

The Future Circular Collider Innovation Study (FCCIS) project has received funding from the European Union's Horizon 2020 research and innovation programme under grant No 951754.



Collaborative Writing

FCCIS Kick-off Meeting – November 2020

**Dr John Hammersley
Co-founder and CEO**

www.overleaf.com

Global scientific collaboration is increasing...

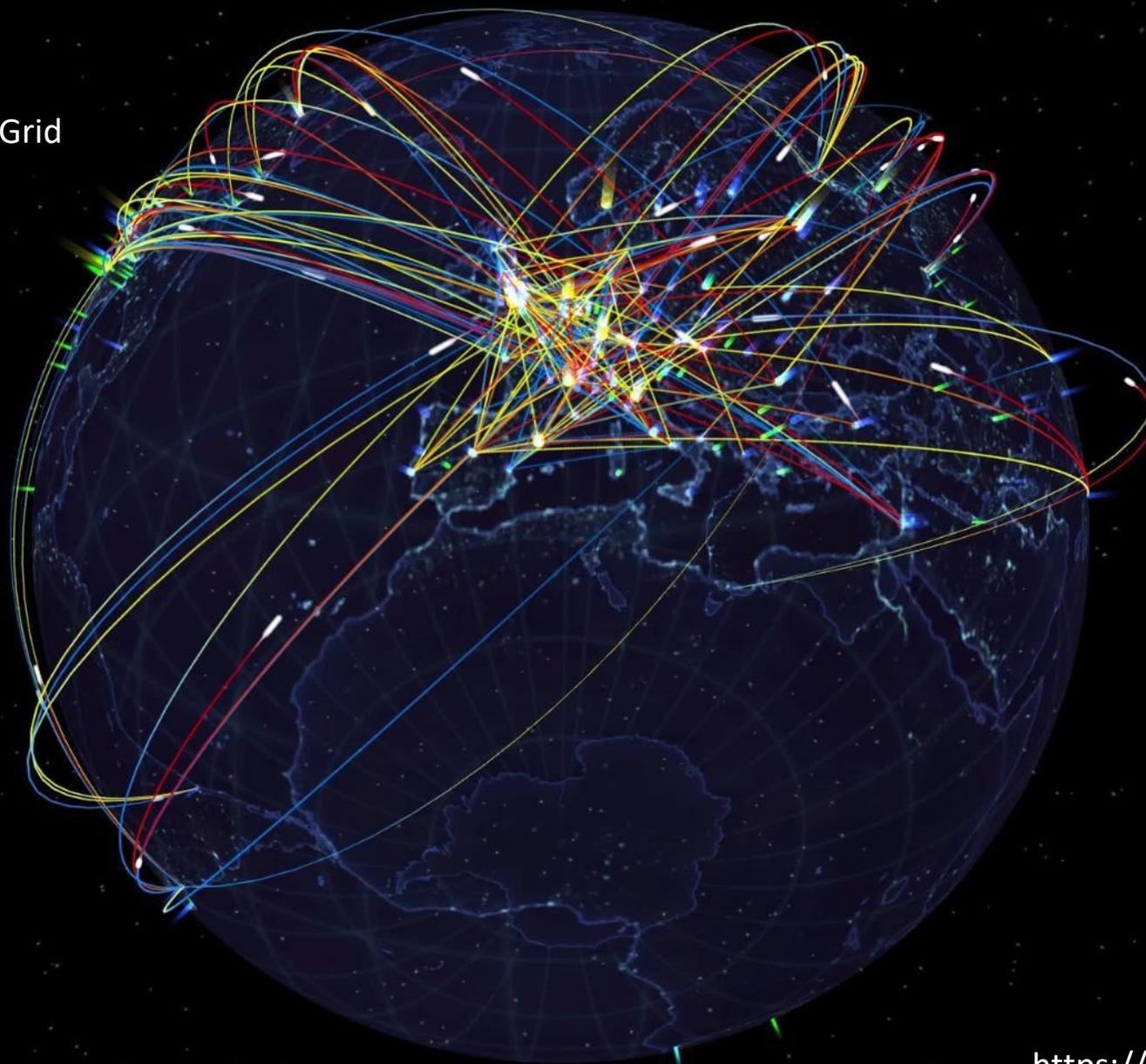


Collaboration networks between researchers in different cities
(built using Scopus data on papers published between 2008 and 2012)

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



The Worldwide LHC Computing Grid activity captured live by the EGL application in August 2017.

