

INTRODUCTION TO JULIA LANGUAGE

Course Objectives:

1. Introduction to Julia language and motivation behind it
2. Learn syntax, programming paradigm
3. Learn type systems, metaprogramming, parallel computing
4. Provide an ability to start writing good quality Julia programs

The concepts will be taught in Julia, the fastest and most productive modern high-level language for numerical computing and machine learning - but can be applied in any language with which the audience is familiar.

Duration: 8 hours

Pre-requisites:

The audience are expected to have basic understanding of high school math and basics of computer science

Course outline:

1. Hello world!
2. Making a plot
3. Data types
4. Basic operations
5. Types
6. Functions
7. Methods
8. Multiple Dispatch
9. Control flow
10. Tasks
11. Loops
12. Scope
13. Exceptions
14. Metaprogramming
15. Arrays and Comprehension
16. Parallel programming