

# Template for One-Page Brief

K. Krishnamurthy and R. Ahmad \*

The necessary page-formatting commands are included in the preamble. By inserting the text in the appropriate fields in this template file, a properly formatted output can be created.

Some further instructions regarding stylistics are included below.

Number citations consecutively in square brackets [1]. The sentence punctuation follows the brackets [2]. Multiple references can be written as [1]-[4]. In sentences, refer simply to the reference number, as in [3]. Do not use “Ref. [3]” or “reference [3]” except at the beginning of a sentence: “Reference [3] shows ...”. For bibtex, use the “unsrt” bibliography style (see [5] for an example of the format). We prefer the paper title to be included, because it gives the reader as clearer idea about the paper being cited.

Use one space after periods and colons. Use a zero before decimal points: “0.25,” not “.25.” Indicate sample dimensions as “0.1 cm × 0.2 cm,” not “0.1×0.2 cm<sup>2</sup>.”

Figure axis labels are often a source of confusion. Use words rather than symbols. As an example, write the quantity “Magnetization,” or “Magnetization, M,” not just “M.” Put units in parentheses. Do not label axes only with units. For example, write “Magnetization (A/m)” or “Magnetization (Am),” not just “A/m.” Do not label axes with a ratio of quantities and units. For example, write “Temperature (K),” not “Temperature/K.”

*Some Common Mistakes:* The word “data” is plural, not singular. A graph within a graph is an “inset,” not an “insert.” The prefix “non-” is not a word; it should be joined to the word it modifies, usually without a hyphen (like “nonlinear”). There is no period after the “et” in the Latin abbreviation “et al.” The abbreviation “i.e.” means “that is,” and the abbreviation “e.g.” means “for example.”

For including graphics, please make sure that the final size of letters is about 9 point (comparable to the letters in the caption). For this, it is often necessary to increase the size of the axis markings and other letterings produced by a plotting program. We prefer illustrations and figures produced in vector graphics format, because they reproduce much better than raster graphics files (like those produced by MSPAINT). In UNIX (or LINUX), the standard graphics program is *xfig*. In this program, first produce a figure in its native format (with extension .fig) and then export to an encapsulated postscript file (with extension .eps) if you compose in  $\LaTeX$  or to pdf if you compose with pdf $\LaTeX$ . In WINDOWS, the vector graphics programmes are *coreldraw*, *Adobe illustrator* etc.

\*K. Krishnamurthy is with the Center for Theoretical Studies, Indian Institute of Technology, Kharagpur-721302, email: krishna@iitkgp.ac.in. R. Ahmed is with the Bharatidasan University, Tiruchirappalli, TN, email: ahmad@bdu.ernet.in

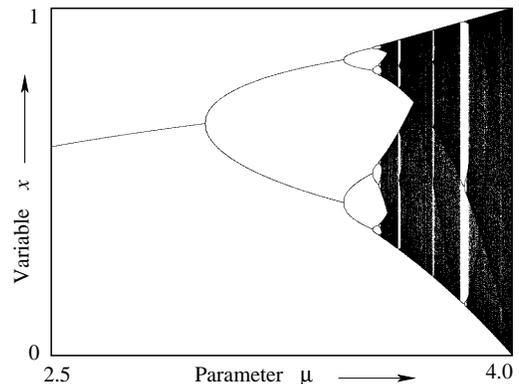


Figure 1: Example of a figure set to one column width.

One common problem is monstrously large file size for the graphics, especially the bifurcation diagrams. Most people will read the paper by downloading from the net, and a large file size causes many problems. One easy way of reducing the file size of a bifurcation diagram is to avoid plotting hundreds of points where the orbit is period-1 or period-2. You may create a filtering code which detects if the orbit has a low period ( $x(n) - x(n+p) < \epsilon$ ), and if it detects, it keeps only the points of one period and deletes the rest. The other way of doing it is to divide the y-axis into boxes depending on the number of pixels, and store the information only about the boxes that had points in them (irrespective of the number of points falling in each box). A third way is to save it in a format like png or jpg, and the use pdf $\LaTeX$  to compose the file.

If you only have raster graphics programs, produce the figures in sufficiently large size so that the rough edges smoothen out when reduced to reproduction size. You will need to convert the format to encapsulated postscript format prior to inclusion in the  $\LaTeX$  file (or into jpg, pdf, or png formats for pdf $\LaTeX$ ). When producing graphs by programs like MATLAB, directly produce the graph in postscript or pdf format.

**Full paper published in** K. Krishnamurthy and R. Ahmad, Title of the paper, *Phys. Rev. E*, **82**, 2008, pp. 1024-1030.

## References

- [1] Leslie Lamport, *A Document Preparation System:  $\LaTeX$ , User's Guide and Reference Manual*, Addison Wesley, 1986.
- [2] Helmut Kopka,  *$\LaTeX$ , eine Einführung*, Addison-Wesley, 1989.
- [3] D.K. Knuth, *The  $\TeX$ book*, Addison-Wesley, 1989.
- [4] D.E. Knuth, *The METAFONTbook*, Addison Wesley, 1986.
- [5] T. Y. Lee and J. A. Yorke. Period three implies chaos. *American Mathematical Monthly*, 82:985–992, 1975.