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Peer Community In... A free recommendation process of preprints based on peer reviews

Denis Bourguet, Benoit Facon, Thomas Guillemaud, Marjolaine Hamelin, Christian Mougin, Wilfried Sanchez, Pierre Labadie

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HAL Id: hal-03484190

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Submitted on 7 Mar 2023

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Peer Community In...

Denis Bourguet

Benoit Facon

Thomas Guillemaud

Marjolaine Hamelin

INRAE

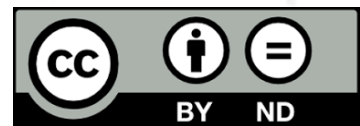
And

Christian Mougin

Wilfried Sanchez

Pierre Labadie

A free recommendation process of
preprints based on peer reviews



PCI

Scientific Publication

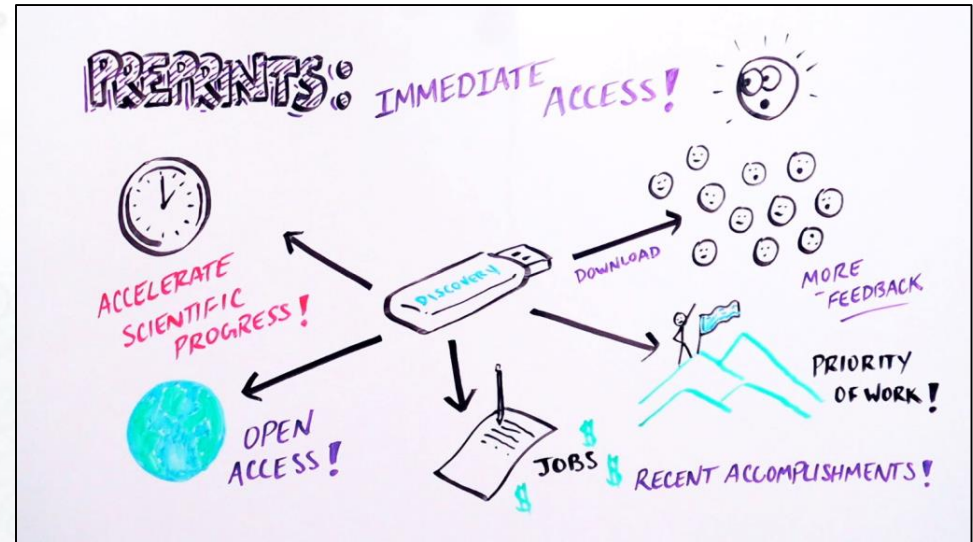
- **facing reproducibility issue**
- **too long**
- **not transparent**
- **too expensive**
 - €10 Billion / 3 millions articles = €3000 / article
 - extraordinary profit margin (30-40% for the 5 big publishers)
- **vicious**
 - turnover positively linked to the number of accepted articles

<https://peercommunityin.org>, @PeerCommunityIn

Preprints: the solution?

Preprints are good...

- Low cost
- Free for authors and readers
- Available immediately
- Archive
- Proof of anteriority
- Searchable/Findable

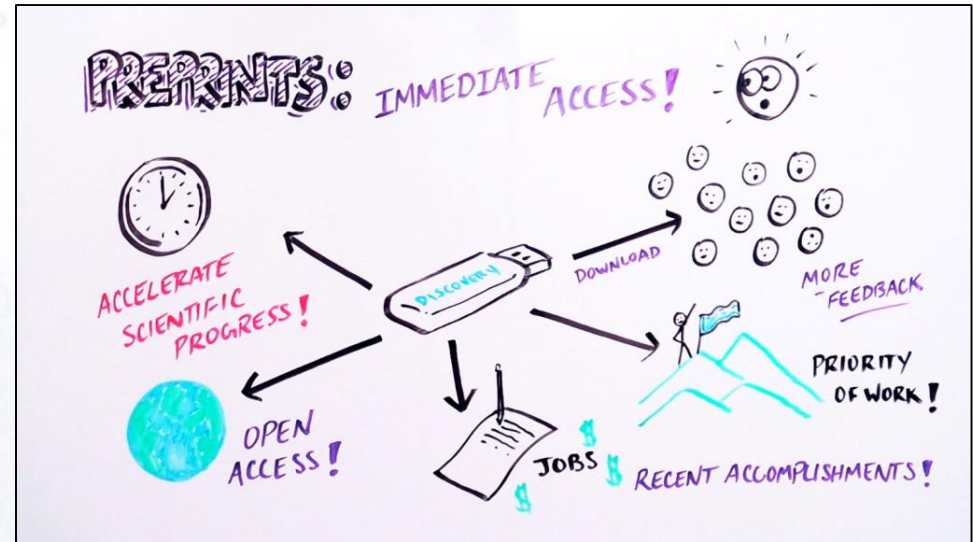


But putative quality problem...

