

Technometrics—An Example of a Special Purpose Statistics Journal

(as opposed to a "general statistical audience" venue)

<http://www.public.iastate.edu/~vardeman/>

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- you say clearly early in the paper what kind of article you are writing ... is it a methodology paper? ... a case study? ... an expository paper?

Technometrics Purpose

(from the inside front cover of every issue of the journal)

The purpose of *Technometrics* is to contribute to the development and use of statistical methods in the physical, chemical and engineering sciences as well as information sciences and technology. These include developments on the interface of statistics and computer science such as data mining, machine learning, large data bases, and so on..The journal places a premium on clear communication among statisticians and practitioners of these sciences and an emphasis on the application of statistical concepts and methods to problems that occur in these fields. The journal will publish papers describing new statistical methods, papers illustrating innovative application of known statistical methods, expository papers on particular statistical methods, and papers dealing with the philosophy and problems of applying statistical methods, when such papers are consistent with the journal's objective.

Technometrics Purpose (continued)

Every article shall include adequate justification of the application of the technique, preferably by means of an actual application to a problem in the physical, chemical, engineering, or information sciences. All papers must contain a short, clear summary of contents and conclusions. Mathematical derivations not essential to the flow of the text should be placed in an appendix. Brief descriptions of problems requiring solution and short technical notes that clearly pertain to the journal's purpose will also be considered for publication. Concise letters to the editor will be published when they are considered timely and appropriate.

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 - the journal will publish high quality statistical papers in any area of statistics that has direct relevance to the physical, chemical, engineering, and information sciences

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- a journal with an editorial board that traditionally has seen itself as "part of the research production process" rather than as "the final inspection station in the research production process"
 - only in the rarest of circumstances are papers judged "essentially ready for publication" as first submitted revision in line with the journal's purposes is almost always required, but constructive reviews giving clear guidance as to what can be done to improve a piece of research (as far as the journal is concerned) is the norm serious efforts are made to keep manuscript processing times to the minimum possible

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- Real Examples ...these are almost always required ... *this is more than a requirement for a numerical example* ... some of the background of the application is typically needed

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- Guidelines for Practice (in the journal's subject areas) ... papers on new methodology must show clearly that not only can a method be used, but detail where and why it should be used (in preference to all existing competing methodologies) ... again, even hard and high quality mathematics that doesn't lead to this end will typically be inappropriate for *Technometrics*

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 - there needs also to be something that a reader can carry away from the paper that has implications beyond the case the author treats

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 - abstracts and introductions especially need to be "user friendly," beginning with the problem being considered, summarizing the paper's contributions and saying how it is organized
 - people primarily interested in statistical theory will read *Technometrics* articles, but they are **not** the journal's target audience, and papers must be written with the target audience in mind, not the secondary audience of theoreticians