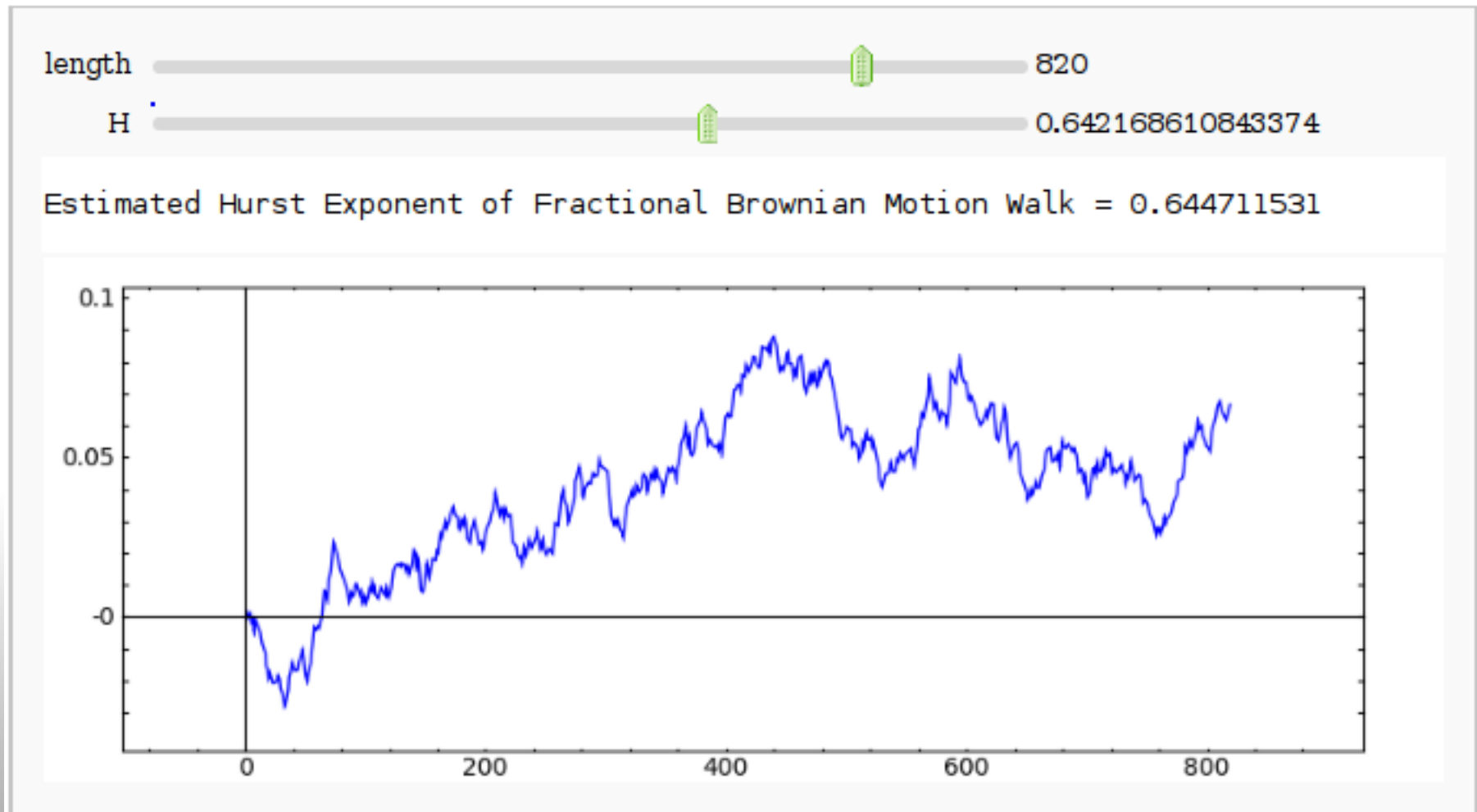


# *Interacting in SAGE*

Igor Tolkov

# Why Interact?

- Demos are more intuitive and visually appealing than function calls
- No need to understand or be able to write Python code



# *Interact vs Manipulate*

## *Interact*

- Open Source
- Will be able to be used outside of the notebook (not yet)
- Requires no software download

## *Manipulate*

- Dynamic reloading
- Better control layout, more controls, nested manipulates
- Proprietary, can only be used in Mathematica or with "Player"
- Demo...

# Completed

- Improved selector (buttons) and slider controls

Distribution

Mean  1.5000000000000000

Scale  1.5200000000000000

- Added text and range slider controls

Plots a graph of the function  $f(x) = \sin(x)/x$

Range

- Demos...

# *In progress*

- Server for safely evaluating interact code
- Publishing of single interactions
- Improved published worksheets

# *In progress*

## *Server for safely evaluating interact code*

- Interactions do not work in published worksheets
- Reason: current implementation uses same protocol for update as for executing arbitrary code
- Solution: different protocol: user passes dictionary instead of python call, server checks interact code

# *In progress*

## *Publishing of single interactions*

- Interactions do not need to be embedded in a worksheet
- Interactions should be published separately from worksheets
- Interactions should be embeddable in web pages (long-term idea with a lot of problems)

# *In progress*

## *Improved published worksheets*

- Published worksheets page is a mess
- Several features I would like to see:
  - Option to delete worksheets
  - Option to write a description for a worksheet
  - Option to categorize worksheets
  - Everything above also applies to interactions
  - Improved page layout



# *In progress*

## *Summary*

- Efficient layout of "published worksheets and interactions"
- Database of materials useful for education
- Ability to write stand-alone Python applets
- I will not implement all of this

# Questions?



Google Summer of Code