- No formal evaluation – no peer-review
- Everything can be found in open archives including preprints of very bad quality

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But putative quality problem...

- No formal evaluation – no peer-review
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 **We therefore need preprint evaluation**



The Peer Community in initiative

The aim of PCI

Communities of researchers handling the **evaluation** of (through peer review) and **recommending preprints** in their scientific field.

bioRxiv

arXiv.org

zenodo

HAL

archives-ouvertes.fr

OSF PREPRINTS

etc ...

PCI Ecology

PCI Evolutionary Biology

PCI Genomics

etc..

PCI

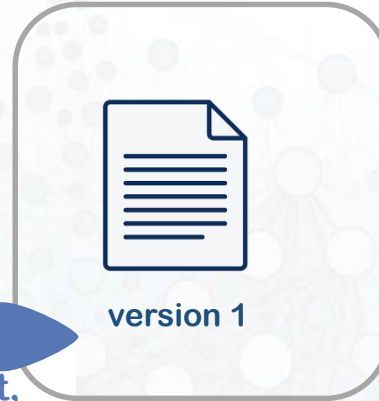
The background of the slide features a complex network diagram. It consists of numerous nodes, represented by circles of varying sizes and shades of blue and grey, interconnected by thin, light grey lines. The nodes are distributed across the entire frame, with a higher density in the center, creating a sense of a global or interconnected system.

How does it work?

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1

author deposits their manuscript,
data and code

Repository



PREPRINT server



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1

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data and code

2

author submits
the DOI/URL

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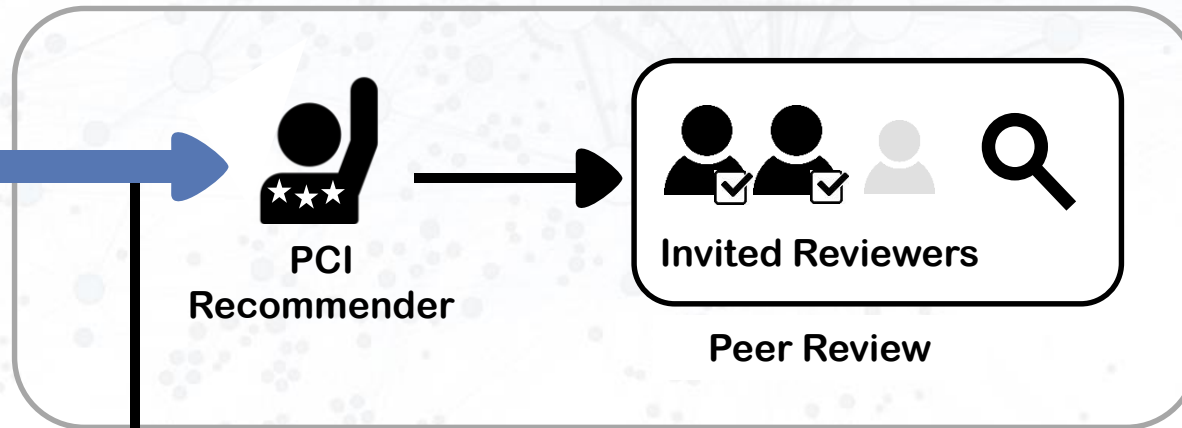


