



# Collaborative Writing and Publishing

*Why 2 million+ users write articles with Overleaf*

*EIFL Webinar, September 27<sup>th</sup> 2018*

John Hammersley

Cofounder and CEO, Overleaf

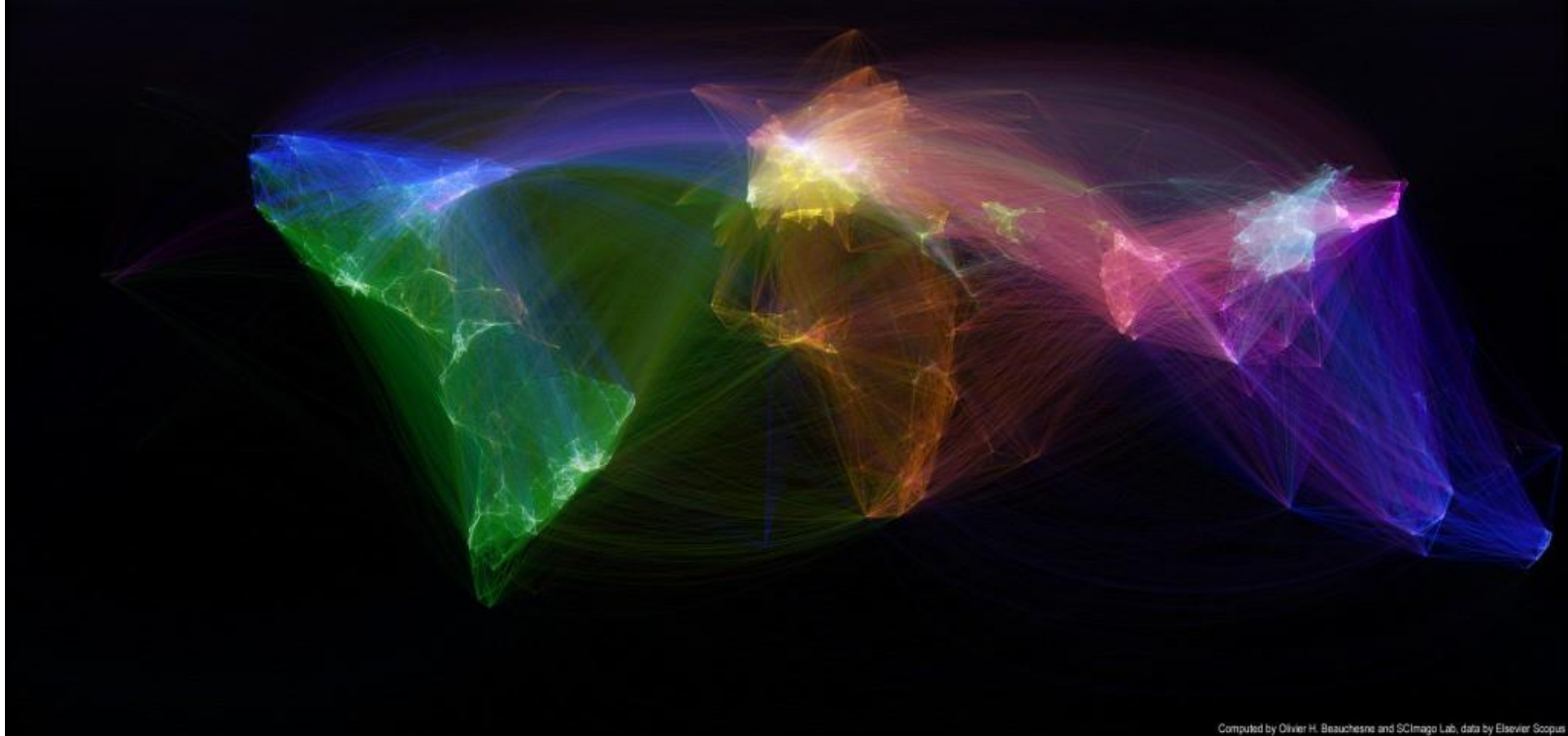
[www.overleaf.com](http://www.overleaf.com)

$$\Delta A = \frac{\partial F}{\partial x_2}(A);$$
$$\frac{\partial^2 F}{\partial y \partial x}(A);$$



$$m_i = f(x_i) \Delta x_i \Delta y_i \Delta z_i$$

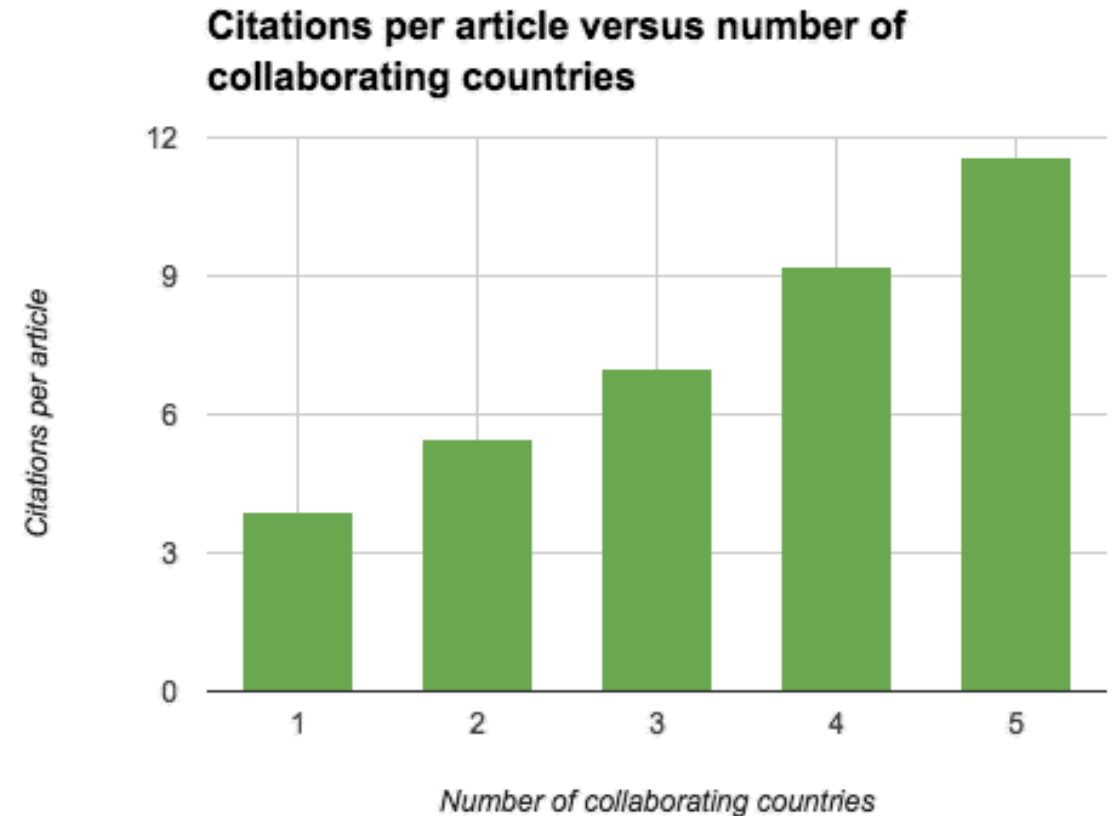
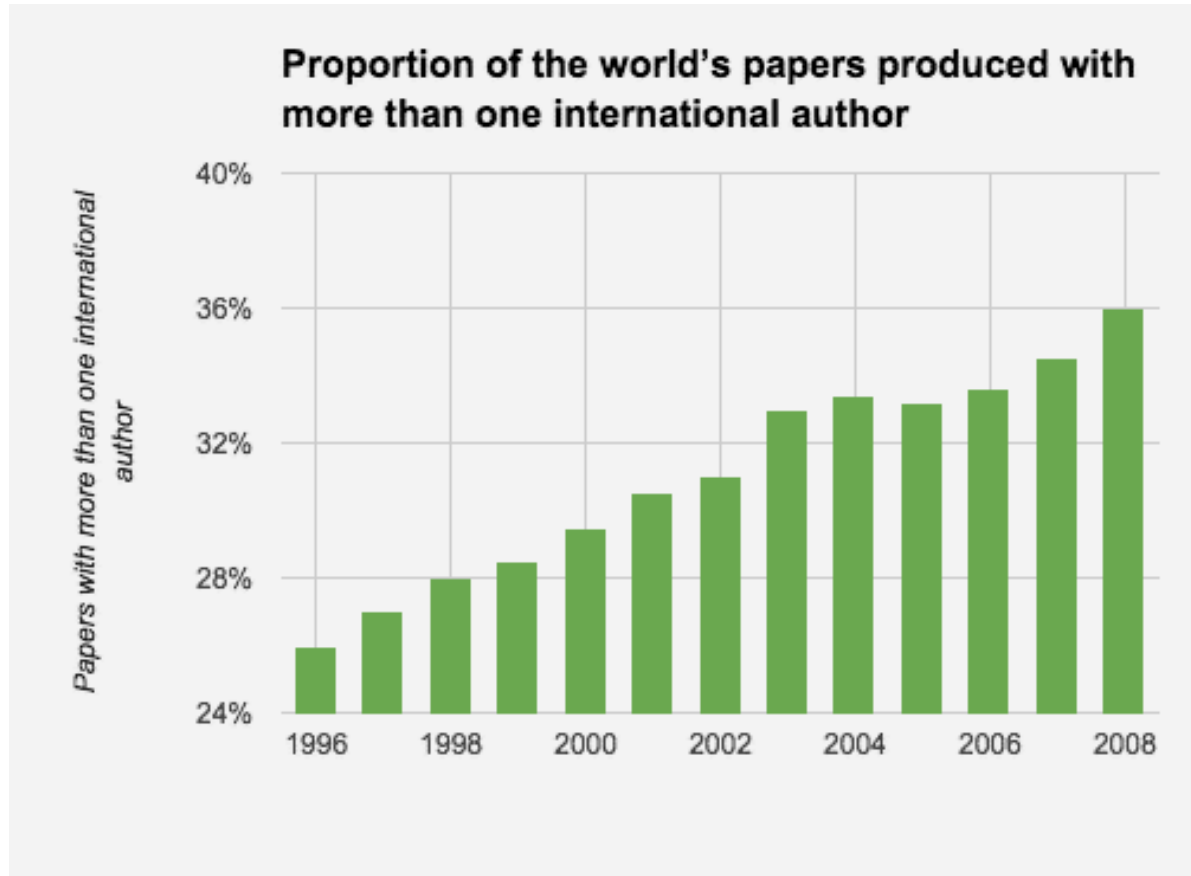
*Global scientific collaboration is increasing...*