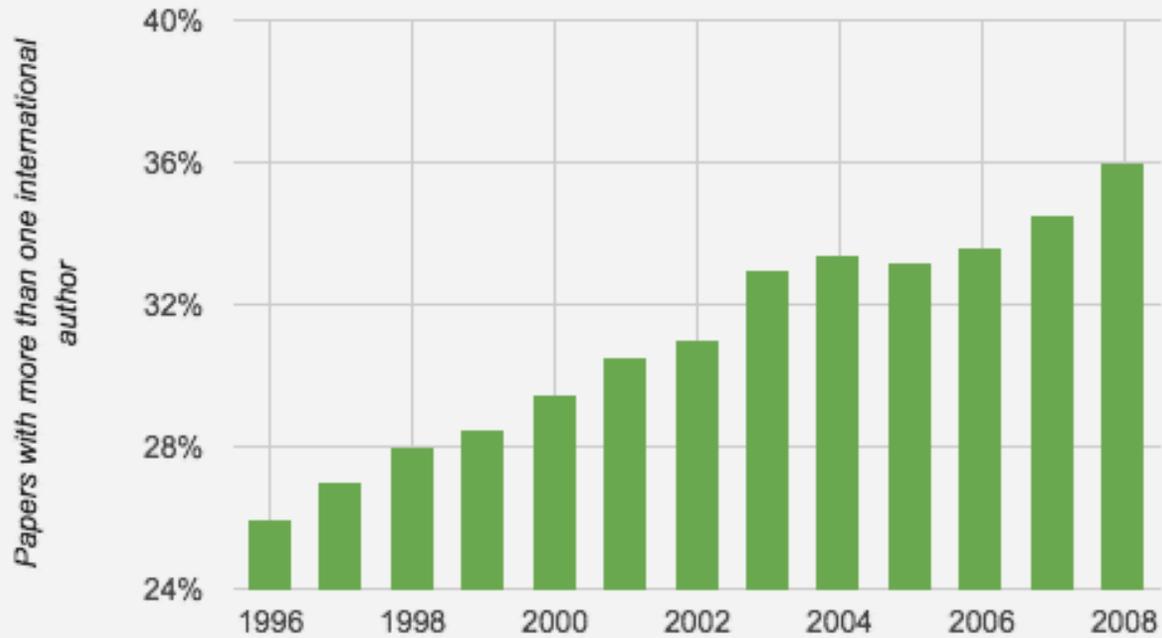


Running jobs: 365644
Active CPU cores: 807139
Transfer rate: 21.54 GiB/sec

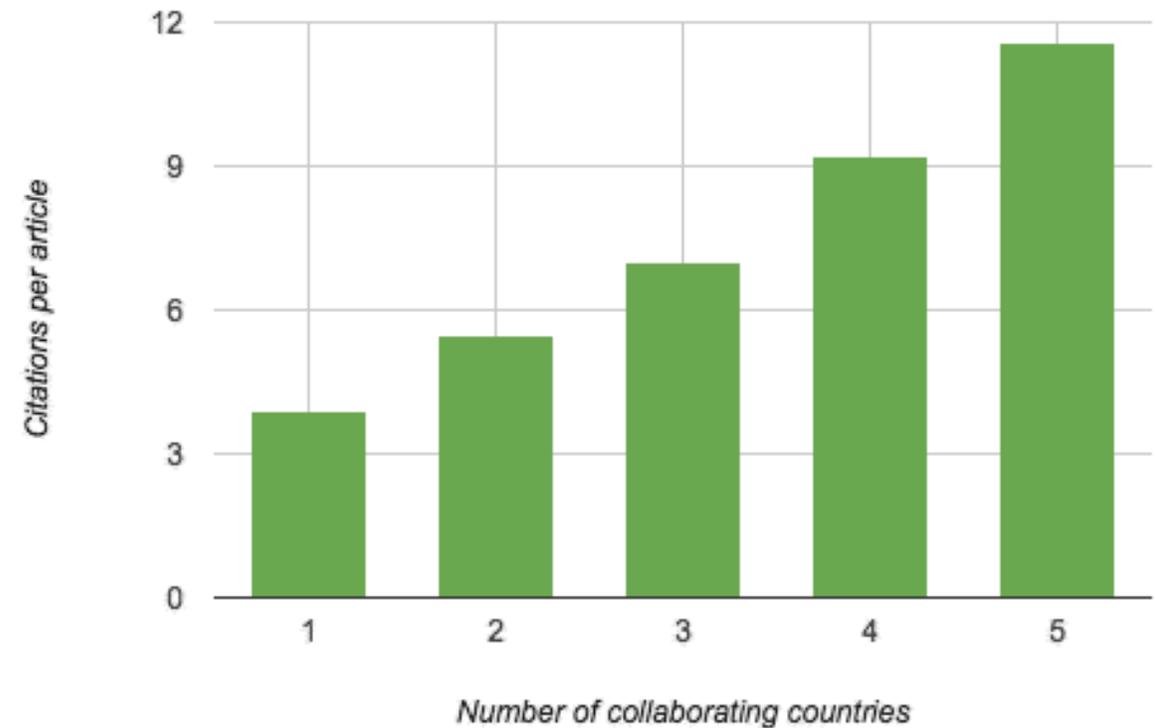
Source: CERN CDS Videos
<https://videos.cern.ch/record/2640380>

This is reflected in research papers being more collaborative...

Proportion of the world's papers produced with more than one international author



Citations per article versus number of collaborating countries





Physics paper sets record with more than 5,000 authors

Detector teams at the Large Hadron Collider collaborated for a more precise estimate of the size of the Higgs boson.

Daide Castelvechi

15 May 2015

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



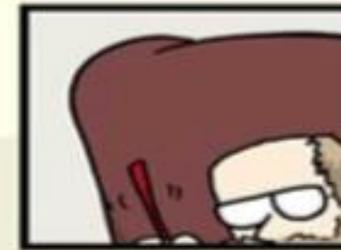
FINAL_rev.6.COMMENTS.doc



FINAL_rev.8.comments5.
CORRECTIONS.doc



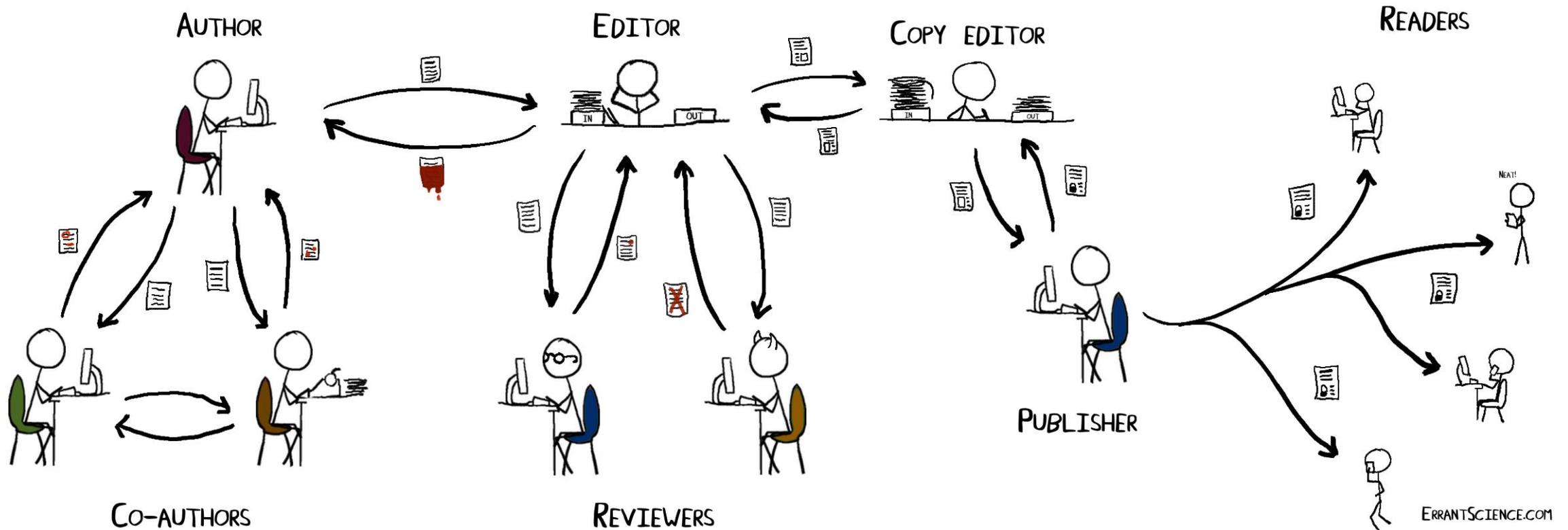
FINAL_rev.18.comments7.
corrections9.MORE.30.doc



