Writing efficient and parallel code in R

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After first steps in any programming language, people typically feel need for more advanced programming skills. The word "efficiency" comes to mind. It is typically recognized in the sense of extremely fast code, but it may also mean (at least for me) that code is readable, reusable, and quickly written and documented. Therefore, the most important meaning of efficiency should be time-efficiency of the programmers work.

Nevertheless, when writing new code, we can try to apply some rules right away that help to avoid extremely slow code. During this tutorial, such basic rules will be shown as well as mechanisms that help to speed up the code. If speed up cannot be solved by code optimization any more, "parallelization" may help. We will discuss how to write code that executes in parallel on several cpu cores or even machines using the new *R* package **parallel**.

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