

Always look on the green side of software

Coral Calero

That software moves the world is a clear fact. And that it is becoming more and more important, too. There are three aspects that have led to an increase in the intensity with which software is used: the Internet and social networks, data and artificial intelligence.

However, not everything is positive in the support that software provides to our daily lives. There are estimates that ICT will be responsible for 20% of global energy consumption by 2030, part of which will be due to software. And precisely the three mentioned aspects require large amounts of energy.

In this keynote we will review different concepts related to software sustainability, and we will show some results of software consumption measurements that we have carried out on the one hand, cases carried out to raise awareness in society in general about the impact that software has on the environment. On the other hand, examples related to the consumption of data and artificial intelligence carried out with the aim of creating a set of best practices for the software professionals.

Our ultimate goal is to make you aware of the consumption problem associated with software and to ensure that, if at first, we were concerned with the "what" and later with the "how", now it is time to focus on the "with what".



Biography

Coral Calero is Professor at the University of Castilla-La Mancha in Spain and has a PhD in Computer Science. She is a member of the Alarcos Research Group, being responsible of the "Green and Sustainable software" line research, where two main lines of work are developed. The first one addresses issues such as measuring the impact that software and information systems have on the environment and how to improve its energy efficiency, as well as human and economic aspects related to software sustainability. The second major line of work supports all the group's dissemination activities to raise awareness of the impact that software has on the environment. Since its creation in 2023, she has been one of the 12 members of the Spanish Research Ethics Committee.

