

Creative title: Where we give results about things

Other Author^{a,1}, Another Author^b, and Daniel J. McDonald^a

^aDepartment of Statistics, The University of British Columbia

^bDepartment of Music, Indiana University

Abstract

Write an abstract.

Keywords: fractals | quavers | carbonara

1 Introduction

We write some math for fun:

$$\int_{-\infty}^{\infty} \frac{1}{\sqrt{2\pi}|\Sigma|^{n/2}} \exp\left\{-\frac{1}{2}(y-\mu)^{\top}\Sigma^{-1}(y-\mu)\right\}dy = 1. \quad (1)$$

We encourage the use of the various macros defined in [ShorTeX](#), so do your best. It makes things easier to read, but also provides lots of necessary mathematics definitions that render nicely.

Be careful with things like KL divergence and conditional probability statements. I find that

$$\text{KL}(q \parallel p)$$

looks much better than

$$\text{KL}(q||p),$$

and I similarly prefer

$$Y \mid X \sim \mathcal{N}(X, \sigma^2) \quad \text{to} \quad Y|X \sim \mathcal{N}(X, \sigma^2).$$

1.1 Cleveref

We prefer to use `cleveref` to get nice references to things. For example, you can say that Eq. (1) was printed in Section 1. No need to write out things like “Section”.

¹To whom correspondence should be addressed. E-mail: some.email@stat.ubc.ca

2 Some best practices

Some of these are taken from [Jacob Bien](#). Note the use of the ShorTeX itemize environment style below.

- Section titles should be all title case or all sentence case. Don't mix and match.
- I prefer data set to dataset.
- I prefer data to be singular. There remains debate on this point. When you use the word "datum" in a sentence, then we can argue. Data is a mass noun, like "information". We don't say "How many data are enough?", we say "How much data is enough." Enough said.
- Terminology is lower case, unless it's a person's name: Nyström extension and lasso.
- Equations are parts of the sentence. Displayed equations almost always have a comma or period after. Very rarely is there a colon or comma *before* a displayed equation.
- Don't start sentences with math ("Σ is the covariance of **X**.") or the name of a software package that's lowercase, e.g., "**glmnet** is my favourite software".
- Don't use contractions.
- No need to put dollar signs around numbers: 12 versus 12.
- DO put dollar signs around math: p not p.
- Use $x \gg y$ not $x >> y$.
- Careful with parentheticals and references. Wrong: (see, e.g., [Akaike \(1973\)](#)). Right: (see, e.g., [Akaike, 1973](#)).
- Never use `eqnarray`, always use `align` (though ShorTeX makes `\[\]` into an align environment.)

2.1 Tables

Table 1 is a nice looking table. Strive for these.

3 Discussion

We made amazing contributions to the world of musical fractal pasta ([McDonald, 2017](#); [Tibshirani, 2013](#)). We use Natbib, so be sure to use ([Stein, 1981](#)) for parenthetical references. Or you can say, according to [Hastie et al. \(2009\)](#), we should strive to balance truth and lies.

Ingredient	Quantity
Fusili	100 g
Eggs	2
Salt	1 tsp
Guanciale	50 g
Pepper	$\frac{1}{2}$ tsp
Grated parmesan	$\frac{1}{4}$ c

Table 1: This is a nice looking table. It might make carbonara.

References

- Akaike, H. (1973) Information theory and an extension of the maximum likelihood principle. In *Proceedings of the 2nd International Symposium of Information Theory* (eds. B. N. Petrov and F. Csaki), 267–281.
- Hastie, T., Tibshirani, R. and Friedman, J. (2009) *The Elements of Statistical Learning: Data Mining, Inference, and Prediction*. Springer Verlag.
- McDonald, D. J. (2017) Minimax Density Estimation for Growing Dimension. In *Proceedings of the 20th International Conference on Artificial Intelligence and Statistics (AISTATS)* (eds. A. Singh and J. Zhu), vol. 54, 194–203. PMLR.
- Stein, C. M. (1981) Estimation of the mean of a multivariate normal distribution. *The Annals of Statistics*, **9**, 1135–1151.
- Tibshirani, R. J. (2013) The lasso problem and uniqueness. *Electronic Journal of Statistics*, **7**, 1456–1490.