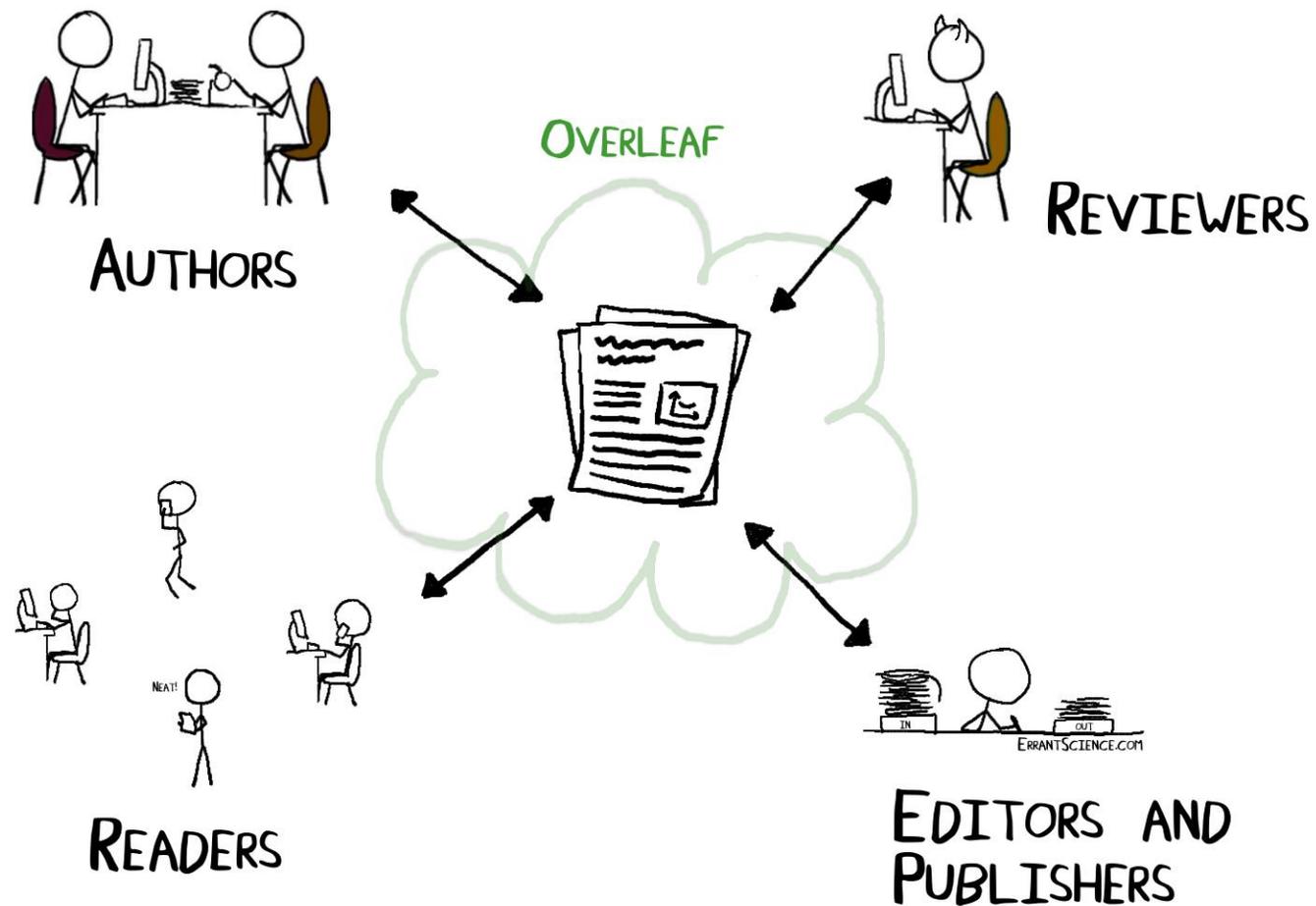
FINAL_rev.22.comments49.
corrections.10.#@\$%WHYDID
ICOMETOGRADSCHOOL?????.doc



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



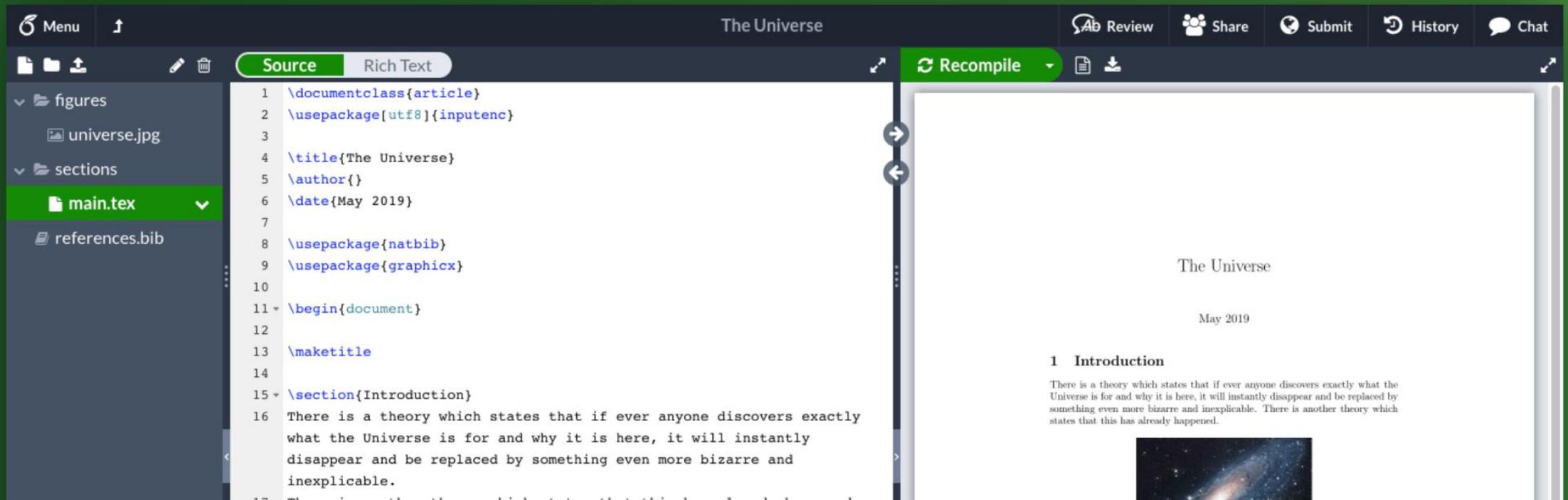
Overleaf helps by putting the document at the centre, so everyone always has access to the latest version



Overleaf also lowers the barrier to those getting started with LaTeX for the first time

LaTeX, Evolved

The easy to use, online, collaborative LaTeX editor



The screenshot displays the Overleaf LaTeX editor interface. The top navigation bar includes a 'Menu' icon, a home icon, the document title 'The Universe', and action buttons for 'Review', 'Share', 'Submit', 'History', and 'Chat'. Below this, a toolbar contains file management icons, a 'Source' tab (selected), a 'Rich Text' tab, a 'Recompile' button, and download/upload icons. The left sidebar shows a file explorer with folders 'figures' and 'sections', and files 'universe.jpg', 'main.tex' (highlighted), and 'references.bib'. The main editor area shows LaTeX source code for a document titled 'The Universe', dated 'May 2019', with an 'Introduction' section. The preview window on the right shows the rendered document with the title, date, and the start of the introduction text, followed by a small image of a galaxy.

```
1 \documentclass{article}
2 \usepackage[utf8]{inputenc}
3
4 \title{The Universe}
5 \author{}
6 \date{May 2019}
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 ever anyone discovers exactly
17 what the Universe is for and why it is here, it will instantly
18 disappear and be replaced by something even more bizarre and
19 inexplicable.
```

The Universe

May 2019

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.



We support a growing community of over six million users worldwide: students, researchers (in academia and industry), faculty and staff

Celebrating over five million users, a quarter million daily actives, and over five years of dedicated user support

Posted by John on November 28, 2019

Earlier this month we hit a number of significant milestones at Overleaf that we'd like to share with you all 😊

Five million users!

There are now over five million user accounts on Overleaf! It's not long since we were announcing [hitting the four million user mark](#), and the continued growth in new sign ups has been amazing to see.

This was announced in a typically understated fashion internally via Slack:



Tim

```
> db.users.count()  
5000379
```

Reaching six million users in an unprecedented six months

Posted by John on July 1, 2020

It has certainly been an unexpected six months since the start of 2020. Back on January 1st, when we all celebrated the start of the new year, none of us expected the lockdown and global pandemic that would follow, nor the events in the USA that would galvanise Black Lives Matter around the world.

