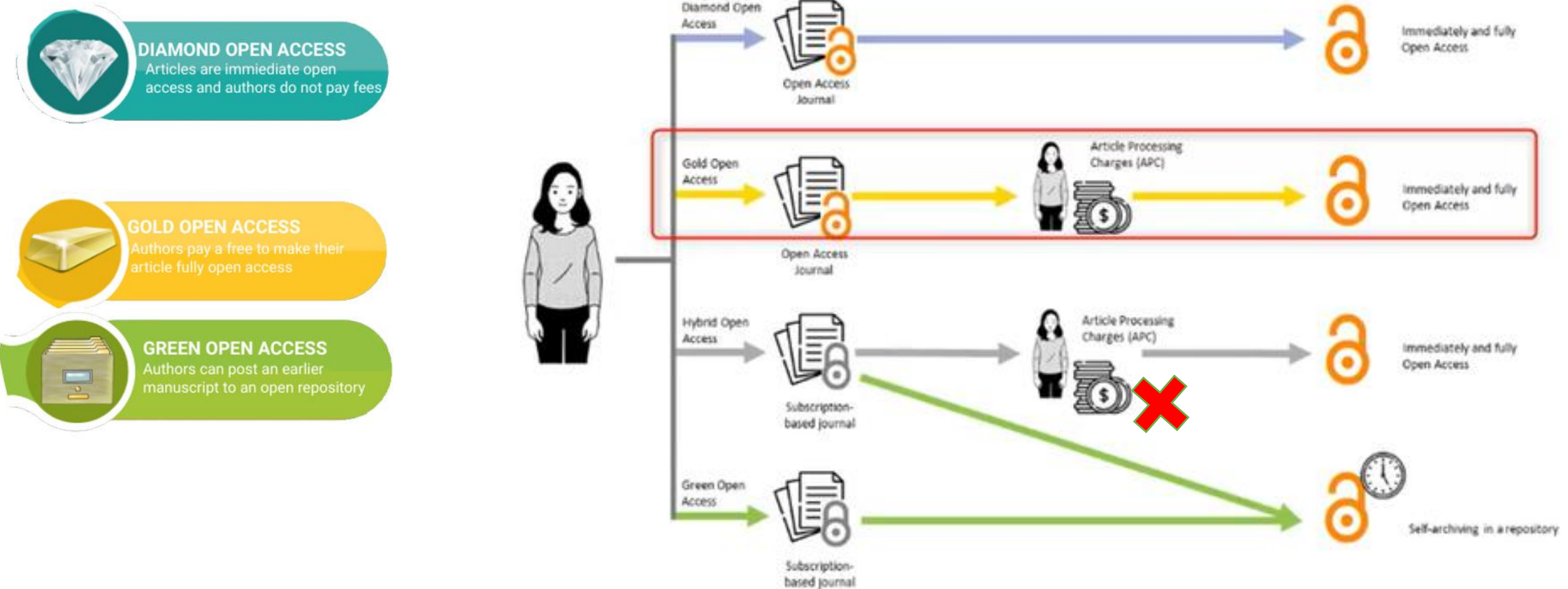
Actors of Open Access: the researchers



Paul Ginsparg

Colors and routes to Open Access publishing

Open Access Publication Routes





What is HAL
repository

Hal L2S: your institutional repository

https://hal.science/SUP_LSS



What can be found in HAL ?

Articles

Thesis

Book chapter

Poster dataset

Report

Lecture

Conference paper

HDR thesis

review

Records / full text



Commission européenne



A platform :

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Open Research Europe is an open access publishing venue for European Commission-funded researchers across all disciplines, with no author fees.

Accelerate the impact of your research with rapid publication, open peer review, and indexing in databases such as Scopus and PubMed.

[Submit your Research](#)

[How it works](#)

An **OPTIONAL** service



Allows researchers to **COMPLY WITH OPEN ACCESS OBLIGATIONS**



NO COST to researchers



Why should researchers
deposit in a repository?

