



PhD Library Camp

Module 2

Publishing an article: how to make an informed choice?

TABLE OF CONTENTS

Table of contents	2
Learning outcomes	2
ntroduction on Scientific Publications and Open Access models	3
Creative commons licenses	6
Archive ouverte UNIGE	7
Research evaluation	8
Online scientific ID	. 10
Academic social networks	. 11
Discerning choices for scientific publication	. 12
Documentation	. 12

LEARNING OUTCOMES

By the end of this workshop, you will be able to:

- Evaluate Open Scientific Information issues: Open Science, Open Access, Post-reviewing, Predatory Journals, Copyright licenses...
- Apply Open Access policies of the funding agencies
- Perform thoughtful choices for publication in order to enhance your scientific career

PART I

INTRODUCTION ON SCIENTIFIC PUBLICATIONS AND OPEN ACCESS MODELS

Publishing process

Science's quality guarantees come from a strict publishing process including editors' selection and peer review evaluation.



http://archive.senseaboutscience.org/pages/peerrevieweducation.html

Those steps will create different versions of a paper, depending on where the manuscript is in the publication process:

Table 1 Different versions of a ma	nuscript
------------------------------------	----------

Pre-referee version	Preprint	Article before reviewing of peers
Accepted version	Author Accepted Manuscript (AAM) or post-print	Accepted final peer-reviewed article without publisher layout
Publisher version	Version of Record (VoR)	Final peer-reviewed manuscript with publisher, under copyright of publisher or under nonexclusive right of diffusion by publisher because of a Creative Common license

Publishing models: Subscription VS Open Access

Traditional way of scientific publishing consists in a subscription or pay-per-view access to articles.



Henkel T, Vullioud-Marcacci S, Mellifluo L. Mastering the Publication Process to Promote Your Scientific Career.

Gold open-access journals offers all of its content open to everyone. Most of the time, authors have to pay a fee (Article/Book Publishing Charges (APC/BPC)).



Henkel T, Vullioud-Marcacci S, Mellifluo L. Mastering the Publication Process to Promote Your Scientific Career.

Gold Road VS Green Road



Figure adapted from the University of Birmingham : <u>https://intranet.birmingham.ac.uk/Images/business-school/bbs-newsletters/2014/03/two-routes.jpg</u>

In order to encourage Open Access, academic institutions and funding agencies created guidelines of researchers' obligations about articles' access.

Obligation for Gold or Green Roads within 6 months; No			
application = funding cutting			
Obligation for Gold or Green, Diamond Roads within 6 months			
Obligation for Gold or Green Roads within 6 months. No hybrid			
journals allowed			
Obligation for Gold or Green Roads within 12 months			
Recommendation for Gold or Green Roads within 12 months			
Target: 100% Open Access in 2017. Gold Road only and CC-BY			
license			



CREATIVE COMMONS LICENSES

	$(\mathbf{\hat{I}})$	ATTRIBUTION	This license lets you distribute, remix, tweak, and build upon the original work,
	Č.	CC BY	even commercially, as long as you credit the original creation. This is the most accommodating of licenses offered.
	AA	ATTRIBUTION-SH	AREALIKE
	U.S.	CC BY-SA	This license lets you remix, tweak, and build upon the original work even for commercial purposes, as long as you credit the original work and license your new creations under the identical terms. This license is often compared to "copyleft" free and open source software licenses. All new works based on the work should carry the same license, so any derivatives will also allow commercial use. This is the license used by Wikipedia.
		ATTRIBUTION-NO	DERIVS
	CC BY-ND	This license allows for redistribution, commercial and non-commercial, as long as it is passed along unchanged and in whole, with credit to the original work.	
		ATTRIBUTION-NO	NCOMMERCIAL
	U S	CC BY-NC	This license lets you remix, tweak, and build upon the original work non-commercially. Your new works must be non-commercial and acknowledge the original work, but you don't have to license your derivative works on the same terms
		ATTRIBUTION-NO	NCOMMERCIAL-SHAREALIKE
		CC BY-NC-SA	This license lets you remix, tweak, and build upon the original work non-commercially, as long as you credit the original work and license your new creations under the identical terms.
		ATTRIBUTION-NO	NCOMMERCIAL-NODERIVS
		CC BY-NC-ND	This license is the most restrictive of the six main licenses, only allowing you to download the original work and share it with others as long as you credit the

6

ARCHIVE OUVERTE UNIGE

https://archive-ouverte.unige.ch

The *Archive ouverte UNIGE* is the digital repository of the University of Geneva. One of its roles is to give the largest possible access to the publications of the institution's researchers, following the recommendations of **Open Access**.