Collaboration networks between researchers in different cities  
(built using Scopus data on papers published between 2008 and 2012)

Source: <http://olihb.com/2014/08/11/map-of-scientific-collaboration-redux/>

# *Collaborative projects are more widely cited in follow up research...*



*But collaboration can be frustrating...*

- Multiple versions of the same document
- Long email chains
- Formatting & typesetting
- Maintaining references
- Long revision cycles

## "FINAL".doc



FINAL.doc!



FINAL\_rev.2.doc



FINAL\_rev.6.COMMENTS.doc



FINAL\_rev.8.comments5.  
CORRECTIONS.doc



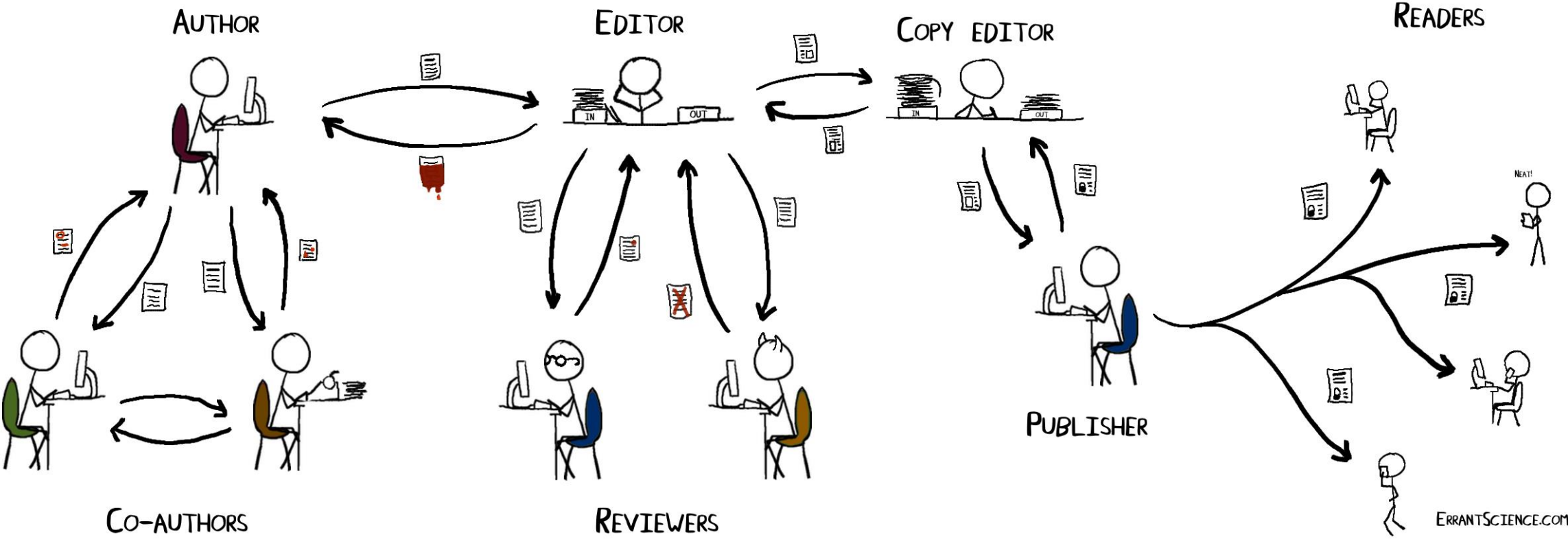
FINAL\_rev.18.comments7.  
corrections9.MORE.30.doc



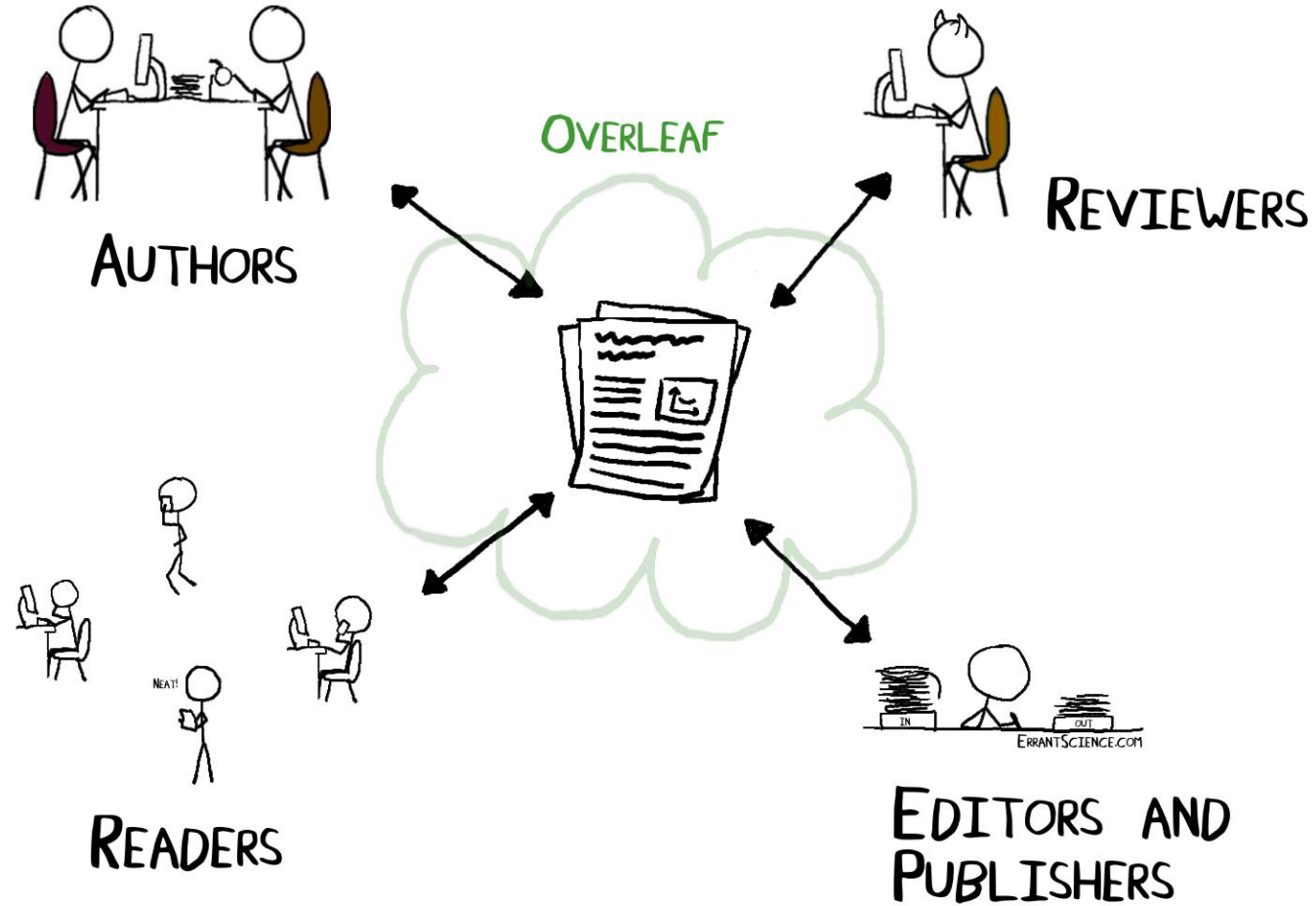
FINAL\_rev.22.comments49.  
corrections.10.#@\$%WHYDID  
ICOMETOGRADSCHOOL?????.doc



*The more people involved, the greater the chance of creating many conflicting versions of a document, all held in silos...*



*Overleaf helps ensure that everyone is always working on the latest version...*



# What Overleaf is doing for end users

---

## **Making research faster, more open & more accessible:**

- One version of document accessible by all
- No need to email large files, simply share a link or invite by email
- Typesetting done automatically in the background
- Easily work with references and citations
- Review tools provide real-time commenting, track changes & version control
- No local software installation on multiple machines required
- End user tech support – platform, templates, LaTeX