HAL is a good tool to share your work

7 good reasons to deposit in HAL





HAL is a good tool to share your work

7 good reasons to deposit in HAL

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HAL gives you strong value **added services**:

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- CV
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Hal guarantees **long term** access (permanent archiving)

To increase **the visibility** of your works

One entry for all your reports :

- Annual activity reports
- Hceres

To have **a legal protection**

- Copyrights
- Creative commons
- Licence, embargo

To **share science** and make it more accessible



What are my
rights?

What does the law for the digital republic change?



The contributions of the law for the digital republic



To remember :

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Postprint is the final draft peerreviewed

You can submit different versions of an article: but we advise you to deposit your Postprint in HAL



We called it Postprint or Final draft or AAM

Receding Horizon Flight Control for Trajectory Tracking of Autonomous Aerial Vehicles[☆]

Ionela Prodan^{a,b}, Sorin Olaru^a, Ricardo Bencatel^c, João Borges de Sousa^c, Cristina Stoica^a, Silviu-Iulian Niculescu^b

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Abstract

This paper addresses the implementation of a predictive control strategy for Unmanned Air Vehicles in the presence of bounded disturbances. The goal is to prove the feasibility of such a real-time optimization-based control design and to demonstrate its tracking capabilities with respect to a reference trajectory which is pre-specified via differential flatness. In order to benefit from the computational advantages of the linear predictive control formulations, an off-line linearization strategy of the nonlinear model of the vehicle along the flat trajectory is employed. The proposed method exhibits effective performance validated through software-in-the-loop simulations and real flight tests on different Unmanned Aerial Vehicles (UAVs).

Keywords: Unmanned Aerial Vehicles (UAVs), differential flatness, constrained Model Predictive Control (MPC)

1. Introduction

Unmanned Aerial Vehicles (UAVs) are flying devices that have received increasing attention in recent years, particularly after the tragic events of September 11, 2001, when the world has questioned the safety of the onboard aircrafts (Valavanis, 2007). Currently, most UAVs are used for military mission planning and for combat support (Valent, Bethke, Hou, de Farias, & Vian, 2007), border surveillance (Hoffman, Huang, Michalek, & Tomlin, 2011) and search for survivors (Geyer, 2008). Also, the range of possible civilian applications for UAVs is expanding to traffic monitoring (Dosenbaum, Kurz, Thomas, Suri, & Reinartz, 2009), pollution measurement (Martin, 2011) or hazard zone inspection (Patterson et al., 2011). Many of the enabling technologies developed for military UAVs are becoming similar or identical to those required for civil UAVs (Zheng, Hou, & Wu, 2013).

One of the main research challenges is to improve and increase their autonomy, in particular to empower the application of advanced control design methods. Their aim is to consider the

[☆]The research of Ionela Prodan is financially supported by the EADS Corporate Foundation (091-A009-1006).

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Tuesday 3rd July, 2013

Published version :



Receding horizon flight control for trajectory tracking of autonomous aerial vehicles[☆]

Ionela Prodan^{a,b}, Sorin Olaru^a, Ricardo Bencatel^c, João Borges de Sousa^c, Cristina Stoica^a, Silviu-Iulian Niculescu^b

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ABSTRACT

This paper addresses the implementation of a predictive control strategy for Unmanned Aerial Vehicles (UAVs) in the presence of bounded disturbances. The goal is to prove the feasibility of such a real-time optimization-based control design and to demonstrate its tracking capabilities with respect to a reference trajectory which is pre-specified via differential flatness. In order to benefit from the computational advantages of the linear predictive control formulations, an off-line linearization strategy of the nonlinear model of the vehicle along the flat trajectory is employed. The proposed method exhibits effective performance validated through software-in-the-loop simulations and real flight tests on different Unmanned Aerial Vehicles (UAVs).

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One of the main research challenges is to improve and increase their autonomy, in particular to empower the application of advanced control design methods. Their aim is to consider the

limitations of the vehicle dynamics and to permit the reconfiguration of the vehicle trajectory in case of unexpected events occurring in the system. The objective of the present paper is to describe and implement a control strategy with a combined use of Model Predictive Control (MPC) and flatness concepts. This represents a challenging methodological combination allowing to handle the feedback control and the trajectory generation while coping with the robustness issues upon set-theoretic methods. Moreover, to the best of the authors' knowledge, such a strategy has not been evaluated in flight tests on actual vehicles. In this sense, the results presented in the present paper can be considered as a validity proof for the proposed control approach for a real UAV system, all by pointing to the sensitive open problems.