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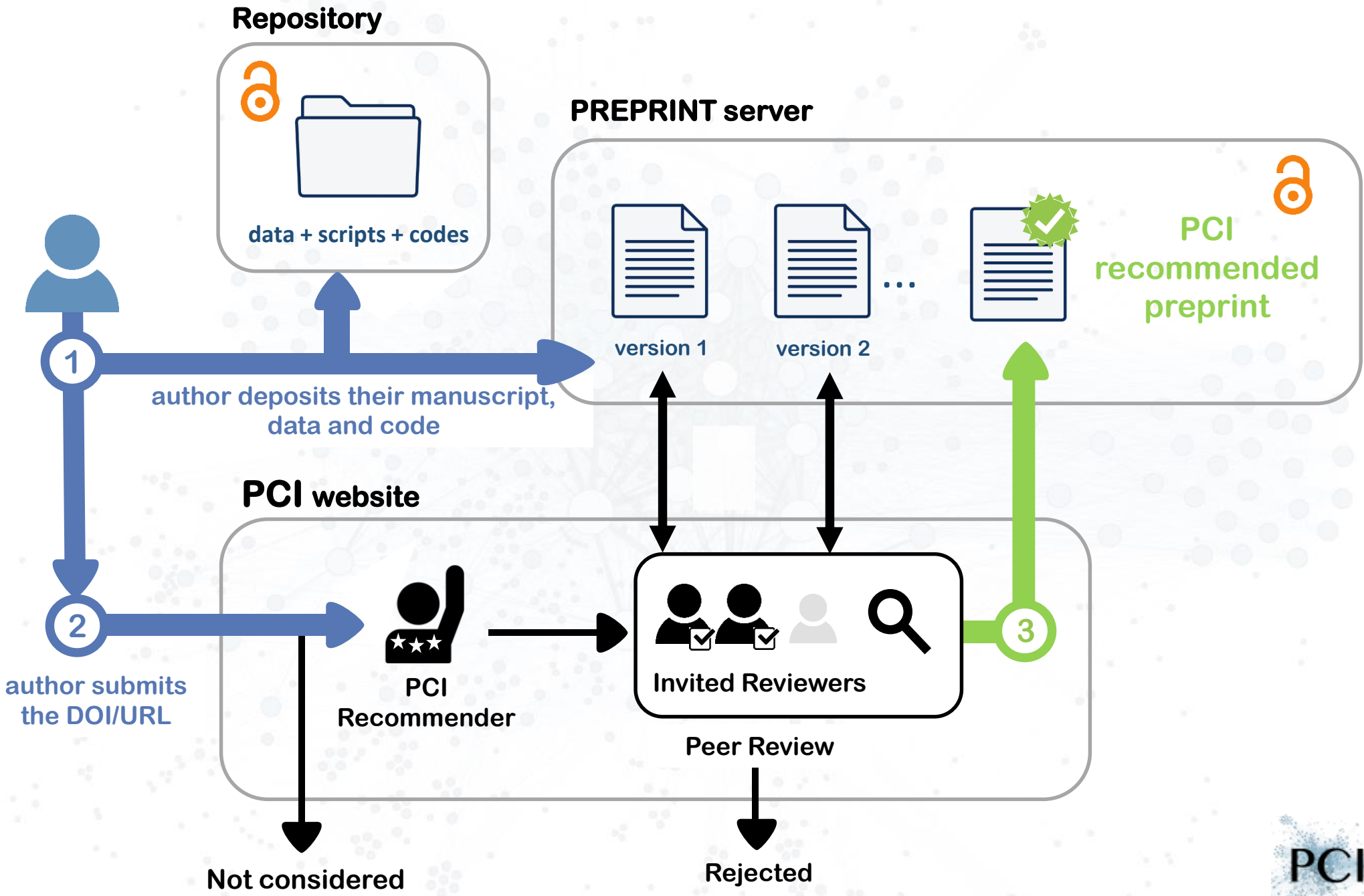