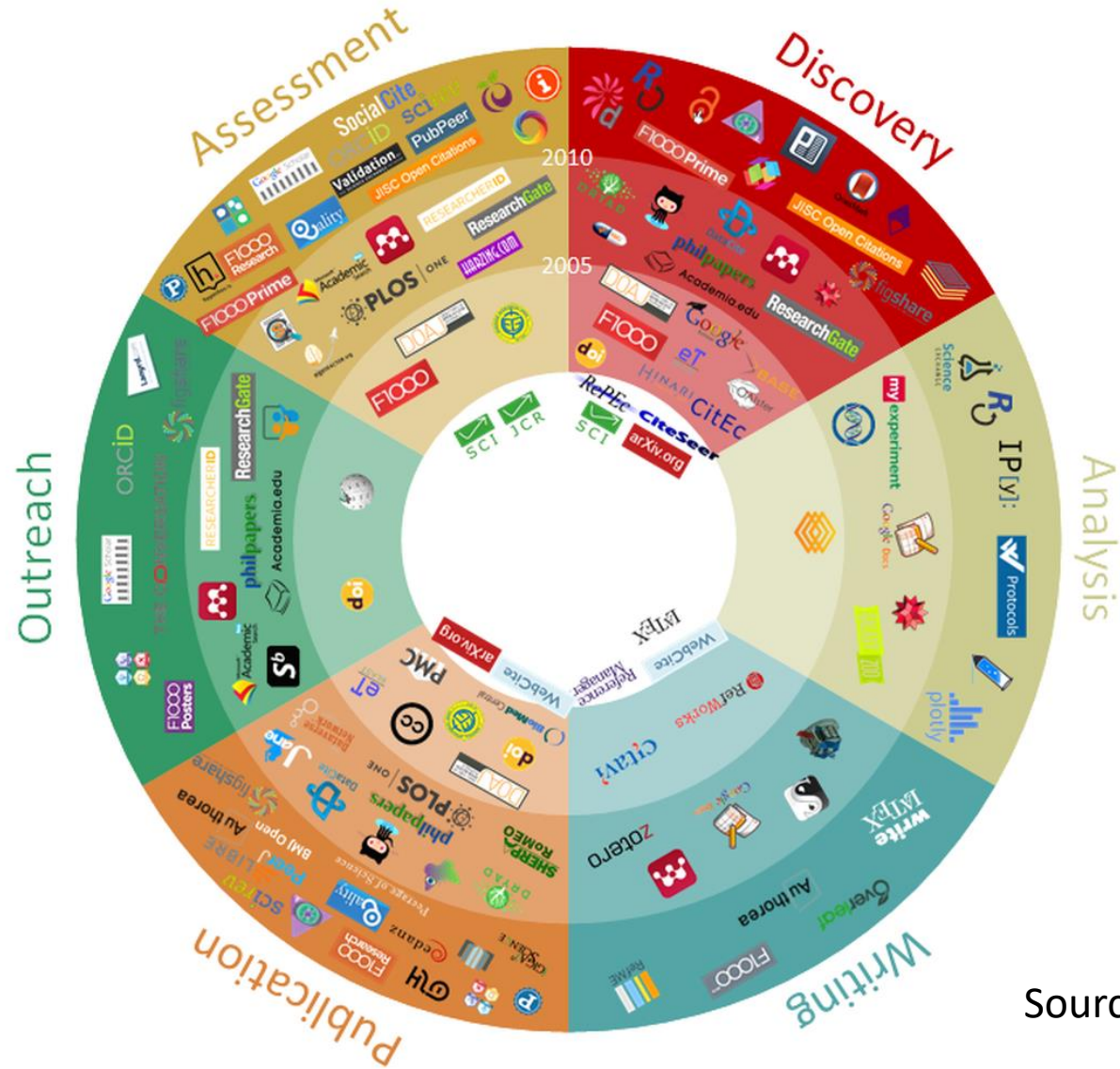




Free to use, Overleaf is now serving a community of over two million authors from 180 countries worldwide



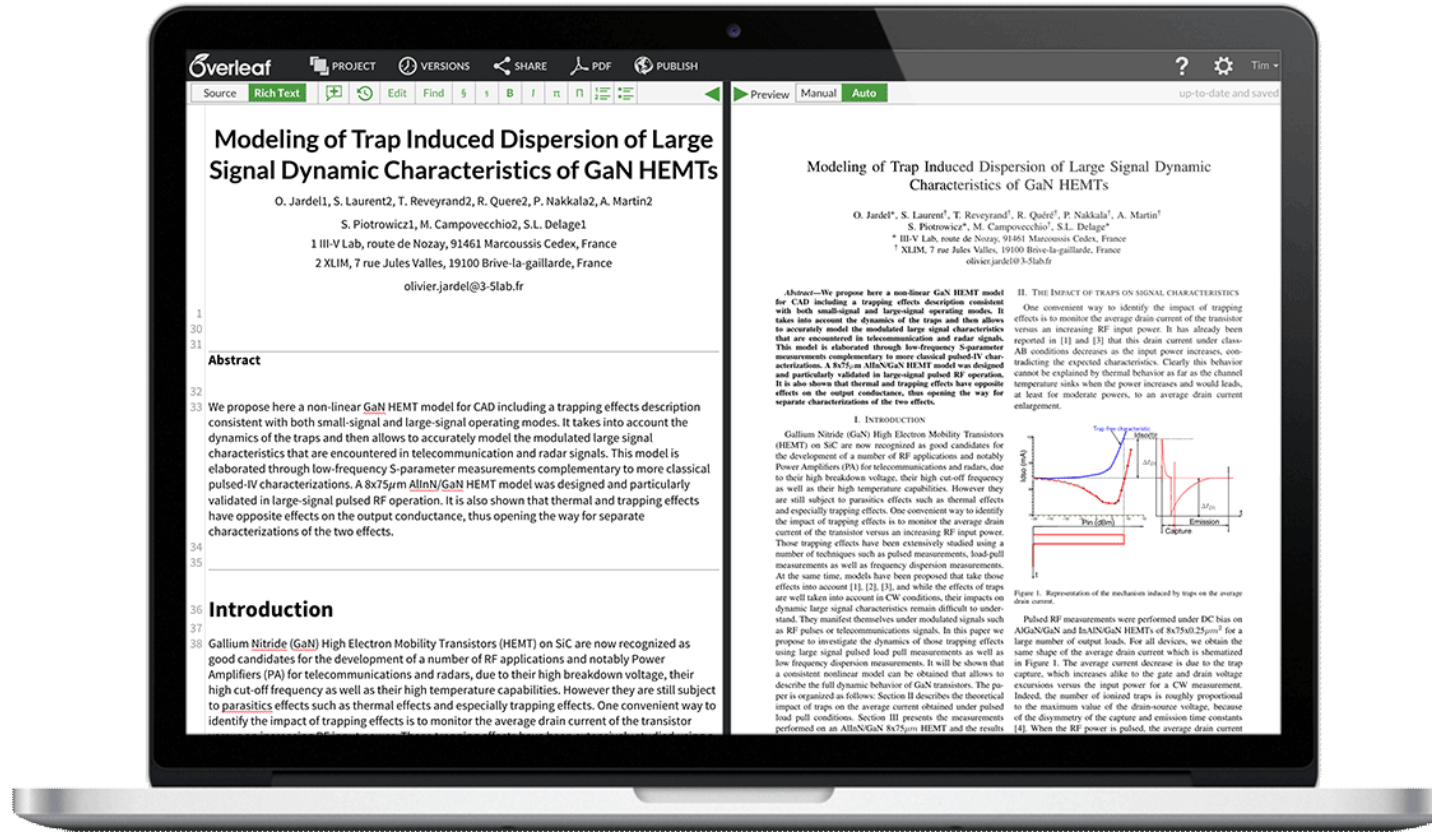
# Part of a wider community, e.g. 101 Innovations in Scholarly Communication



Source: <https://innoscholcomm.silk.co/>

# A collaborative cloud-based writing platform

Edit on the left, see compiled PDF on the right



- styles
- example-bibliograph...
- example-figure.png
- genetics.bst
- GSA-journal-te... ▾**
- gsajnl.cls

65

66 For the authors' names, indicate different affiliations with the symbols:  
\*, †, ‡, §. After four authors, the symbols double, triple, quadruple, and  
so forth as required.

67

68 **Your Abstract**

69

70 In addition to the guidelines provided in the example abstract above,  
your abstract should:

71

- 73 • provide a synopsis of the entire article;
- 74 • begin with the broad context of the study, followed by specific  
background for the study;
- 75 • describe the purpose, methods and procedures, core findings and  
results, and conclusions of the study;
- 76 • emphasize new or important aspects of the research;
- 77 • engage the broad readership of GENETICS and be understandable  
to a diverse audience (avoid using jargon);
- 78 • be a single paragraph of less than 250 words;
- 79 • contain the full name of the organism studied;
- 80 • NOT contain citations or abbreviations.

81

82

83 **Introduction**

84

85 For the introduction, authors should be mindful of the broad readership  
of the journal. The introduction should set the stage for the importance  
of the work to a generalist reader and draw the reader in to the specific  
study. The scope and impact of the work should be clearly stated.

