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At the heart of future computing centers: research on algorithms

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At the heart of future computing centers: research on algorithms

Future research facilities like the Square Kilometre Array Observatory (SKAO) are confronted with zetta-scale computing: only a tiny fraction of the data collected by the thousands of telescopes and antennas can be archived in the long term. Consequently, the relevant information must be extracted in real time out of huge data streams. While we have described the technical challenges of SKAO and the implications for a “Smart Green Computing” in our contributions to the last two EGI conferences, we now address the aspect of how data centers could be organized to address the challenges at hand. Data centers play a critical role in scaling existing community analysis tools, which have often been designed for rather small to medium data sets and computing systems. Further development of existing methods and algorithms requires cooperative interaction at the European level.

Any relevant links

Topic

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