There exist various techniques for the real-time control of UAVs. Usually low-complexity (and robust) control methods are preferred such as sliding mode control (Bencatel, Faied, Sousa, & Grand, 2011), dynamic programming approach for motion control of autonomous vehicles (Silva, Terra, Martins, & de Sousa, 2007) or control strategies that first estimate the speed and heading of the vehicles and then use simple feedback control laws for stabilizing different measurement error (Souza, Aguiar, Pascoal, & Collieri, 2012). In comparison to these solutions we will show that the presented MPC approach, meets the real-time computational constraints even if it presents a relatively important real-time computational load.

The present results follow a recent trend in the control literature where real-time predictive control strategies are applied to vehicles maneuvering problems. For example, in Keviczky and

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Data in Brief 39 (2021) 107622

Contents lists available at ScienceDirect

Data in Brief

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Data Article

Open synthetic travel demand for Paris and Île-de-France: Inputs and output data

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Population
Travel demand
Transport simulation
Paris

ABSTRACT

Hörnl and Balac [1] describe a data pipeline to generate a synthetic travel demand for Paris and Île-de-France. The data set consists of households, persons and their daily activity chains. It can be used in transport simulation, energy analysis and other research fields such as epidemiology. This data-in-brief article describes in detail the generated data set and how it can be regenerated based on publicly available and open data. The characteristics and pre-processing steps for the input data sets are covered in detail.

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* Corresponding author.
E-mail address: sebastian.horl@irt-systemx.fr (S. Hörnl).

Beware of social networks

The contributions of the law for the digital republic

LOI n° 2016-1321 du 7 octobre 2016 pour une République numérique dite « Loi lemaire »



ResearchGate



OpenDOAR

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THEY HAVE COMMERCIALS INTERESTS

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⋮

⌆

⌵

Jean Auriol id

IdHAL:
jean-auriol

Fonction:

Auteur

✎

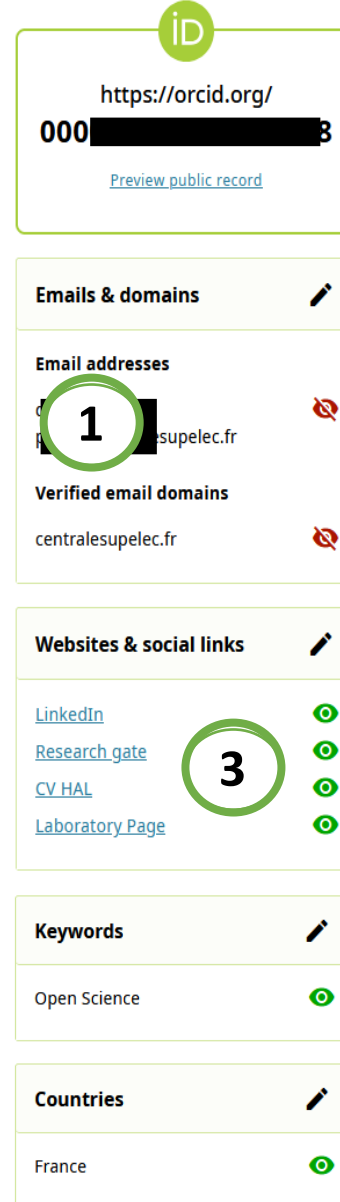
• **Laboratoire des signaux et systèmes** ...