86

87 In individual organisms where a mutant is being studied, the rationale  
for the study of that mutant must be clear to a geneticist not studying  
that particular organism. Similarly, study of particular phenotypes

GENETICS | INVESTIGATION

**Template for preparing your submission to GENETICS using Overleaf**

Author One<sup>\*1</sup>, Author Two<sup>†1</sup>, Author Three<sup>‡2</sup>, Author Four<sup>§</sup> and Author Five<sup>\*\*2,3</sup>  
\*Author one affiliation, †Author two affiliation, ‡Author three affiliation, §Author four affiliation, \*\*Author five affiliation

---

**ABSTRACT** The abstract should be written for people who may not read the entire paper, so it must stand on its own. The impression it makes usually determines whether the reader will go on to read the article, so the abstract must be engaging, clear, and concise. In addition, the abstract may be the only part of the article that is indexed in databases, so it must accurately reflect the content of the article. A well-written abstract is the most effective way to reach intended readers, leading to more robust search, retrieval, and usage of the article. Please see additional guidelines notes on preparing your abstract below.

**KEYWORDS** Keyword; Keyword2; Keyword3; ...

**Introduction**

For the introduction, authors should be mindful of the broad readership of the journal. The introduction should set the stage for the importance of the work to a generalist reader and draw the reader in to the specific study. The scope and impact of the work should be clearly stated.

In individual organisms where a mutant is being studied, the rationale for the study of that mutant must be clear to a geneticist not studying that particular organism. Similarly, study of particular phenotypes should be justified broadly and not on the basis of interest for that organism alone. General background on the importance of the genetic pathway and/or phenotype should be provided in a single, well-reasoned paragraph near the beginning of the introduction.

Authors are encouraged to:

- describe the purpose, methods and procedures, core findings and results, and conclusions of the study;
- emphasize new or important aspects of the research;
- engage the broad readership of GENETICS and be understandable to a diverse audience (avoid using jargon);
- be a single paragraph of less than 250 words;
- contain the full name of the organism studied;
- NOT contain citations or abbreviations.

• cite the supporting literature completely rather than select a subset of citations;

• provide important background citations, including relevant review papers (to help orient the non-specialist reader);

• to cite similar work in other organisms.

**Author Affiliations**

For the authors' names, indicate different affiliations with the symbols: \*, †, ‡, §. After four authors, the symbols double, triple, quadruple, and so forth as required.

**Your Abstract**

In addition to the guidelines provided in the example abstract above, your abstract should:

- provide a synopsis of the entire article;
- begin with the broad context of the study, followed by specific background for the study;

doi: 10.1534/genetics.XXX.XXXXXX  
Manuscript compiled: Thursday 27<sup>th</sup> September, 2018  
<sup>1</sup>These authors contributed equally to this work.  
<sup>2</sup>These authors contributed equally to this work.  
<sup>3</sup>Corresponding author: Please insert the affiliation correspondence address and email for the corresponding author. The corresponding author should be marked with the relevant number in the author list, as shown in the example.

Genetics 1

- styles
- example-bibliograph...
- example-figure.png
- genetics.bst
- GSA-journal-te...**
- gsajnl.cls

```

64 \section{Author Affiliations}
65
66 For the authors' names, indicate different affiliations with the
67 symbols:  $\ast$ ,  $\dagger$ ,  $\ddagger$ ,  $\S$ . After four authors,
68 the symbols double, triple, quadruple, and so forth as required.
69
70 \section{Your Abstract}
71
72 In addition to the guidelines provided in the example abstract
73 above, your abstract should:
74
75 \begin{itemize}
76 \item provide a synopsis of the entire article;
77 \item begin with the broad context of the study, followed by
78 specific background for the study;
79 \item describe the purpose, methods and procedures, core findings
80 and results, and conclusions of the study;
81 \item emphasize new or important aspects of the research;
82 \item engage the broad readership of GENETICS and be understandable
83 to a diverse audience (avoid using jargon);
84 \item be a single paragraph of less than 250 words;
85 \item contain the full name of the organism studied;
86 \item NOT contain citations or abbreviations.
87 \end{itemize}
88
89 \section{Introduction}
90
91 For the introduction, authors should be mindful of the broad
92 readership of the journal. The introduction should set the stage for
93 the importance of the work to a generalist reader and draw the
94 reader in to the specific study. The scope and impact of the work
95 should be clearly stated.
96
97 In individual organisms where a mutant is being studied, the
98 rationale for the study of that mutant must be clear to a geneticist
99 not studying that particular organism. Similarly, study of
100 particular phenotypes should be justified broadly and not on the
101 basis of interest for that organism alone. General background on the
102 importance of the genetic pathway and/or phenotype should be

```

GENETICS | INVESTIGATION

## Template for preparing your submission to *GENETICS* using Overleaf

Author One<sup>\*1</sup>, Author Two<sup>†1</sup>, Author Three<sup>‡2</sup>, Author Four<sup>§</sup> and Author Five<sup>\*\*2,3</sup>  
\*Author one affiliation, †Author two affiliation, ‡Author three affiliation, §Author four affiliation, \*\*Author five affiliation

---

**ABSTRACT** The abstract should be written for people who may not read the entire paper, so it must stand on its own. The impression it makes usually determines whether the reader will go on to read the article, so the abstract must be engaging, clear, and concise. In addition, the abstract may be the only part of the article that is indexed in databases, so it must accurately reflect the content of the article. A well-written abstract is the most effective way to reach intended readers, leading to more robust search, retrieval, and usage of the article. Please see additional guidelines notes on preparing your abstract below.

**KEYWORDS** Keyword; Keyword2; Keyword3; ...

**This *Genetics* journal template is provided to help you write your work in the correct journal format. Instructions for use are provided below.**

**Guide to using this template in Overleaf**  
 This template is provided to help you prepare your article for submission to the *Genetics*.

**Author Affiliations**  
 For the authors' names, indicate different affiliations with the symbols: \*, †, ‡, §. After four authors, the symbols double, triple, quadruple, and so forth as required.

**Your Abstract**  
 In addition to the guidelines provided in the example abstract above, your abstract should:

- provide a synopsis of the entire article;
- begin with the broad context of the study, followed by specific background for the study;

doi: 10.1534/genetics.XXX.XXXXXX  
 Manuscript compiled: Thursday 27<sup>th</sup> September, 2018  
<sup>1</sup>These authors contributed equally to this work.  
<sup>2</sup>These authors contributed equally to this work.  
<sup>3</sup>Corresponding author: Please insert the affiliation correspondence address and email for the corresponding author. The corresponding author should be marked with the relevant number in the author list, as shown in the example.

**Introduction**  
 For the introduction, authors should be mindful of the broad readership of the journal. The introduction should set the stage for the importance of the work to a generalist reader and draw the reader in to the specific study. The scope and impact of the work should be clearly stated.

In individual organisms where a mutant is being studied, the rationale for the study of that mutant must be clear to a geneticist not studying that particular organism. Similarly, study of particular phenotypes should be justified broadly and not on the basis of interest for that organism alone. General background on the importance of the genetic pathway and/or phenotype should be provided in a single, well-reasoned paragraph near the beginning of the introduction.

Authors are encouraged to:

- cite the supporting literature completely rather than select a subset of citations;
- provide important background citations, including relevant review papers (to help orient the non-specialist reader);
- to cite similar work in other organisms.

# Track changes and commenting for ease of collaboration

The screenshot displays a LaTeX editor interface with a dark theme. On the left, a file explorer shows 'main.tex', 'references.bib', and 'universe.jpg'. The main editor shows LaTeX code with line numbers 1 through 32. A central panel shows tracked changes with two entries: 'Deleted instantly' and 'Added very nice', each with 'Reject' and 'Accept' buttons. A comment from 'You' says 'Nice quote :)' and is linked to a quote in the code. The right panel shows the rendered PDF output of the document, including a title page, an introduction section with a paragraph and a galaxy image, and a conclusion section with a quote and a reference.

```
1 \documentclass{article}
2 \usepackage[utf8]{inputenc}
3
4 \title{Example}
5 \author{John Hammersley}
6 \date{April 2018}
7
8 \usepackage{natbib}
9 \usepackage{graphicx}
10
11 \begin{document}
12
13 \maketitle
14
15 \section{Introduction}
16 There is a theory which states that if
17 ever anyone discovers exactly what the
18 Universe is for and why it is here, it
19 will disappear and be replaced by
20 something even more bizarre and
21 inexplicable.
22 There is another very nice theory which
23 states that this has already happened.
24
25 \begin{figure}[h!]
26 \centering
27 \includegraphics[scale=1.7]{universe}
28 \caption{The Universe}
29 \label{fig:universe}
30 \end{figure}
31
32 \section{Conclusion}
33 "I always thought something was
34 fundamentally wrong with the universe"
35 \cite{adams1995hitchhiker}
36
37 \bibliographystyle{plain}
38 \bibliography{references}
39 \end{document}
```

Example

John Hammersley

April 2018

## 1 Introduction

There is a theory which states that if ever anyone discovers exactly what the Universe is for and why it is here, it will instantly disappear and be replaced by something even more bizarre and inexplicable. There is another theory which states that this has already happened.




Figure 1: The Universe

## 2 Conclusion

"I always thought something was fundamentally wrong with the universe" [1]

## References

[1] D. Adams. *The Hitchhiker's Guide to the Galaxy*. San Val, 1995.