In amongst all of this, in early June we reached the milestone of six million users worldwide, after hitting five million [last November](#). We also saw our best-ever month for active users in May, driven both by the natural growth of Overleaf we've seen each year since we started back in 2012, and also the accelerated move to online collaborative tools in the wake of the Coronavirus pandemic which has swept across the globe in a few short months.

Six million users is an amazing milestone to reach, although I think we would all have preferred to reach it in simpler times. But even in these times—or perhaps especially in these times—it's worth taking a brief moment to recognise this

And Overleaf has been adopted by over 100 universities and institutions around the world, including CERN!



Caltech

California Institute of Technology (Caltech) on Overleaf

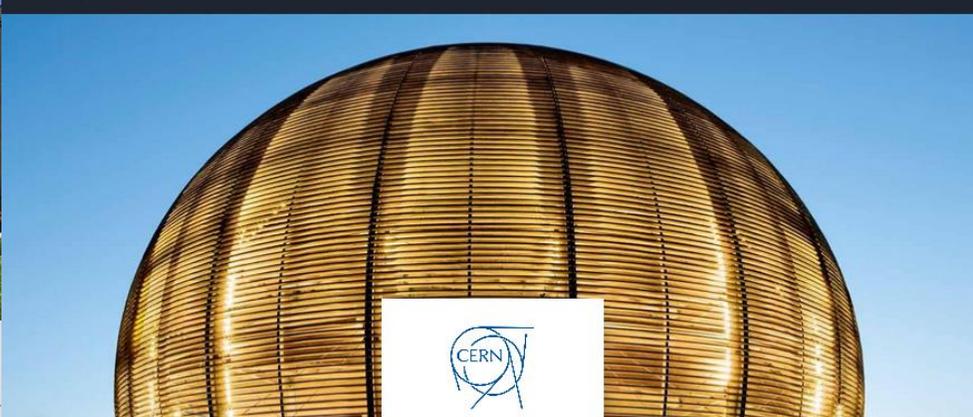
[Overview](#) [Quick Start](#) [Templates](#) [FAQ & Help](#)

Overview

Caltech Library is providing free Overleaf Professional accounts for all students, faculty and staff who would like to use a collaborative, online LaTeX editor for projects. Overleaf Professional accounts provide real-time track changes, unlimited collaborators, and full document history.

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 reference managers to best fit into your workflow.

Claim your free Overleaf Professional account on Overleaf by signing up (or see



European Organization for Nuclear Research (CERN) on Overleaf

[Overview](#) [Quick Start](#) [Templates](#) [FAQ & Help](#)

Featured LaTeX Templates



University of Edinburgh on Overleaf

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Quick Start

Welcome to the quick start guide to Overleaf. We've put together some useful resources and links in the sections below, and if you have any questions about how to get started please [let us know](#) and we'll be happy to help!

For Students

Try out the Overleaf editor with built in tutorial

If you'd like to dive straight into the editor, simply click the button to create a new paper

Create a new paper

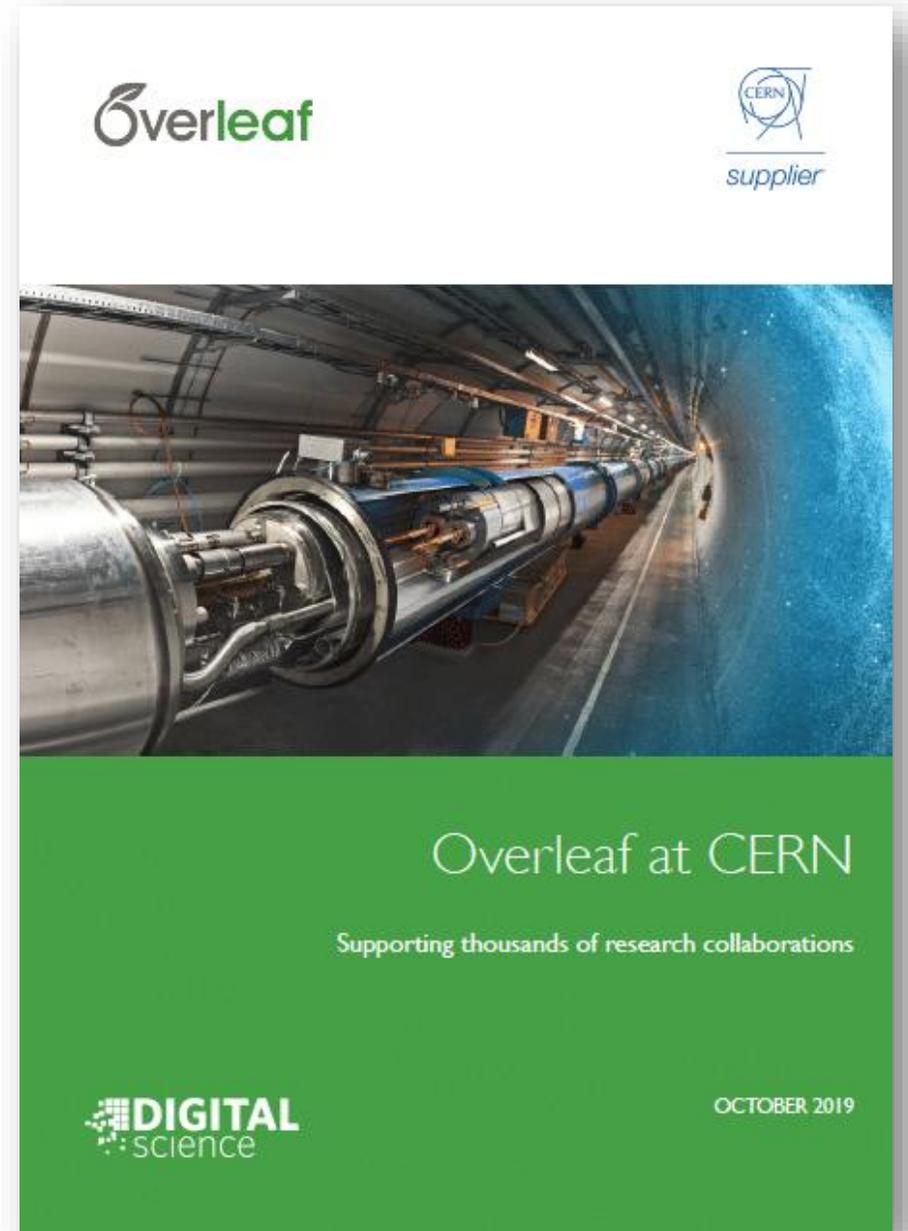
Many different uses of Overleaf at CERN

“The subsequent launch of Overleaf at CERN has been a huge success, with usage in the first year and a half growing by over 800% to include more than 3,600 CERN members across many different departments and specialities.”

Nikos Kasioumis,
Software Engineer in the IT department at CERN
and leader of the CERN authoring trial

Full case study online:

<https://doi.org/10.6084/m9.figshare.10011974>



How to get started? Choose from one of over 6,000 templates in the Overleaf gallery, or pick an example from our learn wiki



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Documentation

Welcome to the Overleaf knowledge base. A cor selection of useful articles:

New to LaTeX?

Start with our [Learn \$\LaTeX\$ in 30 minutes](#) guide.

