The last two decades have seen an explosion in the popularity and use of Bayesian methods, largely as a result of the advances in sampling based approaches to inference. At the same time, important advances and developments in methodology have coincided with highly sophisticated breakthroughs in computational techniques. Consequently, practitioners are increasingly turning to Bayesian methods so as to effectively tackle more complex and realistic models and problems, particularly as richer sources of data continue to become available. The primary aim of the issue is to illustrate and showcase recent advances in Bayesian computation and inferential methods, as well as highlight their application to empirical problems in a broad range of areas, including econometrics, biology, finance and medicine, amongst many others. Methodological contributions that highlight recent developments in Bayesian computing are strongly encouraged.

The papers should have a computational or advanced data analytic component in order to be considered for publication. Authors who are uncertain about the suitability of their papers should contact the special issue editors. All submissions must contain original unpublished work not being considered for publication elsewhere. Submissions will be refereed according to standard procedures for Computational Statistics & Data Analysis. Information about the journal can be found at http://www.elsevier.com/locate/csda.

The deadline for submissions is 30 June 2012. However, papers can be submitted at any time; and, when they have been received, they will enter the editorial system immediately.

Papers for the special issue should be submitted using the Elsevier Electronic Submission tool EES: http://ees.elsevier.com/csda. In the EES please choose the special issue on Bayesian Computing, Methods and Applications and the Co-Editor responsible for the special issues.

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