1

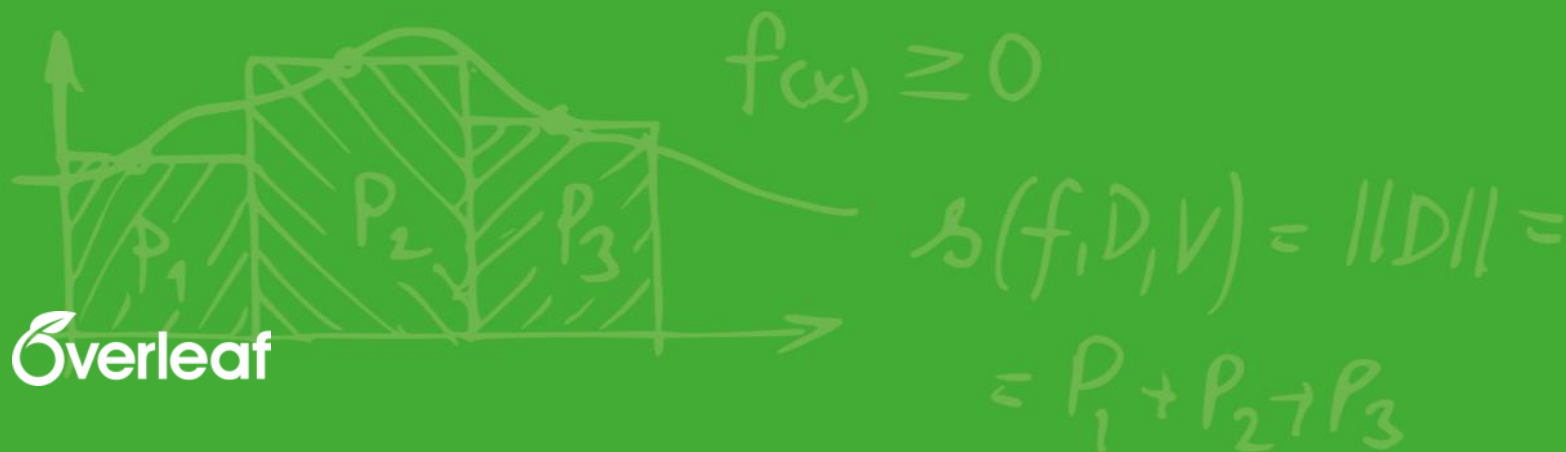
# Key features for students and researchers

---

- **Real-time track changes and commenting** – simplifying review, acceptance or rejection of text edits for faster and easier collaborative editing
- **Private invitation, link sharing and chat functionality** – facilitating new and more productive collaborations
- **Auto-compiling and real-time preview** – updating the PDF view so collaborators can focus on their writing
- **Complementary Rich Text and LaTeX modes** – flexing to a user's preference for editing projects with/without working in the code
- **Ability to import and sync external files** (e.g. datasets, bibliographies) – integrating with resources from other projects or external sources
- **Direct submission to journals and repositories** – saving time and effort when submitting manuscripts
- **Advanced reference search** – facilitating simple search by author name, title, publisher, year or keyword for effortless and fast insertion of the correct citations
- **Automatic two-way Dropbox/Github sync** – supporting seamless transition between working offline to working online with other collaborators

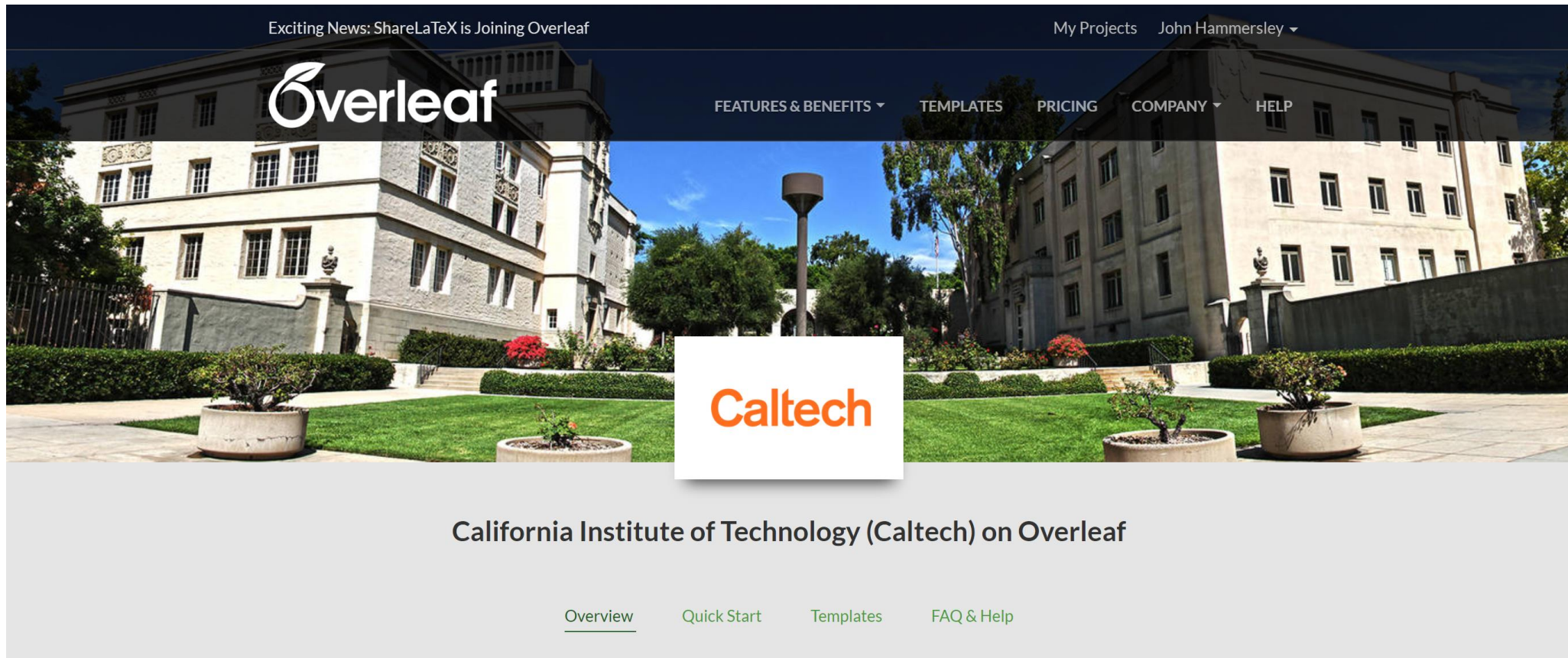
# Overleaf Institutional Solutions

*How Overleaf is helping institutions harness the power of the cloud*





# Overleaf is being adopted by a growing number of universities and institutions around the world, including Stanford, Caltech and CERN



The screenshot shows the Overleaf website interface. At the top, there is a navigation bar with the Overleaf logo on the left and links for 'My Projects' and 'John Hammersley' on the right. Below the navigation bar, there is a main menu with links for 'FEATURES & BENEFITS', 'TEMPLATES', 'PRICING', 'COMPANY', and 'HELP'. The main content area features a large banner image of a Caltech building with a central white box containing the 'Caltech' logo in orange. Below the banner, the text 'California Institute of Technology (Caltech) on Overleaf' is displayed. At the bottom of the banner area, there are four links: 'Overview', 'Quick Start', 'Templates', and 'FAQ & Help', with 'Overview' being the active link.

## Overview

Caltech Library is providing free Overleaf Pro+ accounts for all students, faculty and staff who would like to use a collaborative, online LaTeX editor for their projects.

Overleaf is designed to make the process of writing, editing and producing your research papers and project reports much quicker for both you and your collaborators. Overleaf can also be [linked to other services](#) such as Mendeley, Cit and Plot.ly

# Example: Overleaf at Stanford University

- **450% increase in usage** in the first year the institutional solution was adopted
- Now used by over **7,000 students, researchers, staff and faculty**

*“**Overleaf** has been a huge success at Stanford.*”

*We provide Overleaf Pro accounts to all students, faculty and staff and the **uptake and feedback** has been **tremendous!**”*



Helen Josephine  
Head of the Terman  
Engineering Library, Stanford

# 'Ease of use' featured highly in feedback

In a survey conducted of the trial participants, 86% of respondents said they were **very** or **extremely happy** with the service and didn't want the trial to end.