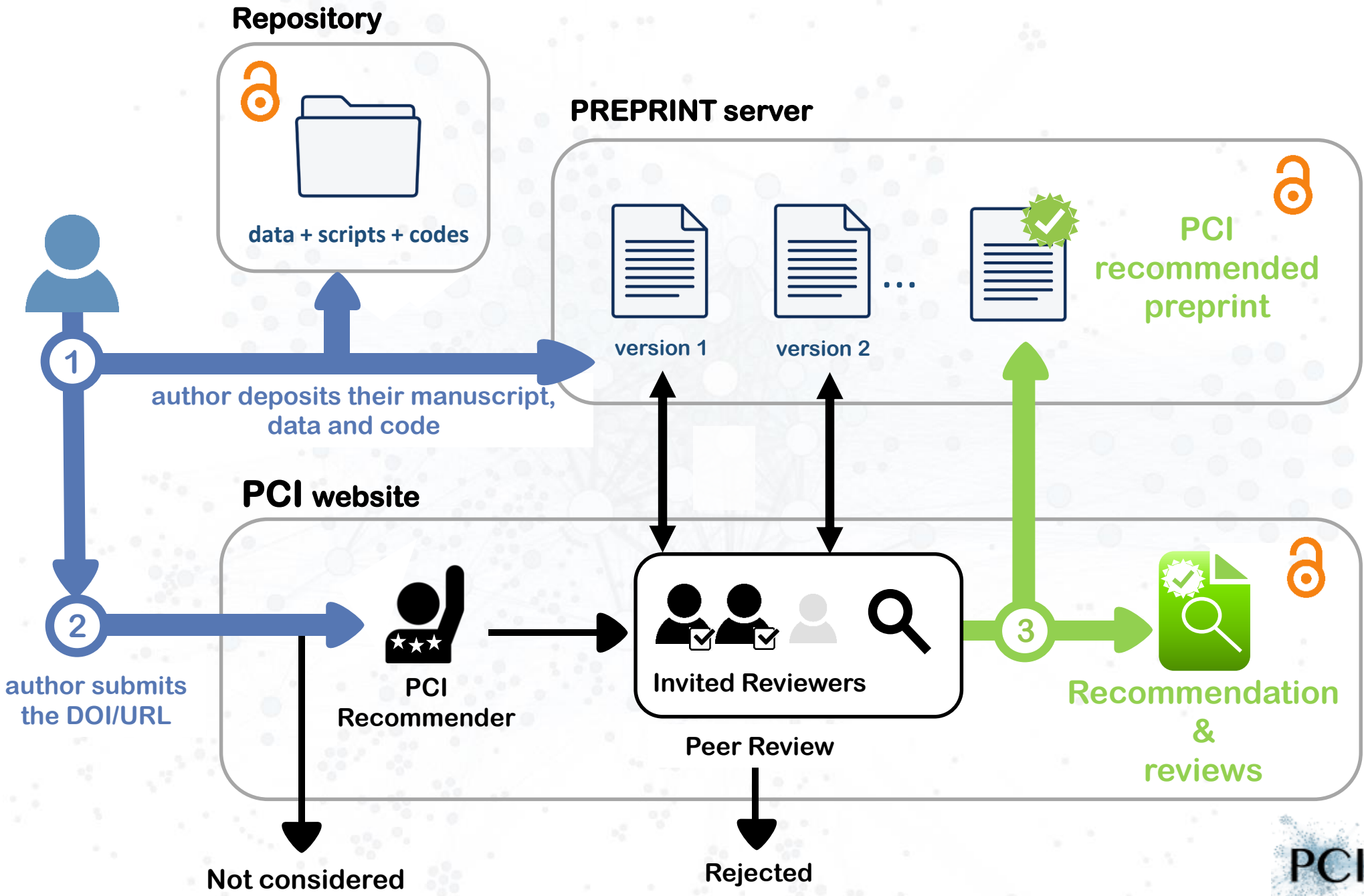
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Not considered







RESEARCH ARTICLE

- Open Access
- Open Data
- Open Code
- Open Peer-Review

Transposable Elements are an evolutionary force shaping genomic plasticity in the parthenogenetic root-knot nematode *Meloidogyne incognita*

Djampa KL Kozlowski¹, Rahim Hassanaly-Goulamhousen¹, Martine Da Rocha¹, Georgios D Koutsouvolos¹, Marc Bailly-Bechet^{1*}, Etienne GJ Danchin^{1*}.