For more specific introductions, have a look at:

- [Create your first document in \$\LaTeX\$](#)
- [Paragraphs and new lines](#)
- [Bold, italics and underlining](#)
- [Lists](#)
- [Mathematics](#)
- [Bibliographies and references](#)
- [Images](#)
- [Tables](#)

Overleaf guides

- [Create your first Overleaf document](#)

Scientific Reports Title to see here

Alice Author^{1,*}, Bob Author^{2,3,*}, and Derek Author^{2,4}

¹Affiliation, department, city, postcode, country
²Affiliation, department, city, postcode, country
^{*}corresponding author@email.example
[†]these authors contributed equally to this work

ABSTRACT

Example Abstract. Abstract must not include subheadings or citations. Example Abstract. Abstract must not include subheadings or citations. Example Abstract. Abstract must not include subheadings or citations. Example Abstract. Abstract must not include subheadings or citations. Example Abstract. Abstract must not include subheadings or citations. Example Abstract. Abstract must not include subheadings or citations.

Please note: Abbreviations should be introduced at the first mention in the main text – no abbreviations lists. Suggested structure of main text (not enforced) is provided below.

Introduction

The Introduction section, of referenced text¹, expands on the background of the work (some overlap with the Abstract is acceptable). The introduction should not include subheadings.

Results

Up to three levels of **subheading** are permitted. Subheadings should not be numbered.

Subsection

Example text under a subsection. Bulleted lists may be used where appropriate, e.g.

- First item
- Second item

Third-level section

Typical subheadings are allowed.

Discussion

The Discussion should be succinct and must not contain subheadings.

Methods

Typical subheadings are allowed. Authors must ensure that their Methods section includes adequate experimental and characterization data necessary for others in the field to reproduce their work.

References

1. Figueredo, A. J. & Wolf, P. S. A. Associative pairing and life history strategy – a cross-cultural study. *Hum. Nat.* **20**, 317–330. DOI: <https://doi.org/10.1007/s11211-009-9068-2> (2009).
2. Han, Z., AghaKouchak, A., Nakjiri, N. & Farshmand, A. Global integrated drought monitoring and prediction system (GIDMaPS) data sets. *Hydrology* <https://doi.org/10.6084/m9.figshare.853801> (2014).

Henriques Lab bioRxiv template

Ricardo Henriques^{1,2}

¹Quantitative Imaging and Nanotechnology Group, MRC Laboratory for Molecular Cell Biology and Department of Cell and Developmental Biology, University College London, Gower Street, London, WC1E 6BT, United Kingdom

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there an information? Is there a difference between this text and some nonsense like "Haardet gefberm"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Use the tag `Correspondence: rhenriques@ucl.ac.uk`

Introduction

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there an information? Is there a difference between this text and some nonsense like "Haardet gefberm"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there an information? Is there a difference between this text and some nonsense like "Haardet gefberm"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there an information? Is there a difference between this text and some nonsense like "Haardet gefberm"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Henriques | [bioRxiv](#) | July 5, 2017 | 1-6



Machine Learning Approaches to the Blockchain

some hyped-up tagline

[Template for submissions to Scientific Reports](#)

This is an article template for new submissions t...

Scientific Reports (Nature Publishing Group)

[HenriquesLab bioRxiv template](#)

This is a gorgeous template for bioRxiv pre-prin...

Ricardo Henriques

Example Article Title

First Author¹ and Second Author²

¹Address of first author
²Address of second author

ABSTRACT

Please provide an abstract of no more than 300 words. Your abstract should explain the main contributions of your article, and should not contain any material that is not included in the main text.

Keywords: Keyword1, Keyword2, Keyword3

- empty.eps
- empty.pdf
- fig.eps
- fig.pdf
- spr-apacite.bst
- spr-aps.bst
- spr-article-bib.tex
- spr-article1-generic.bib
- spr-article1.tex**

File outline

- Introduction
- Results
- ▼ This is an example for first level h...
 - ▼ This is an example for second l...
 - This is an example for thir...
 - Equations
 - Tables
 - Figures
 - Algorithms, Program codes and Li...
- ▼ Cross referencing
 - Details on reference citations
 - Examples for theorem like enviro...
 - Methods
 - Discussion
 - Conclusion
 - Declarations
 - Section title of first appendix

Article Title

{Introduction} {sec1}

The Introduction section, of referenced text [bib1] expands on the background of the work (some overlap with the Abstract is acceptable). The introduction should not include subheadings.

Springer Nature does not impose a strict layout as standard however authors are advised to check the individual requirements for the journal they are planning to submit to as there may be journal-level preferences. When preparing your text please also be aware that some stylistic choices are not supported in full text XML (publication version), including coloured font. These will not be replicated in the typeset article if it is accepted.

{Results} {sec2}

Sample body text. Sample body text. Sample body text. Sample body text.
Sample body text. Sample body text. Sample body text. Sample body text.

{This is an example for first level head---section head} {sec3}

{This is an example for second level head---subsection head} {subsec2}

{This is an example for third level head---subsubsection head} {subsubsec2}

Sample body text. Sample body text. Sample body text. Sample body text.
Sample body text. Sample body text. Sample body text. Sample body text.

Remarks: This template is provided to aid authors with the preparation of original research articles intended for submission to journals published by Springer Nature. The guidance has been prepared in partnership with production teams to conform to Springer Nature technical requirements. Editorial and presentation requirements differ among journal portfolios and research disciplines. You may find sections in this template are irrelevant to your work and are empowered to omit any such section if allowed by the journal you intend to submit to. The submission guidelines and policies of the journal take precedence. A detailed User Manual is available in the template package for technical guidance.

Article Title

First Author^{1,2*}, Second Author^{2†} and
Third Author^{1,2}

^{1*}Department, Organization, Street, City, 100190, State, Country.

²Department, Organization, Street, City, 10587, State, Country.

³Department, Organization, Street, City, 610101, State, Country.

*Corresponding author(s). E-mail(s): iauthor@gmail.com;
Contributing authors: iauthor@gmail.com; iiiauthor@gmail.com;
†These authors contributed equally to this work.

Abstract

The abstract serves both as a general introduction to the topic and as a brief, non-technical summary of the main results and their implications. Authors are advised to check the author instructions for the journal they are submitting to for word limits and if structural elements like subheadings, citations, or equations are permitted.

Keywords: keyword1, Keyword2, Keyword3, Keyword4

1 Introduction

The Introduction section, of referenced text [1] expands on the background of the work (some overlap with the Abstract is acceptable). The introduction should not include subheadings.