- *"I use it in my research **daily** as does my entire lab. It's great!"*
- *"I'm using it **exclusively** for my research papers and dissertations. My advisor actually collaborates on the writing, which was not possible without this **straightforward** service."*
- *"It's an incredibly useful tool for **facilitating** collaboration with one's peers."*
- *"It makes writing professional assignments and projects **super easy**, and having it online and accessible from any device makes it **convenient** as well"*
- *"It's been **really useful** for me since I can use LaTeX on the PCs anywhere on campus."*

# Overleaf provides real-time data on uptake, usage & collaborations



Lilliput University – Administrator Hub

## Usage

In the past week



Signups include 4 Undergraduate Students, 1 Research Postgraduate, and 1 Student

They're from 5 departments, including Bioengineering, aeronautics, and Faculty of Medicine, Department of Surgery & Cancer

Recent activity

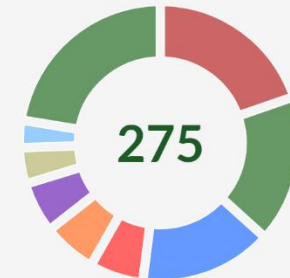
Yesterday	Last Week	Last Month
84 users worked on projects	154 users worked on projects	237 users worked on projects
115 projects	327 projects	511 projects

## Repartition

Departments

Number of users in different Lilliput University departments

- Computing
- Computer Science
- Physics
- Bioengineering
- Mathematics
- Electrical Engineering
- Mechanical Engineering
- Aeronautics & Astronautics
- Other

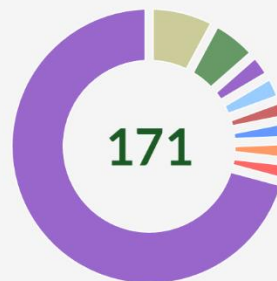


## Collaboration

External collaboration

Number of users at other institutions that have collaborated with Lilliput University the most, in the past week

- University College London, University of London
- Stanford University
- Lawrence Berkeley National Laboratory
- King's College London, University of London
- Consejo Superior de Investigaciones Cientificas (CSIC)
- Brown University
- University of Oxford
- University of Cambridge
- 100 other universities

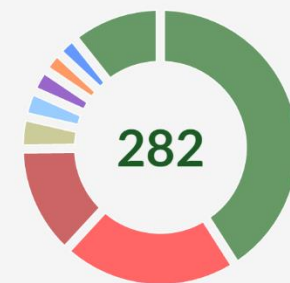


## Repartition

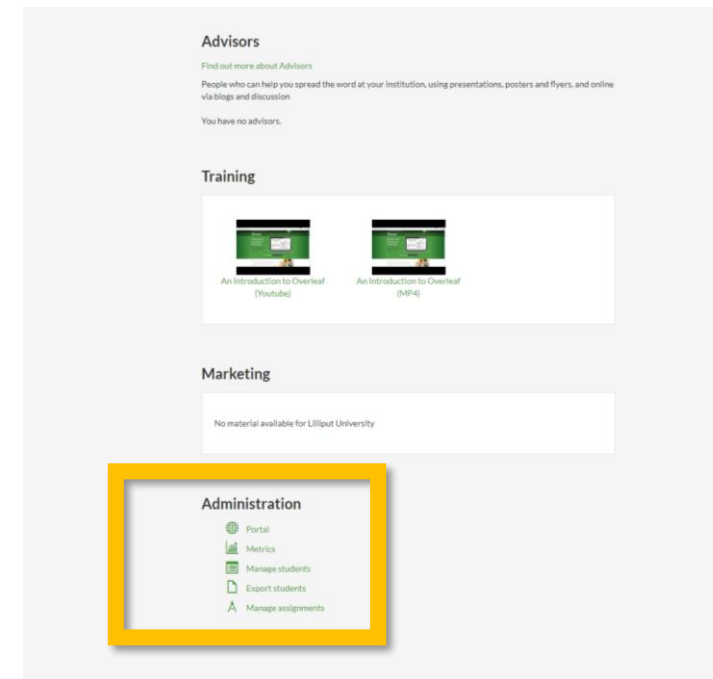
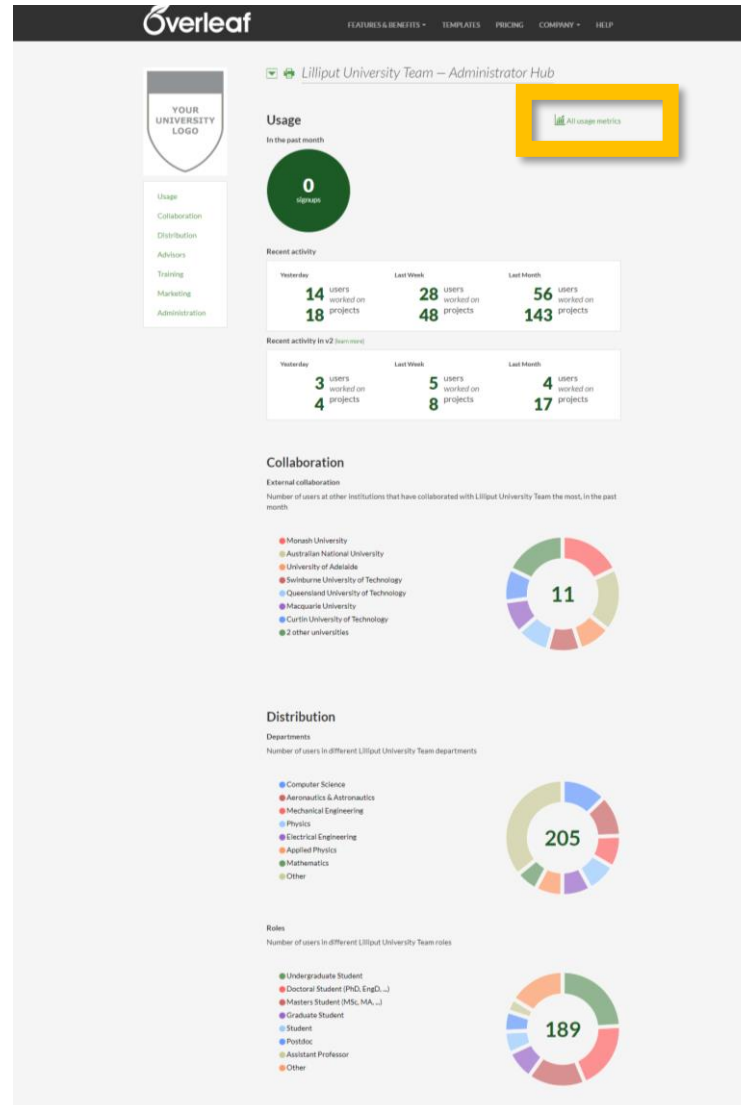
Roles

Number of users in different Lilliput University roles

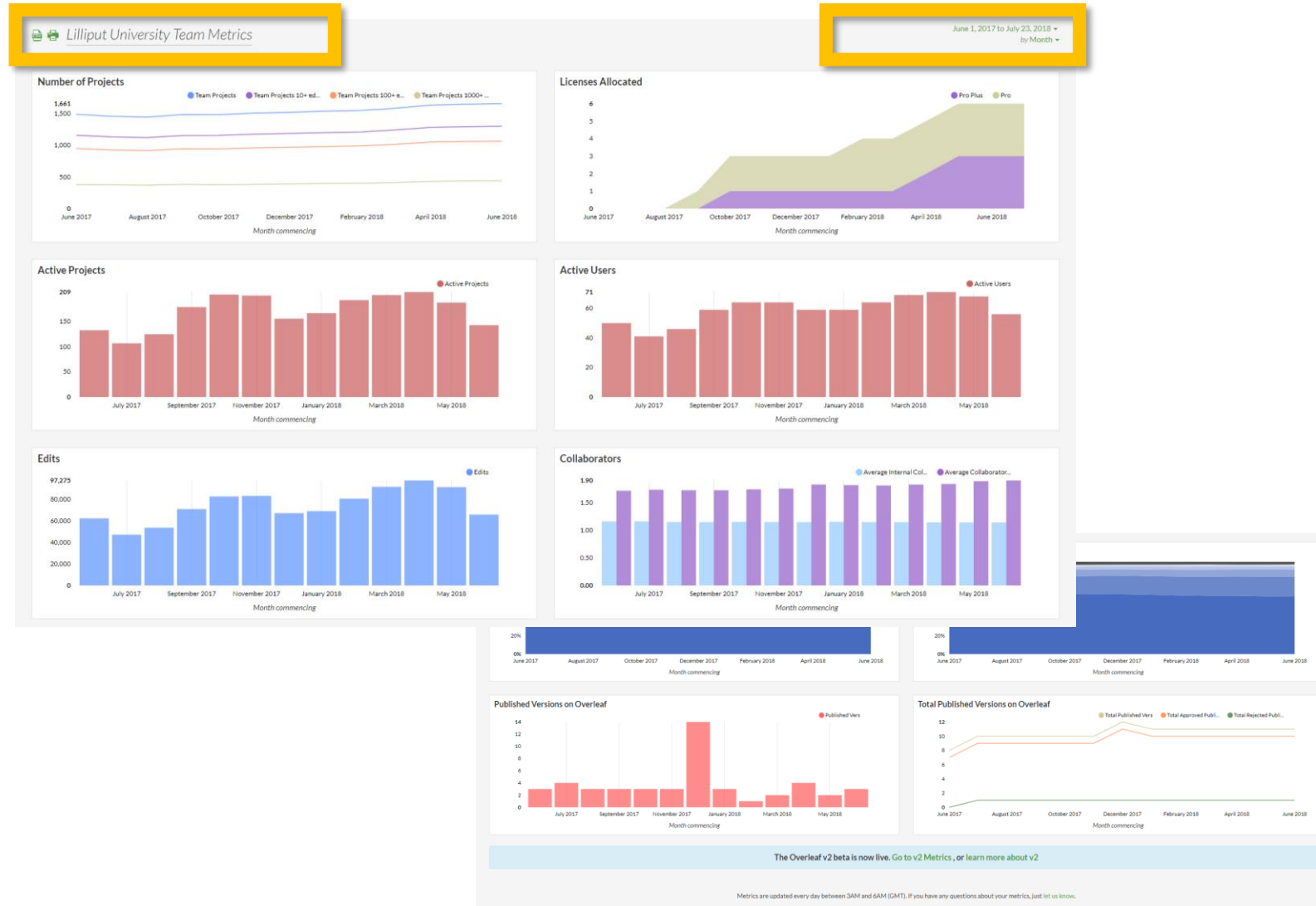
- Undergraduate Student
- Doctoral Student (PhD, EngD, ...)
- Masters Student (MSc, MA, ...)
- Postdoc
- Student
- Research Associate
- Professor
- Lecturer
- Other



# Administrators can view an admin hub with links to additional metrics



# Metrics show the patterns in use of Overleaf over time



# Administrators also receive a monthly digest email with key statistics

## Metrics report for Lilliput University on Overleaf



welcome@overleaf.com

to me

01/07/2017



Dear John Hammersley,

Here's your monthly summary of **Lilliput University** usage on Overleaf.