¹ Université Côte d'Azur, INRAE, CNRS, ISA – Sophia Antipolis, France
* equal contribution

Cite as: Kozlowski DK, Hassanaly-Goulamhousen R, Da Rocha M, Koutsouvolos GD, Bailly-Bechet M, Danchin EG (2020) Transposable Elements are an evolutionary force shaping genomic plasticity in the parthenogenetic root-knot nematode *Meloidogyne incognita*. *bioRxiv*, 2020.04.30.069948, ver. 4 peer-reviewed and recommended by PCI Evolutionary Biology. <https://doi.org/10.1101/2020.04.30.069948>

Posted: 03 Aug 2020

Recommender: Inés Alvarez

Reviewers: Daniel Vitales and two anonymous reviewers

Correspondence: rahim.hassanaly@unice.fr
djampa.kozlowski@unice.fr

This article has been peer-reviewed and recommended by
Peer Community in Evolutionary Biology
<https://doi.org/10.24072/pci.evolbiol.100106>

ABSTRACT

Despite reproducing without sexual recombination, the root-knot nematode *Meloidogyne incognita* is adaptive and versatile. Indeed, this species displays a global distribution, is able to parasitize a large range of plants and can overcome plant resistance in a few generations. The mechanisms underlying this adaptability without sex remain poorly known and only low variation at the single nucleotide polymorphism level have been observed so far across different geographical isolates with distinct ranges of compatible hosts. Hence, other mechanisms than the accumulation of point mutations are probably involved in the genomic dynamics and plasticity necessary for adaptability. Transposable elements (TEs), by their repetitive nature and mobility, can passively and actively impact the genome dynamics. This is particularly expected in polyploid hybrid genomes such as the one of *M. incognita*. Here, we have annotated the TE content of *M. incognita*, analyzed the statistical properties of this TE content, and used population genomics approach to estimate the mobility of these TEs across 12 geographical isolates, presenting phenotypic variations. The TE content is more abundant in DNA transposons and the distribution of TE copies identity to their consensus sequence suggests they have been at least recently active. We have identified loci in the genome where the frequencies of presence of a TE showed variations across the different isolates. Compared to the *M. incognita* reference genome, we detected the insertion of some TEs either within genic regions or in the upstream regulatory regions. These predicted TE insertions might thus have a functional impact. We validated by PCR the insertion of some of these TEs, confirming TE movements probably play a role in the genome plasticity with possible functional impacts.

Keywords: transposons, genomic plasticity, evolution, agricultural pest, parthenogenesis, hybridization



Recommendation

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Determinants of population genetic structure in co-occurring freshwater snails

Trine Bilde and Matteo Fumagalli based on reviews by 3 anonymous reviewers

A recommendation of:



Connectivity and selfing drives population genetic structure in a patchy landscape: a comparative approach of four co-occurring freshwater snail species

Jarne P., Lozano del Campo A., Lamy T., Chapuis E., Dubart M., Segard A., Canard E., Pointier J.-P., David P. (2021), HAL, hal-03295242, ver. 4 peer-reviewed and recommended by Peer Community in Evolutionary Biology
<https://hal.archives-ouvertes.fr/hal-03295242>

Abstract

Submitted: 11 February 2021, Recommended: 01 September 2021

Recommendation

Genetic diversity is a key aspect of biodiversity and has important implications for evolutionary potential and thereby the persistence of species. Improving our understanding of the factors that drive genetic structure within and between populations is, therefore, a long-standing goal in evolutionary biology. However, this is a major challenge,



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Open Data



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PCI-recommended preprint

Recommendation text



Peer Community In Evolutionary Biology

RESEARCH ARTICLE

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Reviewers: Daniel Vitales and two anonymous reviewers

Correspondence: djampa.kozlowski@unice.fr
rahim.hassanaly@unice.fr
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PEER COMMUNITY IN EVOLUTIONARY BIOLOGY 1



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Open Data



Open Code



Final, valid, findable and citable article

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Publication of PCI-recommended preprints

PCI-recommended
preprint



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OR

PCI-friendly journals

Other journals

PCI-friendly journals

3 categories

1. Accept without further reviews



PCI-friendly journals

3 categories

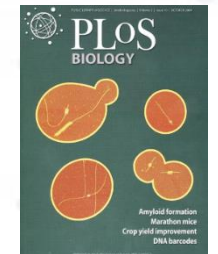
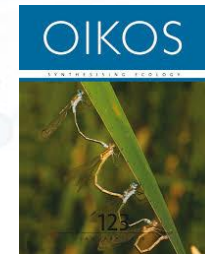
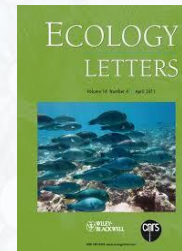
1. Accept without further reviews



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2. Fast response (≤ 5 days) to presubmission enquiry

- Accept without further reviews
- OR
- Need further reviews
- OR
- Not interested



...

