Notes from the Kölner R meeting, 12 December 2014

December 16, 2014

By [Markus Gesmann](#)

Last week's Cologne R user group meeting was the best attended so far, and it was a remarkable event - I believe not a single line of R code was shown. Still, it was an R user group meeting with two excellent talks, and you will understand shortly why not much R code needed to be displayed.

Introduction to Julia for R Users

[Download slides](#)

Hans Werner Borchers joined us from Mannheim to give an introduction to [Julia](#) for R users. Julia is a high-level, high-performance dynamic programming language for technical computing. The language has gained some considerable traction over the last two years and it was great to get an overview from a familiar perspective.

Interestingly, as Hans Werner pointed out, Julia is by far not the only new language around the block. Indeed, over the last decade nearly every year saw the announcement of a new language. Also big tech companies such as Microsoft, Google, Mozilla and Apple are trying to push their own programming languages: F# (2005), Go (2009), Rust (2010) and Swift (2014) respectively.

Over the more recent years we notice a movement towards the use of [LLVM](#) (Low Level Virtual Machine), on which Julia is based as well and which makes it fast. The just in time compilation demands a little mind shift if you come from R, where the mantra for speed is: vectorise - remove all for-loops. Well, the opposite is true for Julia, because your code will be compiled. For-loops are much easier to understand for the underlying compiler. Hans Werner's [slides](#) provide some good examples to get you started and pointers to further resources.