October saw **415** users signing up. Signups include **65** Doctoral Students (PhD, EngD, ...), **58** Masters Students (MSc, MA, ...), and **35** Undergraduate Students. They're from **45** departments, including **Computer Science**, **Electrical Engineering**, and **Mechanical Engineering**.

**1.38 Thousand** users made **2.27 Million** edits on **4.97 Thousand** projects.

**4** versions were published.

Projects worked on by your team have **1.32** collaborators on average.

You can view the [team hub](#) for an overview, or the [metrics dashboard](#) for more details.

---


Don't want to receive these emails? [edit your email preferences](#).

# Overleaf can also provide marketing to help encourage uptake


## Advisors

Find out more about Advisors


People who can help you spread the word at your institution, using presentations, posters and flyers, and online via blogs and discussion



Dr. Arne Bruyneeel  
Stanford University




Michael Muelly  
Stanford University




Madeline Saviano  
Stanford University

## Training




An Introduction to Overleaf (Youtube)




An Introduction to Overleaf (MP4)


## Marketing




Handout 1:  
Campus Flyer (PDF,  
8.5x11)



Handout 2:  
Poster (PDF, 11x17)

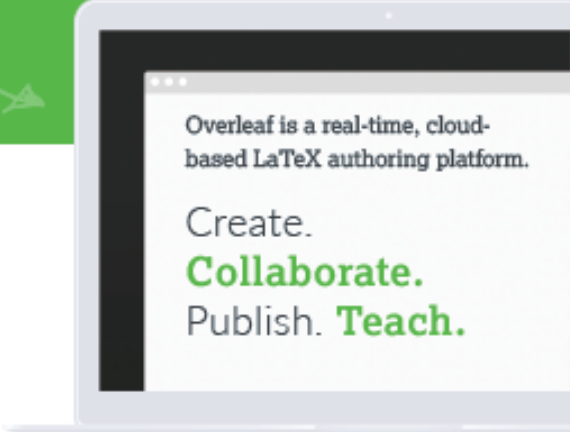


Handout 3:  
Campus Stub Handouts  
(PDF, 8.5x11)



Sign up for your **free\***  
**Overleaf account**  
from Stanford today!

Free LaTeX authoring tool, tutorials, Stanford templates  
& resources at [www.overleaf.com/edu/stanford](http://www.overleaf.com/edu/stanford)

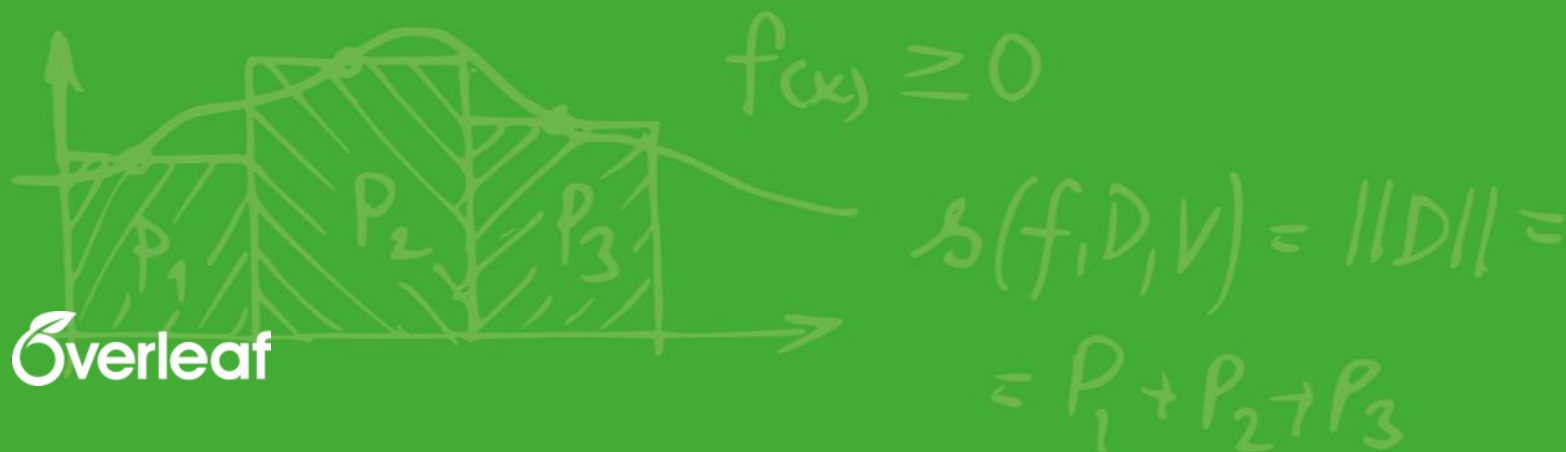


Overleaf is a real-time, cloud-based LaTeX authoring platform.

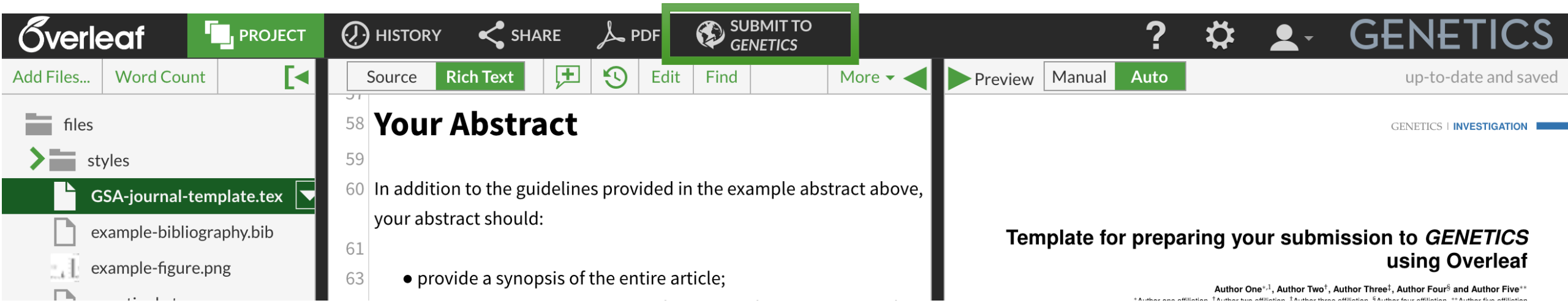
Create.  
**Collaborate.**  
Publish. **Teach.**



*Overleaf is also working with publishers and journals to help streamline manuscript submission*

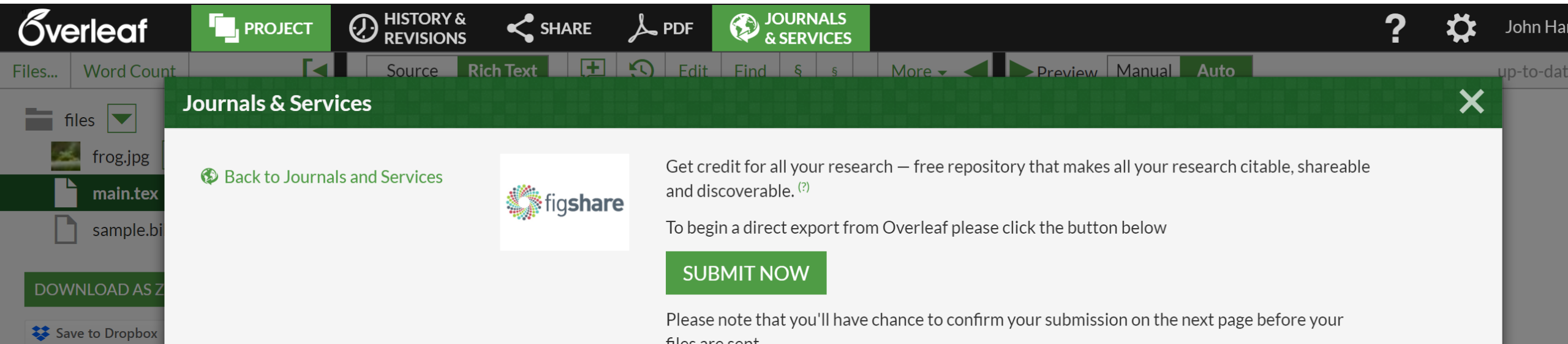


# Submit directly from Overleaf to journals



The screenshot shows the Overleaf web interface. The top navigation bar includes 'Overleaf', 'PROJECT', 'HISTORY', 'SHARE', 'PDF', and a highlighted 'SUBMIT TO GENETICS' button. Below the navigation bar, the left sidebar shows a file explorer with 'files', 'styles', and 'GSA-journal-template.tex' selected. The main editor area displays 'Your Abstract' with the text: 'In addition to the guidelines provided in the example abstract above, your abstract should:' followed by a bullet point: '• provide a synopsis of the entire article;'. The right sidebar shows a preview of the abstract template for 'GENETICS | INVESTIGATION' with the title 'Template for preparing your submission to GENETICS using Overleaf' and author information: 'Author One<sup>1</sup>, Author Two<sup>2</sup>, Author Three<sup>3</sup>, Author Four<sup>4</sup> and Author Five<sup>5</sup>'.