All doctoral thesis, scientific articles and books published by UNIGE members must be submitted to the Archive ouverte UNIGE.

Conference proceedings, reports and master thesis may also be submitted. However, you can't submit preprints, professional articles, posters or PowerPoint presentations.

Beyond these obligations, the diffusion of your work on this open repository offers major advantages:

- increase of visibility for your research projects
- quick dissemination and acceleration of scientific exchanges
- guarantee of stable and enduring access to your papers
- application of the directives of the Swiss National Science Foundation concerning Open Access

Unfortunately some publishers don't allow you to put your work online if it has just been published in one of its journals. To find out if your publishers' copyright rules allow you to submit your publication in the Archive ouverte UNIGE, you can check in the **Sherpa/RoMEO** database:

www.sherpa.ac.uk/romeo

Even if your publication can't be publicly available according to the publishers' copyright rules, you still have to put it in the Archive ouverte UNIGE, where you can **restrict access to UNIGE community**.

UNIGE Open Access Policy

Institutional policy : <u>https://archive-ouverte.unige.ch/pages/unige_policies</u>

- Obligation for all UNIGE collaborators to deposit a copy of their publications in Archive ouverte UNIGE (§2 of institutional Policy)
- Solution to select the most open access level possible (§4)
- Both Version of Record and Author Accepted Manuscript are accepted

Metrics to evaluate journals

The most famous metric to evaluate journals is the **Impact Factor**, which is calculated by this formula:

IF 2017 of *Nature* = $\frac{\sum \text{ of citations in 2017 of articles published in 2015+2016 by$ *Nature* $}}{\sum \text{ of article published in 2015+2016 by$ *Nature* $}}$

Many editors provide Impact Factors for their journals on their websites:

- Elsevier Impact metrics: http://about.elsevier.com/metrics/2017/index.htm
- Nature research journal metrics: <u>www.nature.com/npg_/company_info/journal_metrics.html</u>
- SAGE Impact Factor & Ranking Results: <u>https://uk.sagepub.com/en-gb/eur/impact-factor-ranking-results</u>
- Springer Impact Factor and alternative metrics: <u>www.springer.com/gp/authors-editors/journal-author/impact-factors</u>

Check if you can retrieve the Impact Factor the journals you frequently read:

CiteScore from SCOPUS is another metric available to evaluate journals on the Scopus website: <u>https://www.scopus.com/sources</u>

The formula is closed to the one of the impact factor except that 3 years of publications are taken into account (instead of 2) and that there are more document types in the citable items (short abstracts, editorials...)

CS 2017 of *Nature* = $\frac{\sum \text{ of citations in 2017 of articles published in 2014+ 2015+2016 by Nature}}{\sum \text{ of article published in 2014+2015+2016 by Nature}}$

The **Eigenfactor** is freely available on:

http://www.eigenfactor.org/projects/journalRank/journalsearch.php

The algorithms use the structure of the entire network (instead of purely local citation information) to evaluate the importance of each journal.



https://www.researchgate.net/publication/332085275 Measuring Academic Success The Art and Science of Publication M etrics/figures?lo=1

Metrics to evaluate scientists

The "performance" of a researcher is commonly evaluated with an indicator called **h**-index and calculated as follows:



Within **Web of Science**, you can obtain a citation overview from a search result and get the h-index of an author with the link "*Create Citation Report*".