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🗑

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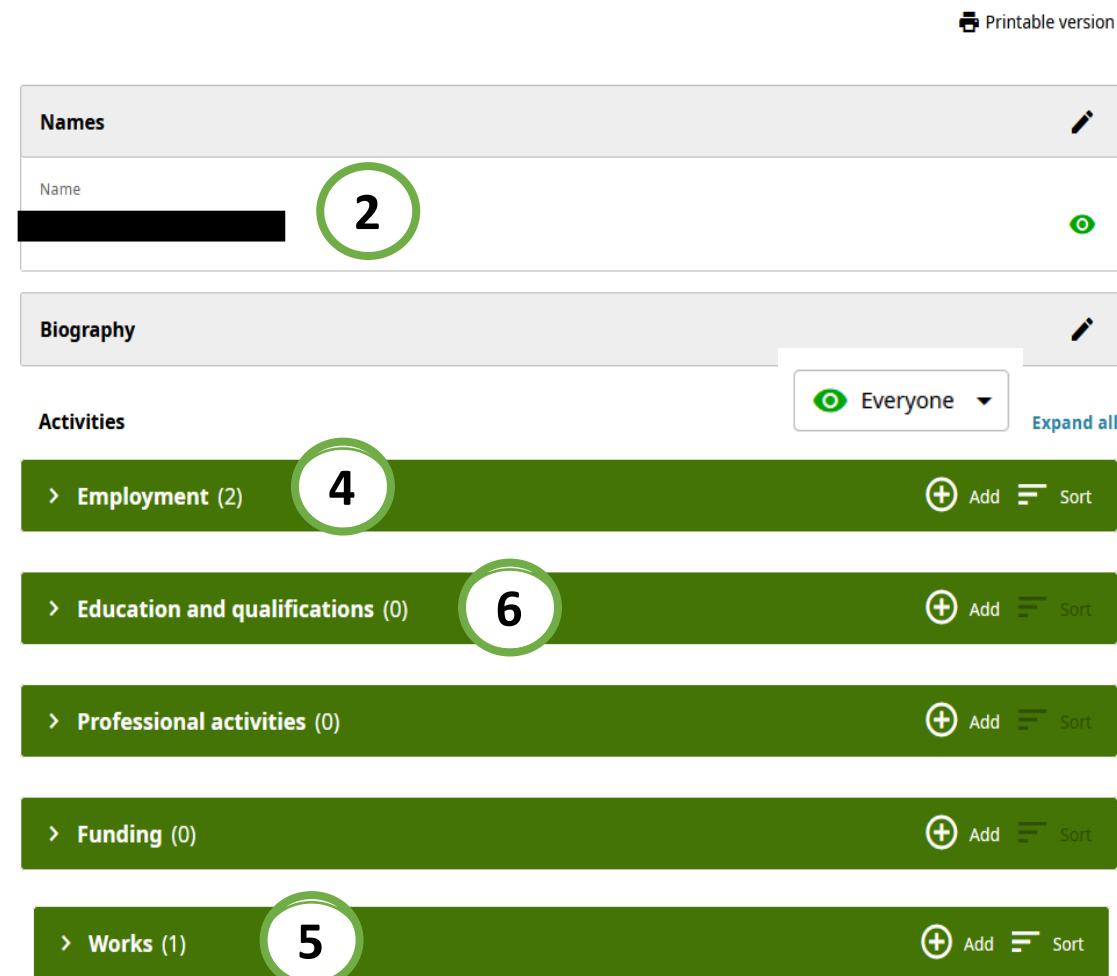
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Keywords
Open Science

Countries
France



Names

Name [REDACTED] **2**

Biography

Activities **Everyone** [Expand all](#)

> Employment (2) **4** [Add](#) [Sort](#)

> Education and qualifications (0) **6** [Add](#) [Sort](#)

> Professional activities (0) [Add](#) [Sort](#)

> Funding (0) [Add](#) [Sort](#)

> Works (1) **5** [Add](#) [Sort](#)

Encouraging FAIR Open Access



supports



L'université Paris-Saclay encourages Green archiving :

- A HALParisSaclay portal: showcasing the work of all publications from Paris Saclay laboratories.
- The University's Open Science barometer published



Accueil

Dépôt

Consulter ~

Rechercher

Déposer : quels sont mes droits ?

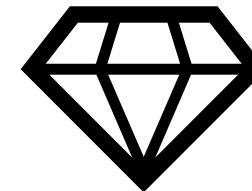
Boîte à outils ~



Solutions : **managing OA GOLD costs** :

- Negotiating with the Couperin consortium
- **Transparency: the openAPC tool**
- **Recommendations not to overpay for APCs(over \$1500)**

Public funding
and freemium



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Thank you for your attention

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