Springer Nature does not impose a strict layout as standard however authors are advised to check the individual requirements for the journal they are planning to submit to as there may be journal-level preferences. When preparing your text please also be aware that some stylistic choices are not supported in full text XML (publication version), including coloured font. These will not be replicated in the typeset article if it is accepted.

```

subheadings.
131
132 % The linguex macro defines three basic commands: \ex., \a.,
and \b.. The first
133 % two generate list environments. The third functions basically
like an \item.
134 % Here is an example. Type setting
135 % \ex. This is the first level of embedding
136 % \a. This is the second level
137 % \b. This is still the second level, but:
138 % \a. This is the third level
139 % \b. This is not the end.
140 % \b. This is the end
141
142 Springer Nature does not impose a strict layout as standard
however authors are advised to check the individual
requirements for the journal they are planning to submit to as
there may be journal-level preferences. When preparing your
text please also be aware that some stylistic choices are not
supported in full text XML, including coloured font. These will
not be replicated in the typeset article if it is accepted.
143
144 This is a short sentence I've added to show track changes.
145
146 \section{Results}\label{sec2}
147
148 Sample body text. Sample body text. Sample body text. Sample
body text. Sample body text. Sample body text. Sample body
text. Sample body text.
149
150 \section{This is an example for first level head---section
head}\label{sec3}
151
152 \subsection{This is an example for second level
head---subsection head}\label{subsec2}
153
154 \subsubsection{This is an example for third level
head---subsubsection head}\label{subsubsec2}
155
156 Sample body text. Sample body text. Sample body text. Sample
body text. Sample body text. Sample body text. Sample body
text. Sample body text.
157
158 \section{Equations}\label{sec4}
159
160 Equations in \LaTeX can either be inline or on-a-line by
itself 
$$E=mc^2$$
. For

```

Track changes is on

Everyone

LianTze Lim (Overleaf Support)

Guests

Deleted (publication version)
Nov 9, 2020 2:14 PM • You

Reject Accept

Added This is a short sentence
I've added to show track changes.
(show less)
Nov 9, 2020 2:12 PM • You

Reject Accept

You: Alice, could you have a first go at
drafting the Results section?
Nov 9, 2020 2:11 PM • Edit

Hit Enter to reply

Resolve Reply

Current file Overview

1 Introduction

The Introduction section, of referenced text [1] expands on the background of the work (some overlap with the Abstract is acceptable). The introduction should not include subheadings.

Springer Nature does not impose a strict layout as standard however authors are advised to check the individual requirements for the journal they are planning to submit to as there may be journal-level preferences. When preparing your text please also be aware that some stylistic choices are not supported in full text XML, including coloured font. These will not be replicated in the typeset article if it is accepted.

This is a short sentence I've added to show track changes.

1

2 Article Title

2 Results

Sample body text. Sample body text. Sample body text. Sample body text.
Sample body text. Sample body text. Sample body text. Sample body text.

3 This is an example for first level head—section head

3.1 This is an example for second level head—subsection head

3.1.1 This is an example for third level head—subsubsection head

Sample body text. Sample body text. Sample body text. Sample body text.
Sample body text. Sample body text. Sample body text. Sample body text.

4 Equations

Equations in \LaTeX can either be inline or on-a-line by itself “display

Already know LaTeX? Join our tutorial: Intro to Overleaf for Intermediate/Advanced users today at 3:30PM CET.

Session details: <https://indico.cern.ch/event/923801/page/21375-cern-tutorials-introduction-to-overleaf>

Register here: <https://register.gotowebinar.com/register/2811264725822925582>



Dr Helen Wright
@ellielou_uk

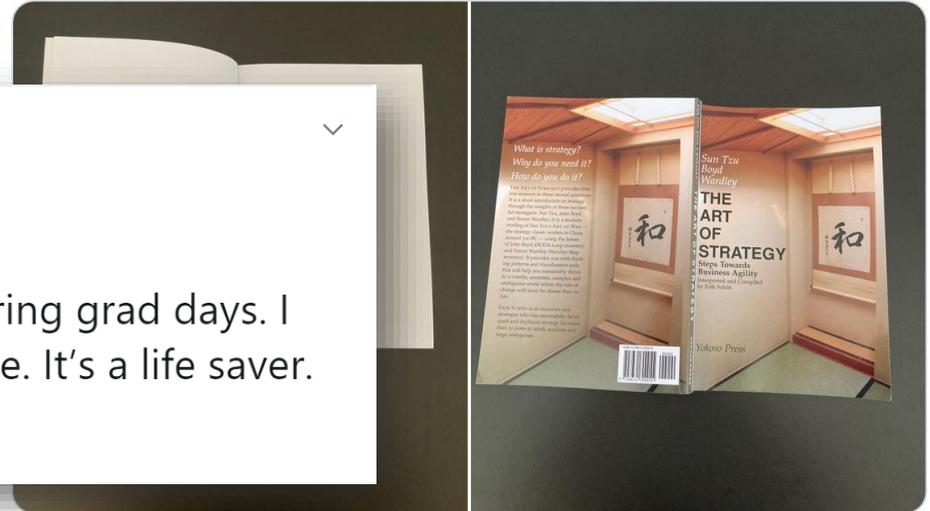
Today I started coding using LaTeX with the help of an [@overleaf](#) template and I now have a beautiful publication quality manuscript to deposit as a pre-print. I am very impressed and feel super clever!

2:43 PM · Jun 2, 2020 · [Twitter Web App](#)



Erik Schön
@erik_schon

Thank you so much [@EdwardTufte](#) and [@overleaf](#) - I would never have made it without you! [#ArtOfStrategy](#)
[yokosopress.se](#)



12:23 PM · Apr 26, 2020 · [Tweetbot for iOS](#)



Nivi
@Nivi_Sid

Replying to [@KepplingerB](#) and [@overleaf](#)

Extensively used overleaf during grad days. I still use it to make my resume. It's a life saver.

12:20 PM · Jun 3, 2020 · [Twitter for iPhone](#)



Petri Aukia
@aukia

Replying to [@teemu_roos](#) [@UusitaloLaura](#) and [@overleaf](#)

Just used [#latex](#) for the first time in ages last night and was tried [@overleaf](#) for the first time. It's an amazing tool and rejuvenates LaTeX.

10:16 AM · Apr 24, 2020 · [Twitter Web App](#)



Dirk Seidensticker
@SeidenstickerD

Replying to [@KepplingerB](#) and [@overleaf](#)

Wrote my PhD thesis using LaTeX and am prepping it for publication at the moment. I cannot image getting to the same results in e.g. Word. Worked with InDesign for type-setting before and would not go back to that either. [#overleaf](#) is a good starting point

12:50 PM · Jun 3, 2020 · [Twitter Web App](#)