and to pre-print servers and repositories such as figshare



The screenshot shows the Overleaf web interface with the 'Journals & Services' modal window open. The modal window has a green header with the title 'Journals & Services' and a close button. Below the header, there is a link 'Back to Journals and Services' and the 'figshare' logo. The text in the modal reads: 'Get credit for all your research – free repository that makes all your research citable, shareable and discoverable. (?)' followed by 'To begin a direct export from Overleaf please click the button below' and a green 'SUBMIT NOW' button. At the bottom, it says: 'Please note that you'll have chance to confirm your submission on the next page before your files are sent'.

 **IEEE** **SPRINGER NATURE** **COSS** **SPIE.**

**PeerJ**

**OXFORD**  
UNIVERSITY PRESS

**GSA**  
Genetics Society of America

 **ASBMB**

 **AGU**  
American Geophysical Union

**OSA**  
The Optical Society

**ASCE**

**PNAS**

**F1000**  
Research

**bioRxiv**  
THE PREPRINT SERVER FOR BIOLOGY

 **figshare**  
credit for all your research

 **MENDELEY**

**ed/tage**  
by CACTUS

 **Rubriq**

**zotero**

 **AJE**

**IOS**  
REVIEW

 **bioedit**

**enago**

 **em**

**SCHOLARONE**<sup>TM</sup>

 **eJournalPress**

 **IEEE**  
**Collabratec**<sup>TM</sup>

# Templates linked directly from publisher/journal websites

Proceedings of the National Academy of Sciences of the United States of America

PNAS

CURRENT ISSUE // ARCHIVE // NEWS & MULTIMEDIA // AUTHORS // ABOUT // COLLECTED ARTICLES // BROWSE BY TOPIC // EARLY EDITION // FRONT MATTER

FOR AUTHORS

Information for Authors

**How to Submit Your Manuscript and Figures**

Submit an Article

Author Frequently Asked Questions

Preparation of Revised Submissions

For Reviewers

## Submitting LaTeX Files

PNAS is excited to announce our latest [LaTeX template](#) is available on [Overleaf](#). Overleaf allows authors to easily create their submissions using a PNAS-formatted LaTeX template. Authors will have the option to download a PDF (best for initial submissions) or a .zip file that can be uploaded into the PNAS submission system.

If you experience any issues when creating your manuscript, support is provided by Overleaf at the contact information below, or you can contact the [PNAS office](#) for assistance.

We are pleased to provide this new service to authors and encourage our LaTeX users to try it out.

**Overleaf:**

Email: [support@overleaf.com](mailto:support@overleaf.com)  
[Overleaf Support Contact Form](#)

[05/16]

Current Issue  
Email Alerts  
Subscribe  
RSS

Don't Miss

Thinking of submitting your next paper to PNAS? Learn tips in our [PNAS tutorial videos](#).

Other PNAS Media

- Image Gallery
- Video Library
- Follow Us on Twitter
- Find Us on Facebook

▼ MOST READ MOST CITED

For a smooth workflow, files and metadata are passed in the background

The screenshot shows a web browser window with the URL `https://f1000research.com/author/submit/new/external?`. The page header includes the F1000Research logo and navigation links. A green box highlights a notification: "Your Overleaf file is being uploaded". Below this, the "About the Article" section contains a form with the following fields:

- Article Type \***: A grid of radio button options including Research Article, Review, Systematic Review, Method Article, Study Protocol, Clinical Practice Article, Opinion Article, Software Tool Article, Observation Article, Research Note, Antibody Validation Article, Data Note, Case Report, Correspondence, F1000 Faculty Critique, Editorial, and F1000 Faculty Review. Each option has an information icon (i).
- Article Title \***: A text input field containing "F1000Research Submission Demo".
- Authors**: A list of authors, with "John Lees-Miller (jdleesmill@gmail.com)" selected. A checkbox for "Corresponding Author" is present next to the name.

Green boxes highlight the notification, the Article Title field, and the Author field.



**Alex Buerkle**  
@disequillbber



Following

3rd large NSF proposal of 2016 subm today with big teams of co-authors using @overleaf. One already rec for funding. LTER,EPSCoR sent today

RETWEETS 3 LIKES 12



1:43 PM - 2 Aug 2016



**Aaron MacNeil**  
@ma\_macneil



Following

Just submitted to @thePeerJ using @overleaf using 3 clicks. #awesomeness

RETWEETS 3 LIKES 5



1:21 PM - 12 May 2016



SHARE PDF SUBMIT TO F1000RESEARCH ? Michael C

More Preview Manual Auto wa

quence

aph-based ver, the n from the

the basic anipulation. a structures

-based

age, a -efficient read data

es,

ch

op of Bloom sion

for users:

res and ain kinds of develop

ted in C++,

Python form various veloped on

F1000Research F1000Research 2014 - DRAFT ARTICLE (PRE-SUBMISSION)

### The khmer software package: enabling efficient nucleotide sequence analysis

Michael R. Crusoe<sup>1</sup>, Hussien Alameldin<sup>2</sup>, Sherine Awad<sup>3</sup>, Ryan R. Boyce<sup>4</sup>, Elmar Bucher<sup>5</sup>, Adam Caldwell<sup>6</sup>, Reed Cartwright<sup>7</sup>, Bede Constantinides<sup>8</sup>, Greg Edverson<sup>9</sup>, Scott Fay<sup>10</sup>, Jake Fenton<sup>11</sup>, Thomas Fenzl<sup>12</sup>, Jordan Fish<sup>13</sup>, Leonor Garcia-Gutierrez<sup>14</sup>, Phillip Garland<sup>15</sup>, Jonathan Gluck<sup>16</sup>, Ivan Gonzalez<sup>17</sup>, Sarah Guermond<sup>18</sup>, Jiarong Guo<sup>19</sup>, Aditi Gupta<sup>20</sup>, Josh Herr<sup>21</sup>, Adina Howe<sup>22</sup>, Alex Hyer<sup>23</sup>, Andreas Härpfer<sup>24</sup>, Luiz Irber<sup>25</sup>, Rhys Kidd<sup>26</sup>, Heather L. Wiencko<sup>27</sup>, David Lin<sup>28</sup>, Justin Lippi<sup>29</sup>, Tamer Mansour<sup>30</sup>, Pamela McAulty<sup>31</sup>, Eric McDonald<sup>32</sup>, Jessica Mizzi<sup>33</sup>, Kevin Murray<sup>34</sup>, Joshua Nahum<sup>35</sup>, Kaben Nanlohy<sup>36</sup>, Lex Nederbragt<sup>37</sup>, Humberto Ortiz-Zuazaga<sup>38</sup>, Jeramia Ory<sup>39</sup>, Jason Pell<sup>40</sup>, Chuck Pepe-Ranne<sup>41</sup>, Rodney Picett<sup>42</sup>, Zachary N. Russ<sup>43</sup>, Erich Schwarz<sup>44</sup>, Camille Scott<sup>45</sup>, Josiah Seaman<sup>46</sup>, Scott Sievert<sup>47</sup>, Jared Simpson<sup>48</sup>, Connor T. Skennerton<sup>49</sup>, James Spencer<sup>50</sup>, Ramakrishnan Rajaram Srinivasan<sup>51</sup>, Daniel Standage<sup>52</sup>, James Stapleton<sup>53</sup>, Susan Steinman<sup>54</sup>, Joe Stein<sup>55</sup>, Benjamin Taylor<sup>56</sup>, Will Trimble<sup>57</sup>, Michael Wright<sup>58</sup>, Brian Wyss<sup>59</sup>, Qingpeng Zhang<sup>60</sup>, enzyme<sup>61</sup>, and C. Titus Brown<sup>62</sup>

<sup>1</sup>mcrusoe@msu.edu, Microbiology and Molecular Genetics, Michigan State University, East Lansing, MI 48824, USA



**Michael R. Crusoe**  
@biocrusoe



We have 62 co-authors on the khmer project paper! Great free LaTeX tech support from @F1000Research & @overleaf; +100



# Thanks for listening!

Find more information on Overleaf here:

Overleaf for authors:

[www.overleaf.com/for/authors](http://www.overleaf.com/for/authors)

Overleaf for institutions:

[www.overleaf.com/for/universities](http://www.overleaf.com/for/universities)

Overleaf for publishers:

[www.overleaf.com/for/publishers](http://www.overleaf.com/for/publishers)

Or get in touch with us directly via [welcome@overleaf.com](mailto:welcome@overleaf.com), we'd love to hear from you!