Web of Science		•	Clarivate Analytics			
Search Search Results			and alerts 👻 Search History Marked List			
Citation report for 71 results from Web of Science Core Collection between 1900 - and 2018 - Go You searched for: AUTHOR: (galliot b)More This report reflects citations to source items indexed within Web of Science Core Collection. Perform a Cited Reference Search to include citations to items not indexed within Web of Science Core Collection.						
			Export Data: Save to Excel File 🔹 🗡			
Total Publications	h-index 🕚	Sum of Times Cited	Citing articles 🚯			
71 Analyze	31	6 225	5 395 Analyze			
.1 a 100111001100.0 1999 2018	Average citations per item 87,68	Without self ditations 5 901	Without self diations 5 342 Analyze			

What is your PhD director's h-index within Web of Science?
Look at your neighbor's and make hypothesis to state why it is higher/lower:

A scientist can create a personal profile in **Google Scholar**. If he made it, you can consult his h-index, based on publications referenced by the scientist as his own and citations of these publications within the Google Scholar database:

LUCE B	Robbie Loewith University of Geneva eukaryote growth control, signal transduction, Target Of Rapam molecular biophysics	vcin Complexes	Google Scholar			
Title 1–20	Verified email at unige.ch - Homepage	Cited by	Year	Get m	y own profile All	Since 2010
TOR signaling in gro S Wullschleger, R Loew Cell 124 (3), 471-484	wth and metabolism th, MN Hall	3519	2006	Citations Frindex i10-index	10335 20 31	7189 20 30
Mammalian TOR co insensitive E Jacinto, R Loewith, A Nature cell biology 6 (11	mplex 2 controls the actin cytoskeleton and is rapamycin Schmidt, S Lin, MA Rüegg, A Hall, MN Hall), 1122-1128	1266	2004	2007 2008 2009 2010	2011 2012 2	2013 2014 2015
Two TOR complexes	s, only one of which is rapamycin sensitive, have distinct					

"Everything that can be counted does not necessarily count; everything that counts cannot necessarily be counted."

Albert Einstein

ONLINE SCIENTIFIC ID

Since personal names can change, may not be unique, contain inconsistent-use of first-names abbreviation, it is important to use scientific unique identifier.

There are several of them:

Researcher ID from Thomson Reuters: <u>https://www.researcherid.com</u>

ORCID (Open Researcher and Contributor ID) which is non-proprietary: <u>https://orcid.org/</u>

- The registry is an independent nonprofit organization
- No fees
- Alphanumeric code to uniquely identify scientific authors (ex: 0000-0003-0166-248X)
- ORCID is a subset of the International Standard Name Identifier (ISNI)

ACADEMIC SOCIAL NETWORKS

Academic Social Networks are becoming essential for scientists to communicate,

connect and collaborate among the scholarly community. The 2 main commercial platforms are Academia <u>https://www.academia.edu/</u> and ResearchGate <u>https://www.researchgate.net/</u>

ACADEMIA	ResearchGate
 ✓ 85M users ✓ No institution checking ✓ Humanities oriented 	 ✓ 15M users ✓ Institution checking ✓ STM oriented

PART II: STUDY CASES

DISCERNING CHOICES FOR SCIENTIFIC PUBLICATION

Group 1 How to choose a journal?Group 2 Who should be author?Group 3 How to comply with OA and copyright?

Section objectives

1	The participant takes into account indexation of the journal by search tools, publisher embargo period , IF value , and access to journal	
2	The participant makes a clear difference between authors who share responsibilities for any paper they co-author, acknowledges individuals who have partially contributed to the study and details author contributions	
3	The participant applies SNSF OA policy , and uses institutional and/or disciplinary Open Access repositories for self-archiving besides personal website or social media	

DOCUMENTATION

Parts of this document is based on a CUSO handout "Mastering the publication process to promote your scientific career" published under a CC-BY-NC-SA license in 2019 by Thomas Henkel and Laure Mellifluo, itself adapted from a previous version originally published under a CC-BY-NC-SA license in 2017 by Thomas Henkel and Sylvie Vullioud-Marcacci.



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Group 1 How to choose a journal? [Findability]

Study case

Professor David Horisberger advised his PhD Colin 4 journals in which Colin should publish his new method for Alzheimer disease study in rats, originally developed for Huntington disease study.

- Before answering him, the student considers those 4 options
- He prepared a table as a base of discussion with his professor;
- He thinks that 2 journal candidates could be selected amongst the pre-selected 4;
- His project thesis was financed by SNSF.

