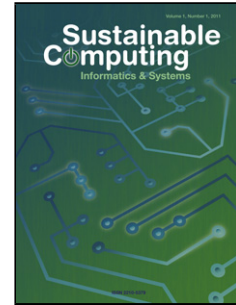


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Puzzling out Software Sustainability

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Highlights

- Software Sustainability is gaining importance and, as occurs in any other new discipline, although some efforts have been made there are still many misconceptions and misunderstandings.
- We identify three kinds of resources needed by software life cycle processes: human resources (people involved in carrying out the software processes), economic resources (needed to finance the software processes) and energy resources (all the resources that the software consumes during its life).
- In the Green in software, the most popular areas of research are generally Design/Construction and Quality, followed by requirements. There are, meanwhile, few research efforts as regards testing, models and methods, process and maintenance, and management is the only area to which contributions have not been made.

Abstract. Software Sustainability is gaining importance and, as occurs with any other new discipline, there are still many misconceptions and misunderstandings surrounding it. In this paper we attempt to clarify the different aspects of software sustainability, from organizational sustainability to software sustainability, exploring the latter in great depth by considering its three dimensions. We also present an overview of the research that has been developed around software sustainability, which was obtained after reviewing the best known workshops and conferences on green and sustainable software and some journals. The results obtained principally address the environmental dimension, and specifically green software design, quality and requirements.

Keywords.

Software sustainability, software greenability, SWEBOK, green in software engineering

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