Background: The main purpose of this document is to assist reviewers who are involved in the appraisal of computer research proposals but are not computer scientists themselves. It might also be usable in other contexts. The document lists a number of characteristics of computer science (CS) as a scientific discipline, including its publication culture.

– The CS discipline is very broad. CS research can be fundamental in nature, as well as application-oriented. Within the CS discipline, a wide variety of sub-disciplines exist, many of which relate to other scientific disciplines, such as the life sciences, biology, mathematics, business administration, and the humanities. Research questions for computer scientists may arise from using CS in application domains, such as law or healthcare.

– CS is artifact-centric in the sense that much of its research is concerned with the design and evaluation of artifacts (algorithms/techniques/tools/methods/software/technology). The artifact is seen as of being of value in itself. The creation of an artifact demonstrates the feasibility of the underlying concepts and opens the way for practical application. This artifact-centricity of CS contrasts with disciplines where the development or testing of theory takes centre stage.

– Next to the purely theoretical CS research, many sub-disciplines within CS are practice-oriented. The uptake of CS artifacts in practice is seen as an important indicator for the impact that work has. Also, the study of how artifacts are used is an important aspect of CS research.

– Computer scientists publish much of their best work in the proceedings of scientific conferences. Acceptance rates for CS conferences can be very low, even lower than for some top CS journals. CS conferences are ranked, for example, by CORE Inc. and GII-GRIN-SCIE. Note that ISI’s “Web of Science” is inadequate for most of CS, because it is mostly based on journal publications; Google Scholar and Semantic Scholar give a better overview of publications.

– It is an accepted practice that a paper that is presented at a CS conference is extended towards a submission for a scientific journal, in particular on the basis of an invitation for a special issue connected to the event in question. Extending one’s work that is presented at a workshop or conference towards a journal article is not seen as an act of plagiarism.

– Computer scientists also often directly submit their work to a scientific journal, in particular when it is considered to be of archival value. Journal publications have a similar significance for quality evaluation as in many other disciplines.

– Since it is relevant for computer scientists to present their work at conferences, service as chairs or members of program committees is held in high esteem. Such memberships reflect the recognition of computer scientists by their peers. Memberships of editorial boards are appraised similarly.

– There are different conventions for the listing of authors of CS papers. A common convention is to list as first author the person who is the most important contributor to the paper, as second author the person who is the second most important contributor, etc. A fully alphabetical ordering of authors is also an accepted practice. In either case, the last author can be but is not necessarily the group leader.