Target

Explain to participants which 2 journals Colin may have selected?

1. Preparation 45'

- Find if the journals are indexed by Web of Science (WoS) and other interdisciplinary search tools such as Google Scholar and what are their Impact Factor according to Journal of citation report (JCR)
- Look if the journals are indexed by most important domain search tool (here ex <u>Pubmed</u>)
- Find embargo period and publication model with <u>Romeo/Sherpa Publisher Copyright</u> <u>policies & Self-Archiving</u> and journal website

Find if embargos and publication models comply with SNF policies: <u>http://www.snf.ch/en/theSNSF/research-policies/open-access/Pages/default.aspx</u>

2. Presentation 10'

Slide 1

Display the study case to allow course participant to read it

Slide 2 = online demos on how to find one of those journals information about: indexation by WoS, IF, self-archiving type of manuscript and embargo period if any

Slide 3 Target

Comment the table, explain why Colin considers seriously two of the 4 propositions.

2. Discussion 15'

Key questions to raise to audience are:

Slide 4: Is it better to choose a journal that is indexed by WoS?
Slide 5: Is it better to choose multidisciplinary or specialized journals?
Slide 6: Is it better to choose a subscription-based journals or a Gold-OA journal?
Slide 7: Is it better to choose a subscription-based journal with high IF or Gold-OA journal with lower IF?

Resources at glance: how to choose a journal?

Journal of citation report (JCR): <u>https://jcr.clarivate.com</u> Sherpa/Romeo: <u>http://www.sherpa.ac.uk/romeo/index.php</u>

	Audience	Originality	Findability	Prestige	Publication model	OA compliance
	Ļ	Ļ	Ļ	Ļ	Ļ	Ļ
Journal	Domain?	Chances of being published?	Database indexation?	WoS Impact Factor?	OA, subscription or hybrid?	Embargo on self- archiving?
Nature						
PLOS ONE						
Alzheimer's Research & Therapy						
Alzheimer's & Dementia						

Group 2 Who should be author? [Work contribution and content responsibility]

Study case

The PhD student Marie Schuller is writing an article on pro-biotics supplementation:

- She is writing the article together with **John Imrak**, a post-doc student located abroad. They both processed Marie's data.
- She generated her own data, but combined them with non-published older data from a former lab PhD, **Stefan Aragno**.
- Marie designed the experiment together with Marc Hindermülle, a statistician.
- **Paul Vinze** is Marie Schuller's Professor and raised the project funding money. He read the article when the writing of Marie and John was finished and was very happy of the work and conclusions, allowing Marie to submit her article to a journal. Prof. Vinze's chair is funded by Nestlé and Roche.

Target

Who should be mentioned as an author on Marie's article?

1. Preparation 45'

- Check the guidelines of the Swiss Academies of Arts and Sciences and the policies of your institution
 Swiss Academy of Arts and Sciences: <u>Authorship in scientific publications: analysis</u> <u>and recommendations</u> (chapter 3)
 UNIGE: <u>Integrity in scientific research: guidelines on integrity in research and</u> <u>procedures for handling alleged violations</u> (art. 2.10)
- Find out about authorship abuse and its consequences loannidis, J. P. A., Klavans, R., & Boyack, K. W. (2018). Thousands of scientists publish a paper every five days. *Nature*, *561*(7722), 167–169. <u>https://doi.org/10.1038/d41586-018-06185-8</u>
- Find an example of good practice in acknowledgement and author contributions Enabling the Contributor Roles Taxonomy for author contributions. (2017). *Inside eLife*. Retrieved July 24, 2019, from <u>https://elifesciences.org/inside-elife/f39cfcf5/enabling-the-contributor-roles-taxonomy-for-author-contributions</u>

2. Presentation 15'

Slide 1: Display the study case to allow course participant to read it

Slide 2 : online demos of how to know what authorship is or not

Slide 3: Show below table and comment the increasing transparency of solutions. Which configuration should Marie choose?

3. Discussion 10'

Key questions to raise to audience are:

Slide 5: Are all authors responsible of the content? Slide 6: Is the meaning of author place the same for a reader or for citation counting "machine"?

