



Skolkovo Institute of Science and Technology  
Center for Energy Science and Technology

# Julia Programming Language

Aleksandr Lukashevich  
aleksandr.lukashevich@skoltech.ru

October 29 2021

# Table of Contents



## Introduction

Communication

What is Julia

## Installation

Jupyter + Julia

Install Julia

Install Jupyter

Install IJulia

## The journey begins

# How do we Communicate?

- ▶ Canvas
- ▶ Telegram
- ▶ Any question – just text me (@lukashsasha at Telegram)
- ▶ GITHUB FOR ALL OF THE STUFF
- ▶ 5 Homeworks
- ▶ Deadlines are hard – **NO DEADLINE EXTENSIONS**
- ▶ Please turn on your web cameras!



# What is Julia

Why to use it?

Skoltech

Skolkovo Institute of Science and Technology

3

- ▶ Julia is OpenSource
- ▶ Julia is a Scientific Oriented Programming Language (like Python, MATLAB)
- ▶ Julia is about performance
- ▶ Julia is a relatively new language (first release in 2012)

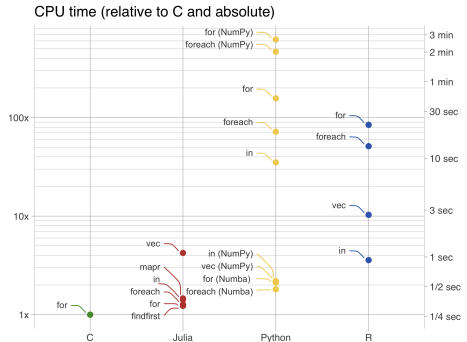


Figure: Julia v.s. C, Python and R

# Table of Contents



## Introduction

Communication

What is Julia

## Installation

Jupyter + Julia

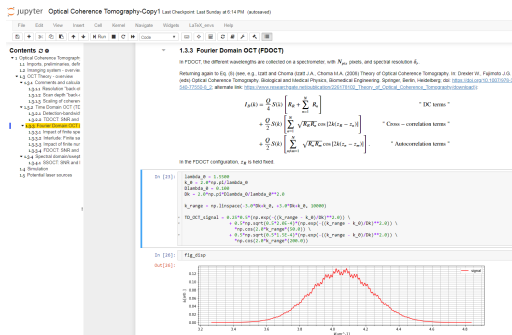
Install Julia

Install Jupyter

Install IJulia

## The journey begins

- Highly interactive IDE (Integrated Development Environment)
- Convenient for simple (and not very) experiments
- Make notes, code, figure in one place



- <https://julialang.org/downloads/>
- Choose your system
- Install, Add Julia to PATH

### Current stable release: v1.6.3 (Sep 23, 2021)

Checksums for this release are available in both MD5 and SHA256 formats.

Windows <a href="#">[help]</a>	64-bit (installer), 64-bit (portable)	32-bit (installer), 32-bit (portable)
macOS <a href="#">[help]</a>	64-bit	
Generic Linux on x86 <a href="#">[help]</a>	64-bit (GPG), 64-bit (mu2) <sup>1)</sup> (GPG)	32-bit (GPG)
Generic Linux on ARM <a href="#">[help]</a>	64-bit (AArch64) (GPG)	32-bit (ARMv7- $\rightarrow$ hard float) (GPG)
Generic Linux on PowerPC <a href="#">[help]</a>	64-bit (little endian) (GPG)	
Generic FreeBSD on x86 <a href="#">[help]</a>	64-bit (GPG)	
Source	Tarball (GPG)	Tarball with dependencies (GPG) <a href="#">GitHub</a>

Installer - Julia 1.6.3

#### Select Additional Tasks

Select additional tasks to perform:

Icons:

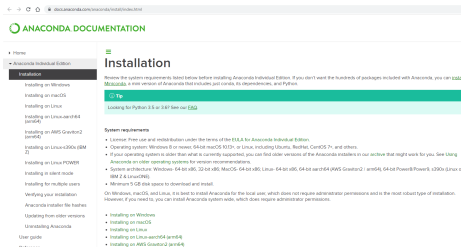
- ☒ Create a Desktop shortcut
- ☒ Create a Start Menu entry

Other:

- ☒ Add Julia to PATH

[Back](#)[Next](#)[Cancel](#)

- Install Anaconda  
<https://docs.anaconda.com/anaconda/install/index.html>
- Open cmd (Windows) or terminal ( $\approx$  Linux)
- Install Jupyter  
<https://jupyter.org/install>



## Getting started with the classic Jupyter Notebook

### Installation with mamba or conda

The classic notebook can be installed with `mamba` and `conda`:

```
mamba install -c conda-forge notebook
```

or

```
conda install -c conda-forge notebook
```

### Installation with pip

If you use `pip`, you can install it with:

```
pip install notebook
```

Congratulations, you have installed Jupyter Notebook! To run the notebook, run the following command at the Terminal (Mac/Linux) or Command Prompt (Windows):

```
jupyter notebook
```

See [Running the Notebook](#) for more details.



8

1

`https://github.com/vjugor1/FPS2021`

- ▶ Open cmd (Windows) or terminal ( $\approx$  Linux)
- ▶ Type `jupyter notebook`