

An Analysis of Gibbs Posterior Concentration in Terms of the Separation α -Entropy

Olivier Binette

Université du Québec à Montréal
e-mail: olivier.binette@duke.edu

and

Yu Luo

McGill University
e-mail: yu.t.luo@mail.mcgill.ca

References

- Barron, A. R. (1986). Discussion: On the consistency of bayes estimates. *14*(1), 26–30.
- Berk, R. H. (1966). Limiting Behavior of Posterior Distributions when the Model is Incorrect. *Annals of Mathematical Statistics* *37*(1), 51–58.
- Bhattacharya, A., D. Pati, and Y. Yang (2019). Bayesian fractional posteriors. *Ann. Statist.* *47*(1), 39–66.
- Chernozhukov, V. and H. Hong (2003). An MCMC approach to classical estimation. *Journal of Econometrics* *115*(2), 293–346.
- Choi, T. and R. V. Ramamoorthi (2008). *Remarks on consistency of posterior distributions*, Volume Volume 3, pp. 170–186. Beachwood, Ohio, USA: Institute of Mathematical Statistics.
- De Blasi, P. and S. G. Walker (2013). Bayesian asymptotics with misspecified models. *Statistica Sinica*, 169–187.
- Grünwald, P. D. and N. A. Mehta (2016). Fast Rates for General Unbounded Loss Functions: from ERM to Generalized Bayes. pp. 1–79.
- Grünwald, P. and T. van Ommen (2017). Inconsistency of bayesian inference for misspecified linear models, and a proposal for repairing it. *12*(4), 1069–1103.
- Holmes, C. C. and S. G. Walker (2016). A General Framework for the Updating of Belief Distributions. pp. 1103–1130.
- Kleijn, B. J., A. W. van der Vaart, et al. (2006). Misspecification in infinite-dimensional bayesian statistics. *The Annals of Statistics* *34*(2), 837–877.

- Syring, N. and R. Martin (2015). Calibrating general posterior credible regions. (December 2018), 479–486.
- Syring, N. and R. Martin (2016). Robust and rate-optimal Gibbs posterior inference on the boundary of a noisy image. (1998), 1–19.
- Syring, N. and R. Martin (2017). Gibbs posterior inference on the minimum clinically important difference. *Journal of Statistical Planning and Inference* 187, 67–77.
- Walker, S. (2004). New approaches to Bayesian consistency. *The Annals of Statistics* 32(5), 2028–2043.
- Xing, Y. and B. Ranneby (2009). Sufficient conditions for Bayesian consistency. 139(7), 2479–2489.
- Zhang, T. (2006). Information-theoretic upper and lower bounds for statistical estimation. *IEEE Transaction On Information Theory* 52(4), 1307–1321.