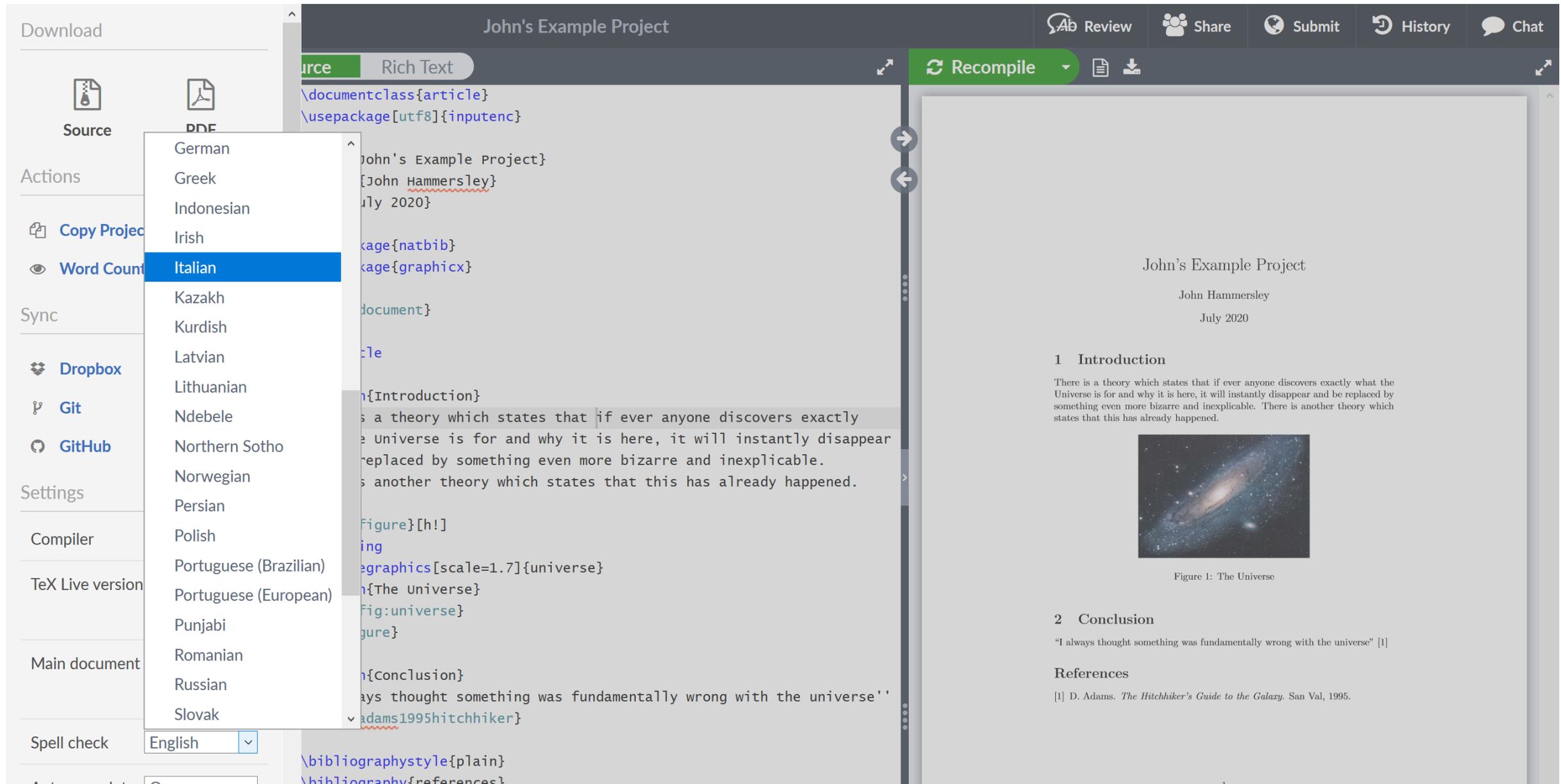
Elizabeth Smith
@eeeeelizzzzz

Replying to [@AndrewDzambo](#) and [@jeremy_gibbs](#)

Seriously trying [@overleaf](#) was such an easy transition to latex. I could NEVER go back now.

9:28 PM · Jun 12, 2020 from [Norman, OK](#) · [Twitter for iPhone](#)

Designed for different workflows, e.g. spell check in over 40 languages



The screenshot displays a LaTeX editor interface for a project named "John's Example Project". The top toolbar includes buttons for "Review", "Share", "Submit", "History", and "Chat". A "Recompile" button is highlighted in green. The left sidebar contains a "Download" section, "Source" and "PDF" icons, and a list of "Actions" including "Copy Project", "Word Count", and "Sync" options like "Dropbox", "Git", and "GitHub". The "Settings" section includes "Compiler", "TeX Live version", "Main document", and "Spell check". The "Spell check" dropdown menu is open, showing a list of 40 languages, with "Italian" selected. The main editor window shows LaTeX source code with a red squiggly line under "Hammersley". The right pane shows the rendered PDF output, which includes a title page, an introduction section with a paragraph of text, an image of a galaxy, and a conclusion section.

Download

John's Example Project

Review Share Submit History Chat

Source PDF

Actions

Copy Project Word Count

Sync

Dropbox Git GitHub

Settings

Compiler TeX Live version Main document Spell check

German Greek Indonesian Irish Italian Kazakh Kurdish Latvian Lithuanian Ndebele Northern Sotho Norwegian Persian Polish Portuguese (Brazilian) Portuguese (European) Punjabi Romanian Russian Slovak

Rich Text

```
\documentclass{article}
\usepackage[utf8]{inputenc}

John's Example Project
{John Hammersley}
July 2020}

\package{natbib}
\package{graphicx}

\document{}

\title{}

\begin{document}
\section{Introduction}
There is a theory which states that if ever anyone discovers exactly
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.

\begin{figure}[h!]
\includegraphics[scale=1.7]{universe}
\caption{The universe}
\end{figure}

\section{Conclusion}
'I always thought something was fundamentally wrong with the universe''
-- adams1995hitchhiker}

\end{document}

\bibliographystyle{plain}
\bibliography{references}
```

John's Example Project

John Hammersley

July 2020

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]

