Writing log for this hot paper

Blaine Mooers

2022-09-10

Contents

1 Why am I writing this paper?}

What is the rationale for writing this paper?
To help advance the field.
To help win or renew a grant funding.
To establish credibility in a new field for my lab.

2 Who is the audience of the paper?

3 Related Grant Application Specific Aims

-
-
-
-
-
-
-

4 Related projects

Take care not to re-start a project a second time.

-
-
-
-
-
-
-
-

5 Potential Journals, IF

5.1 Very High Impact Journals

- Annals of Oncology, 51.7!
- Cell
- Molecular Cell
- Nature
- Nature Methods
- Nature Molecular and Structural Biology
- NPJ Precision Oncology
- Nucleic Acids Research
- PNAS
- Science

5.2 Respectable Science Journals

- Acta Cryst. Section A
- Acta Cryst. Section B
- Acta Cryst Section D
- Biochemistry
- Bioinformatics
- Biophysical Journal
- Cell Communication and Signaling
- Computational and Structural Biotechnology Journal, 7.3
- Data in Brief
- The FEBS Journal, 5.5
- IUCrJ
- iScience
- J of Appl Crystallography
- J of Biological Chemistry
- J of Molecular Biology
- J of Structural Dynamics

- J of Structural Biology

- MethodsX

- Opinion in Structural Biology

- Progress in Biophysics and Molecular Biology, 3.7

- Protein Science

- RNA

- Structure

5.3   Computationtal biochemistry

- Computational and Theoretical Chemistry, 1.9

- Computational Biology and Chemistry, 2.8

- Computers in Engineering and Science

- Crystals

- International Journal of Molecular Science, 6.3

- Journal of Computational Chemistry, 3.4

- Journal of Molecular Graphics and Modeling

- Journal of Molecular Graphics and Modelling, 2.5

5.4   Computing Journals

- CAD Computer Aided Design, 3.0

- Computational Geometry: Theory and Applications

- Computer Aided Geometric Design, 1.3

- Computer Graphics Forum

- Computers in Engineering and Science

- Graphics \ Visual Computing,

- SoftwareX

5.5   Journals about science education

- Biochemistry and Molecular Biology Education, 1.2

- Biochemistry and Molecular Biology Education

- Computers and Education, Open, no APC

6 Potential Titles

-
-
-
-
-

7 Potential Keywords

-
-
-
-
-

8 Potential Internal Reviewers

-
-
-
-
-

9 Potential External Reviewers

- Harsh Critic
- Keen Competitor
-
-
-
-
-
-
-
-

10   Potential Competitors

-
-
-
-
-

11   Potential Collaborators

-
-
-
-
-

12   Draft Introduction

The central hypothesis of this amazing paper is that it will be accepted on the first submission [Chaloner and Verdinelli,

13   Draft Abstract

14   Writing Log

14.1   9 September 2022

5 hours

- Answered the why
- Identified the audience
- Drafted the Introduction and identified the central hypothesis of the paper
- Outlined the planned results in terms of figures and tables
- Outlined the key discussion points
- Drafted the abstract
- Started a list of potential titles
- Started list of keywords
- Generated list of potential reviewers to suggest

14.2   10 September 2022

1.5 hours Worked on the Results subsection about the more important result.

15   Next Action

- To this next

16   To Be Done

-
-
-
-
-

17   May Be Done Someday

- write another related paper
-
-
-
-

18   Word Count

The word count tends to approach a plateau in the latter stages of writing.

| Date	Day	Words
20,210,916	1	1,148
20,210,917	2	3,267
20,210,919	3	5,062
20,210,920	4	5,251
20,210,921	5	6,506
20,210,922	6	6,975
20,210,923	7	7,993
20,210,924	8	8,818
20,210,925	9	9,399
20,210,926	10	10,560
20,210,927	11	11,141
20,210,928	12	11,793
20,210,929	13	11,982
20,210,930	14	12,318
20,211,001	15	12,642
20,211,002	16	12,762
20,211,003	17	12,762
20,210,004	18	14,454
20,211,005	19	14,707
20,211,107	20	14,801
20,220,809	21	16,029
20,220,811	22	16,782
20,220,812	23	16,888

Table 1: Date, day and wordcount.
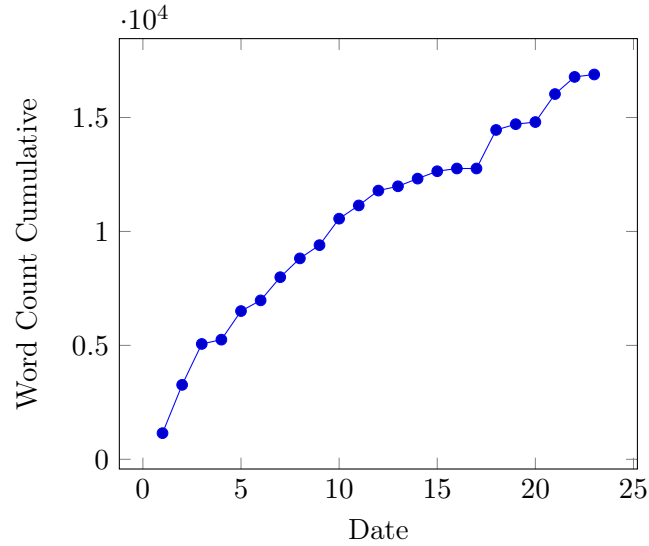
Figure 1: Cummulative word count.

19   Glossary of jargon

censored datacensored data Censoring hides values from points that are too large, too small, or both. The number of data points that were censored is known, unlike the case for truncated data. Data are right-censored if the value is greater than a threshold. The data are left-censored if the value is below a threshold. The censored data can be treated as missing data. In Stan, the censored data have their own array and their mean and sigma are sampled.

diminishing adaptation condition The distance between two consecutive Markov kernels must uniformly decrease to zero.

leapfrog approximation The Metropolis-Hastings correction required by the Hamiltonian Monte Carlo.

Markov Chain Monte Carlo A class of algorithms that simulates a Markov chain whose stationary distribution is the target distribution of interest. The stationary chain generates a sample from the target distribution.

No U-turn sampler An adaptive algorithm that aims to find the best parameter settings by tracking the sample path and preventing HMC from retracing its steps in this path.

overdispersion When the observed variance is greater than the mean in count data.

Poisson overdispersion The Poisson distribution has a mean that is equal to its variance. When the observed variance is greater than the mean; this is known as overdispersion and indicates that the Poisson model is not appropriate. A common reason for overdispersikon ais the omission of relevant explanatory variables, or dependent observations. Under some circumstances, the problem of overdispersion can be solved by using quasi-likelihood estimation or a negative binomial distribution instead.

20   Reminders and precautions

- Develop a checklist for manuscript uploading to save time and pain

- Check the accepted image file format early in the figure preparation process

-

-

-

References

[Chaloner and Verdinelli, 1995] Chaloner, K. and Verdinelli, I. (1995). Bayesian experimental design: A review. Statistical Science *10*, 273–304.

Index