PCI-friendly journals

3 categories

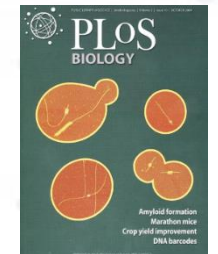
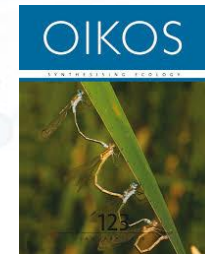
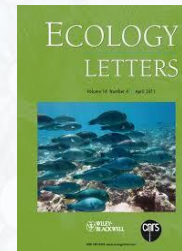
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2. Fast response (≤ 5 days) to presubmission enquiry

- Accept without further reviews
- OR
- Need further reviews
- OR
- Not interested



...

3. May use the evaluations of PCI if adequate



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Peer Community Journal

Search articles, authors. [Q Search](#) [Browse by volumes](#) [Browse by section](#)

Latest Articles



Evolutionary Biology

Relaxation of purifying selection suggests low effective population size in eusocial Hymenoptera and solitary pollinating bees

Weyna, Arthur ; Romiguier, Jonathan

10.24072/pcjournal.3 - Peer Community Journal, Volume 1 (2021), article no. e2.

With one of the highest number of parasite, eusocial and pollinator species among all insect orders, Hymenoptera features a great diversity of specific lifestyles. At the population genetic level, such life-history strategies are expected to decrease effective population size and efficiency of purifying selection. In this study, we tested this hypothesis by estimating the relative rate of non-synonymous substitution in 169 species to investigate the variation in natural selection efficiency throughout the hymenopterian tree of life. We found no effect of parasitism or body size, but show that relaxed selection is associated with eusociality, suggesting that the division of reproductive labour decreases effective population size in ants, bees and wasps. Unexpectedly, the effect of eusociality is marginal compared to a striking and widespread relaxation of selection in both social and non social bees, which indicates that these keystone pollinator species generally feature low effective population sizes. This widespread pattern suggests specific constraints in pollinating bees potentially linked to limited resource and high parental investment. The particularly high load of deleterious mutations we report in the genome of these crucial ecosystem engineer species also raises

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- 80 PCI recommended articles will be published in the weeks following the launch of the journal

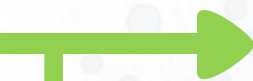
In summary

PCI-recommended
article



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Author's
choice to
submit to



Peer Community Journal

Direct publication in diamond open access

OR



PCI-friendly journals

- accept with no further peer review

OR

- fast response (≤ 5 days) to presubmission enquiry

OR

- use of PCI evaluation if appropriate

OR



Other journals

If not satisfied by
the decision

If not satisfied by
the decision

PCI

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- **... can know** within a few days **if one or more PCI-friendly journals**
 - are interested
 - will request or not further peer-review
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PCI in figures



14

PEER
COMMUNITIES



441

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256

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ARTICLES



47

MEDIAN TIME TO
1ST DECISION (DAYS)



>9200

TWITTER
FOLLOWERS



>5600

REGISTERED
USERS



>1700

RECOMMENDERS



120

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797

REVIEWERS



88

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2017

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2018

PCI Ecology

PCI Paleontology

2019

PCI Animal -Science

PCI Zoology

2020

PCI Mathematical and Computational
Biology

PCI Forest and Wood Science

PCI Network Science

PCI Genomics

PCI Archaeology

PCI Circuit Neuroscience

2021

PCI Registered Reports

PCI Ecotoxicology and Environmental
Chemistry

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Supports awards and recognition

Institutions and universities



MAX-PLANCK INSTITUTE
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de Guyane



Institut de Recherche
pour le Développement
FRANCE



université
de BORDEAUX

Université

de Strasbourg

UNIVERSITÉ DE
RENNES 1



AgroParisTech



Max Planck Institute
for Evolutionary Anthropology

Grants, awards and projects

PCI is one of the winners of the first call for projects of the French National Open Science Fund (2020)



Pilote project in « Notify » with COAR, Harvard Library, Los Alamos Lab, HAL, etc...

