

# Reviewing Natural Language Processing Research

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## Abstract

The reviewing procedure has been identified as one of the major issues in the current situation of the NLP field. While it is implicitly assumed that junior researcher learn reviewing during their PhD project, this might not always be the case. Additionally, with the growing NLP community and the efforts in the context of widening the NLP community, researchers joining the field might not have the opportunity to practise reviewing. This tutorial fills in this gap by providing an opportunity to learn the basics of reviewing. Also more experienced researchers might find this tutorial interesting to revise their reviewing procedure.

## 1 Tutorial Content

This tutorial will cover the theory and practice of reviewing research in natural language processing. As has been pointed out for years by leading figures in our community (Webber, 2007), researchers in the ACL community face a heavy—and growing—reviewing burden. Initiatives to lower this burden have been discussed at the recent ACL general assembly in Florence (ACL 2019)<sup>1</sup>. Simultaneously, notable “false negatives”—rejection by our conferences of work that was later shown to be tremendously important after acceptance by other conferences (Church, 2005)—have raised awareness of the fact that our reviewing practices leave something to be desired. . . and we do not often talk about “false positives” with respect to conference

papers, but conversations in the hallways at \*ACL meetings suggest that we have a publication bias towards papers that report high performance, with perhaps not much else of interest in them (Manning, 2015).

It need not be this way. Reviewing is a learnable skill (Basford, 1990; Paice, 2001; Benos et al., 2003; Koike et al., 2009; Shukla, 2010; Tandon, 2014; Spyns and Vidal, 2015; Stahel and Moore, 2016; Kohonen, 2017; McFadden et al., 2017; Hill, 2018), and you will learn it here via a combination of lectures and a significant amount of hands-on practice.

**Type:** Introductory

**Structure:** see Table 1

**Prerequisites:** Proficiency in English

Table 1 presents a brief outline of the tutorial. Our aim is to provide enough options for hands-on experience and smaller-group activities in breakout rooms.

### 1.1 Reading List

- Kenneth Church. 2005. [Last words: Reviewing the reviewers](#). *Computational Linguistics*, 31(4):575–578
- Button K. S., Bal L., Clark A., and Shipley T. 2016. [Preventing the ends from justifying the means: withholding results to address publication bias in peer-review](#). *BMC Psychol.*, 4(1)
- Leif Engqvist and Joachim Frommen. 2008. [Double-blind peer review and gender publication bias](#). *Animal Behaviour*, 76:e1–e2

<sup>1</sup><http://www.livecongress.it/aol/indexSA.php?id=E2EAED7D&ticket=>

Slot	Content
1	Role of peer review in scientific publishing
2	General Procedure in Reviewing – Overview on Various Review Forms & Best Practise
3	Approaches to reviewing and NLP-specific issues
4	Section-specific criteria (Materials & Methods, Results, etc.)
5	Ethics of reviewing
6	How to give kind, constructive, and helpful feedback efficiently
7	Wrap-Up

Table 1: Rough outline of the planned schedule, which will be accommodated according to audience expertise and input. Each slot will also include practical exercises in smaller groups.

- Michael J. Mahoney. 1977. [Publication prejudices: An experimental study of confirmatory bias in the peer review system](#). *Cognitive Therapy and Research*, 1(2):161–175
- Mark Steedman. 2008. [Last words: On becoming a discipline](#). *Computational Linguistics*, 34(1):137–144
- Bonnie Webber. 2007. [Breaking news: Changing attitudes and practices](#). *Computational Linguistics*, 33(4):607–611

## 1.2 Presenters (in alphabetical order)

**Kevin Bretonnel Cohen** has written, overseen, and received hundreds of reviews in his capacity as deputy editor-in-chief of a biomedical informatics journal, associate editor of five natural language processing or bioinformatics journals, special issue editor, workshop organizer, and author of 100+ publications in computational linguistics and natural language processing. His forthcoming book *Writing about data science research: With examples from machine and natural language processing* includes coverage of a number of aspects of the reviewing process. His current research focuses on issues of reproducibility.

**Karën Fort** is an associate professor at Sorbonne Université. Besides being a reviewer for most major NLP conferences, she has been editor in chief for a *Traitement automatique des langues* journal special issue on ethics and acted as Area Chair for ACL in 2017 and 2018 (as senior AC). She co-authored the report on the EMNLP reviewer survey (Névéol et al., 2017).

**Margot Mieskes** is a professor at the Darmstadt University of Applied Sciences. She has written and received reviews for numerous conferences and journals. She is a member of the ACL Professional Conduct Committee and an active member of the Widening NLP efforts. She co-authored the report on EMNLP reviewer survey (Névéol et al., 2017). **Aurélié Névéol** is a permanent researcher at LIMSI CNRS and Université Paris Saclay. She has been

involved in reviewing natural language processing papers at many stages of the reviewing process, including: reviewer, associate editor for three journals, area chair for \*ACL and bioinformatics conferences, workshop organizer. Her research focuses on biomedical natural language processing as well as ethics issues in NLP research. She co-authored the report on EMNLP reviewer survey (Névéol et al., 2017).

**Anna Rogers** is a post-doctoral associate at the University of Copenhagen. Her main research areas are interpretability, evaluation and analysis of deep learning models for NLP. She is also active in the sphere of meta-research and methodology, working on issues in peer review and organizing the Workshop on Insights from Negative Results in NLP (EMNLP 2020, 2021).

## References

- P Basford. 1990. How to... review an article. *Nursing times*, 86(40):61–61.
- Dale J Benos, Kevin L Kirk, and John E Hall. 2003. How to review a paper. *Advances in physiology education*, 27(2):47–52.
- Kenneth Church. 2005. [Last words: Reviewing the reviewers](#). *Computational Linguistics*, 31(4):575–578.
- Leif Engqvist and Joachim Frommen. 2008. [Double-blind peer review and gender publication bias](#). *Animal Behaviour*, 76:e1–e2.
- Michael D Hill. 2018. How to review a clinical research paper. *Stroke*, 49(5):e204–e206.
- Thomas Kohnen. 2017. How to write a good peer review. *Journal of Cataract & Refractive Surgery*, 43(10):1243–1244.
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- David McFadden, Scott LeMaire, Michael Sarr, and Kevin Behrns. 2017. How to review a paper: Suggestions from the editors of surgery and the journal of surgical research. *Surgery*, 162(1):1–6.
- Aurélié Névéol, Karën Fort, and Rebecca Hwa. 2017. [Report on EMNLP Reviewer Survey.](#) Technical report, Association for Computational Linguistics.
- Elisabeth Paice. 2001. How to write a peer review. *Hospital Medicine*, 62(3):172–175.
- Button K. S., Bal L., Clark A., and Shipley T. 2016. [Preventing the ends from justifying the means: withholding results to address publication bias in peer-review.](#) *BMC Psychol.*, 4(1).
- Satish K Shukla. 2010. How to review an article. *Indian Journal of Surgery*, 72(2):93–96.
- Peter Spyns and María-Esther Vidal. 2015. *Scientific Peer Reviewing: Practical Hints and Best Practices*. Springer.
- Philip F Stahel and Ernest E Moore. 2016. How to review a surgical paper: a guide for junior referees. *BMC medicine*, 14(1):29.
- Mark Steedman. 2008. [Last words: On becoming a discipline.](#) *Computational Linguistics*, 34(1):137–144.
- Rajiv Tandon. 2014. How to review a scientific paper. *Asian journal of psychiatry*, 11:124–127.
- Bonnie Webber. 2007. [Breaking news: Changing attitudes and practices.](#) *Computational Linguistics*, 33(4):607–611.