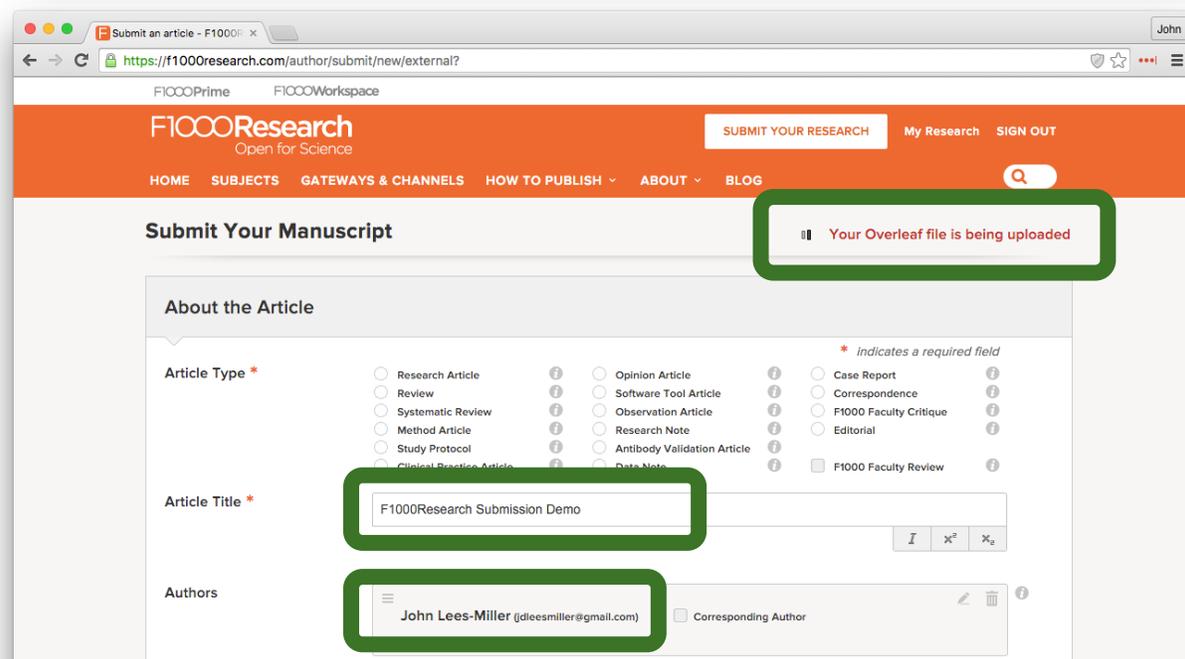
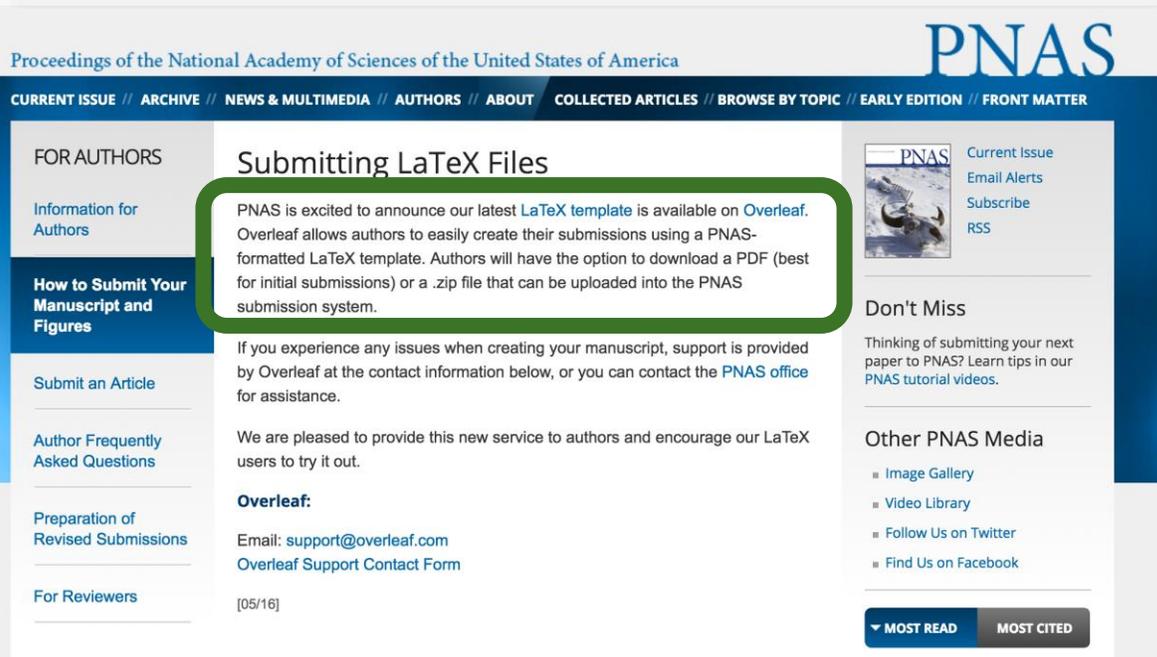
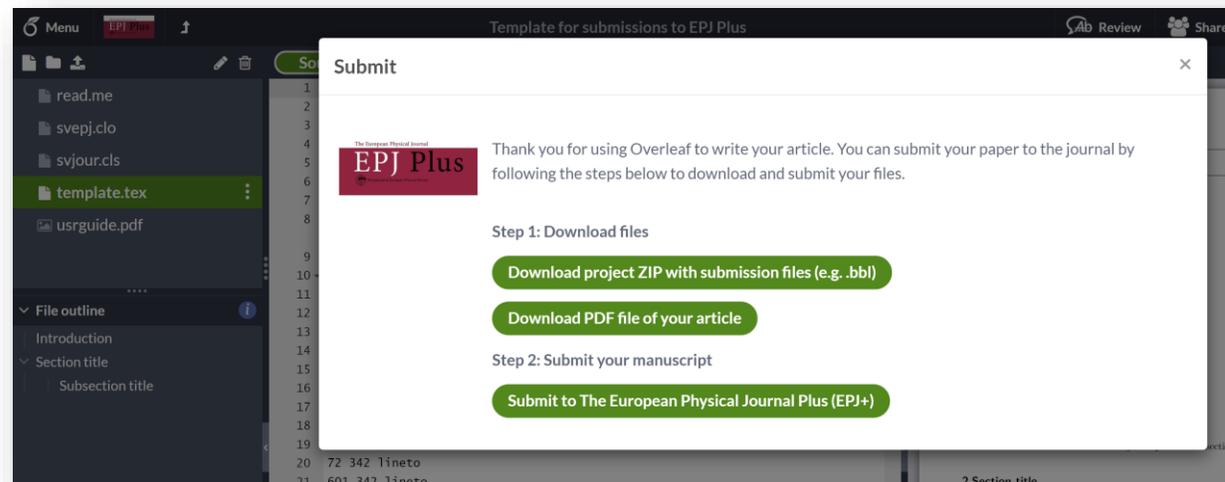
References

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

Simplifying submission from Overleaf to journals and preprint servers.

This includes:

1. Template development and support;
2. Compatibility testing with new TeX Live releases;
3. Simple direct submission links;
4. Advanced submission links with e.g. metadata transfer, support for revisions.



What's next?

Overleaf is in continuous development, based on feedback from our community of users.

We (try to!) focus on product improvements that directly help authors during the writing process – for example, the file outline feature released earlier this year.

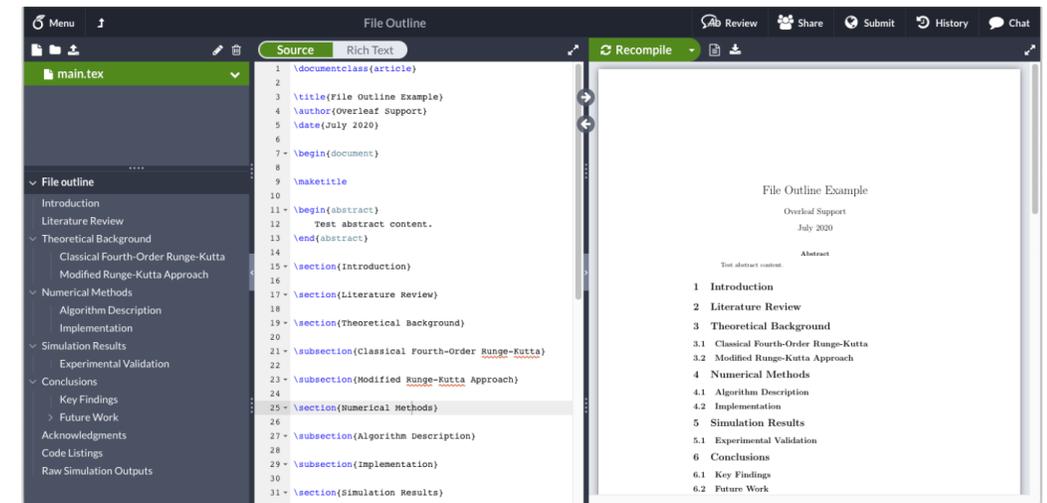
As part of this, we conduct regular user interviews throughout the year to help us see things from your perspective. We'd love to talk to anyone currently using Overleaf, especially for large collaborations – please let us know if you'd like to take part in one!

During the FCCIS programme we'll be working together with SpringerNature to improve the writing and submission experience, from document creation to publication. More on this in the next talk!

Blog

New Feature: File Outline is now available on Overleaf

Posted on September 1, 2020



We're pleased to announce the full release of the Overleaf project file outline. This feature is perfect for anyone who is working on larger projects such as research papers, books and theses. It's also pretty handy for shorter projects too!

What is the file outline and how does it work?

When you have a large file with lots of sections, the file outline means you're no

Thanks for listening!

Dr. John Hammersley
Co-founder and CEO, Overleaf

Contact email: john@overleaf.com

www.overleaf.com