Further readings

• Kovacs, J. (2013). Honorary authorship epidemic in scholarly publications? How the current use of citation-based evaluative metrics make (pseudo)honorary authors from

honest contributors of every multi-author article. *Journal of Medical Ethics*, 39(8), 509–512. <u>https://doi.org/10.1136/medethics-2012-100568</u>

- Kwok, L. S. (2005). The White Bull effect: abusive coauthorship and publication parasitism. *Journal of Medical Ethics*, 31(9), 554–556. <u>https://doi.org/10.1136/jme.2004.010553</u>
- McNutt, M.K., Bradford, M., Drazen, J.M., Hanson, B., Howard, B., Jamieson, K.H., et al. (2018). Transparency in authors' contributions and responsibilities to promote integrity in scientific publication. *PNAS*. 115(11): 2557–2560. <u>https://doi:10.1073/pnas.1715374115</u>
- Woolston, C. (2015). Fruit-fly paper has 1,000 authors. *Nature*, 521(7552), 263–263. https://doi.org/10.1038/521263f

	1 st author	2 nd author	Last author	Dataset citation	Acknowledgment	Author contributions	Declaration of conflict of interest
1	Marie Schüller	John Imrak	Paul Vinze	Marie Schuller dataset	none	none	none
2	Marie Schüller	John Imrak	Paul Vinze	Marie Schuller dataset	none	none	Prof Paul Vinze chair funded by Nestlé and roche
3	Marie Schüller	John Imrak	Paul Vinze	Marie Schuller dataset	Marc Hindermülle for statistical design	none	Prof Paul Vinze chair funded by Nestlé and roche
4	Marie Schüller	John Imrak	Paul Vinze	Marie Schuller dataset	Marc Hindermülle for experimental design Stefan Aragno for his unpublished data that were mixed with mine to form the cited dataset, with his consent.	none	Prof Paul Vinze chair funded by Nestlé and roche
5	Marie Schüller	John Imrak	Paul Vinze	Marie Schuller dataset	Marc Hindermülle for experimental design Stefan Aragno for his unpublished data that were mixed with mine to form the cited dataset, with his consent.	Conceived and designed the experiments: MS, JI. Performed the experiments: MS. Analyzed the data: MS, JI. Wrote the paper: MS, JI	Prof Paul Vinze chair funded by Nestlé and roche
6	Marie Schüller	none	John Imrak	Marie Schuller dataset	Marc Hindermülle for experimental design Stefan Aragno for his unpublished data that were mixed with mine to form the cited dataset, with his consent. Prof Paul Vinze for support	Conceived and designed the experiments: MS, JI. Performed the experiments: MS. Analyzed the data: MS, JI. Wrote the paper: MS, JI	Prof Paul Vinze chair funded by Nestlé and Roche

Group 3 Where and how to diffuse a research paper? [OA and copyright compliance]

Study Case

You are given 5 articles and corresponding self-archiving full texts.

Target

Complete the chart and find the 2 best self-archiving practices, for copyright and OA compliances

1. Preparation 45'

- Find about <u>FNS open access policy</u>
- What are publishers' requirements? <u>Sherpa/Romeo</u>
- What are the risks faced by authors who don't comply publishers' and/or funders' requirements?

<u>Funders punish Open Access dodgers</u> <u>Elsevier Takedown Notices for Faculty Articles on UC Sites</u> <u>Social-sciences preprint server snapped up by publishing giant Elsevier</u>

2. Presentation 10'

Slide 1: Display the table study case to allow course participant to read it
Slide 2: online demos on how to find open access funding agency SNSFpolicies
Slide 3: Show completed table and comment each cell also by opening the links
Slide 4: Show the participants how to prepare an article for self-archiving. What are key elements? Why is there this preparation to be done, will it be always like this in Switzerland?

3. Discussion 15'

Key questions to raise to audience are:

Slide 5: What are consequences if Copyright is not respected?

Slide 6 :What are consequences if OA of funding agency is not respected?

Slide 7 : Are funding agency Open Access and publisher Copyright policies compatible?