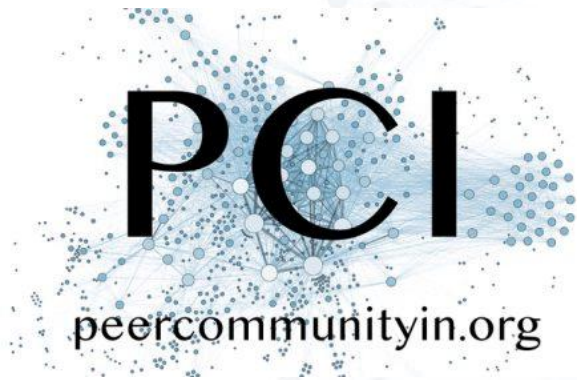
2020 LIBER Award for Library Innovation



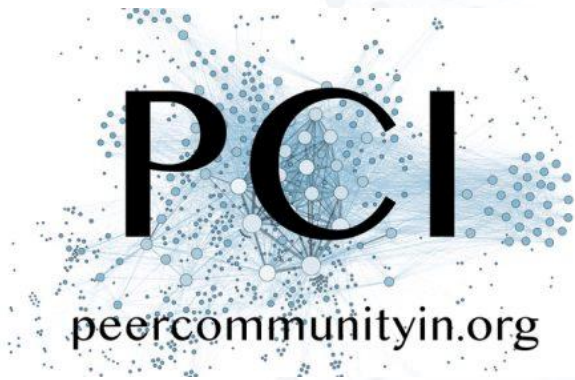
How to participate?



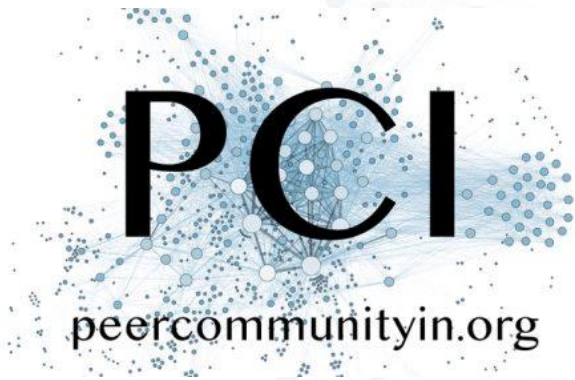
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- **Spread the word**



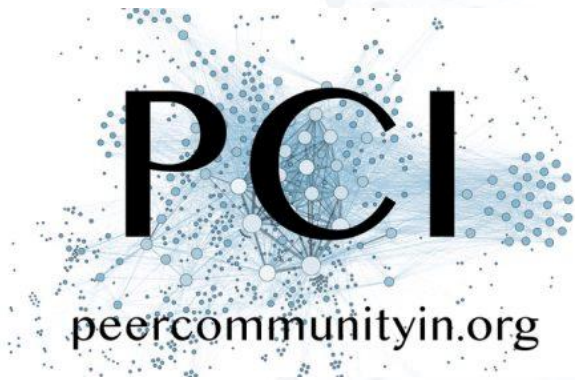
- **Submit your articles to a PCI**
- **Spread the word**
- **Give us contacts to obtain supports or recognition**



- **Submit your articles to a PCI**
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- **Give us contacts to obtain supports or recognition**
- **Think about founding a new PCI**



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- **Think about founding a new PCI**
- **Register to the PCIs' websites (to be reviewer)**



- **Submit your articles to a PCI**
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- **Consider becoming a recommender**

Peer Community in Ecotoxicology and Environmental Chemistry

- **Launched in 2021 by:**

Christian Mougin

Wilfried Sanchez

Pierre Labadie



INRAE



Ifremer



- **Scope: interfaces of environmental chemistry, ecology and environmental toxicology**
- **Currently 20 recommenders**

- **Our supports**



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- **Our website**

<https://ecotoxenvchem.peercommunityin.org/>

- **Our contact**

contact@ecotoxenvchem.peercommunityin.org

- **Current discussions for partnership with PCI-friendly journals**
- **Also seeking for:**
 - New submissions of preprints**
 - Additional recommenders**

Thanks!



@PeerCommunityIn

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