Beitrag ID: **10** Typ: **nicht angegeben**

Reproducibility Infrastructure of the Julia Language

Donnerstag, 27. Oktober 2022 11:05 (25 Minuten)

The Julia language is mostly advertised for the underlying vision to provide an environment for scientific computing and data science which allows to implement algorithms using a syntax similar to Python and Matlab but without sacrificing performance.

Reproducibility and reusability are further important aspects of Julia and its ecosystem.

Julia's built-in package manager Pkg.jl provides tools to exactly reproduce project environments. Semantic Versioning and maintenance of compatibility constraints are mandatory for packages available from the Julia General registry. Automatic package management is built as well into Julia's Pluto.jl computational notebooks. Julia's BinaryBuilder allows to maintain binary packages for all relevant platforms supported by Julia itself. An artifact handling system handles access to artifacts stored outside the Julia ecosytem and their versioning.

The talk will start with highlighting the advantages of avoiding the two-language problem – another vision behind Julia – under the aspect of reproducibility. It will give a pragmatic overview on the topics mentioned from the perspective of a Julia user and co-developer of a group of Julia packages for the numerical solution of partial differential equations.

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Sitzung Einordnung: Contributed Talks