Article (with <i>gest-unige</i> wifi without VPN)	Journal business model	Open archive Type of full text?	Social media Type of full text?	Copyright compliance ? Yes/No	OA SNSF compliance? Yes/No
Magrelli, Silvia et al. Social orienting of children with autism to facial expressions and speech: a study with a wearable eye-tracker in naturalistic settings. Frontiers in Psychology 4, p. 840 (2013)	Gold OA	Archives ouvertes Genève	Linked-in: Reference only		
Frederic Mery and Tadeusz J. Kawecki. A Cost of Long-Term Memory in Drosophila. Science 308 (5725): 1148 (2005)	Subscription based	Rerodoc Fr	None		
Neyen, Claudine; Bretscher, Andrew J.; Binggeli, Olivier; Lemaitre, Bruno. Methods to study Drosophila immunity. Methods 68 (1): 116-128 (2014)	Hybrid	Infoscience	<u>Research</u> <u>Gate</u>		
Müller L, et al. A new exposure system to evaluate the toxicity of (scooter) exhaust emissions in lung cells in vitro. Environmental Science Technology 44(7):2632-38 (2010).	Subscription based	<u>Boris</u>	Research Gate		
Hameri et al. Production Flow Analysis - cases from manufacturing and service indus try. International Journal of Production E conomics 129(2) pp. 233-241. (2011)	Hybrid	Serval	<u>Research</u> <u>Gate</u>		

Check-list: overview of publication steps

Before project	The project leader includes Gold-OA funding's and writes a data research management (DRM) plan to funding agency [not done by PhD, but by PI when submitting project]					
Journal selection before	The PhD avoids hybrid journals , as recommended by SNSF , favors Gold-OA journals OR subscription based journals allowing Green-OA within 6 months to comply with SNSF OA policy, favor journals allowing use of pre-print server					
whiting	The PhD take into account IF value, indexation of journal by search tool, OA-conditions , CC license, ORD compatibility and avoids predatory journals					
Before publisher signature	The PhD signs agreement with the publisher for the re-use of the article in his PhD if necessary					
Signature	The PhD select a publisher compatible with his OA-thesis, if a monograph version is to be published					
After signature and during	The PhD writes affiliation according to institutional guidelines for easy University bibliometrics [not treated in this course. To be checked with PI]					
writings	The PhD prepares research data : anonymization, metadata, compatibility format, and selection of ORD repository with help of DRM plan [not treated in this course. To be done with PI]					
	The PhD chooses carefully keywords in title, abstract, and author keywords to enhance findability by search tools [not treated in this course]					
	The PhD avoids auto-plagiarism numerous auto-citations and citations to please supervisor and/or, editor and/or publisher, and avoids secondary citations if not necessary [PhD beginners course]					
	The PhD complies with check-lists for best reporting of experimental design, protocols, and statistics in supplementary material, material and methods or in data paper linked to published datasets , allowing reader to rapidly detect putative bias , and to ease reproducibility					
	The PhD writes agency funding agency or sponsor name , project number, and make a clear declaration of conflict interest to allow reader to evaluate putative bias					
	The PhD makes difference between authors who share responsibilities of the paper and acknowledges individuals who contributed partially to the study. Author contribution may clarify respective author work to the paper, as well as dataset citations .					
During evaluation	The PhD stays up-to-date on a specific question effortlessly thanks to emails, RSS alerts and group bibliographies alerts [PhD beginners course]					
process	The PhD follows online reviewing process : pre-print-, open-, blind-, double blind reviewing) [not treated in this course]					
	The PhD keeps carefully the accepted manuscript for further Green-OA compliance					
After publication	The PhD self-archives Gold and subscription based articles in institutional and/or disciplinary OA repositories (+ embedded mark for article type of manuscript + DOI to original publication)					
	The PhD reuses publisher version of articles for the thesis (+ embedded mark publisher authorization of reuse if necessary + DOI to original publication)					
	The PhD updates his personal reference list on ORCID , and/or Thomson Researcher ID, Scopus Researcher ID					
	The PhD follows publication comments from " post-reviewing " sources (journal, dedicated websites, search tools, and social media Academia, Research Gate, Linked-in, Twitter.					