What is Octave?

Jordi Gutiérrez Hermoso

July 22, 2012
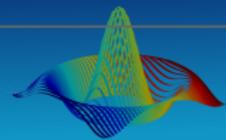
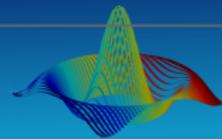# Outline
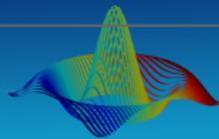
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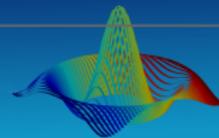
What is Octave?

Our motto

A free numerical environment mostly compatible with MATLAB
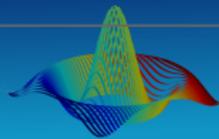
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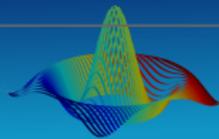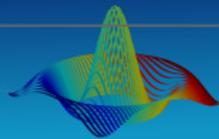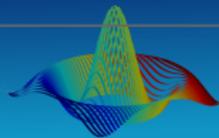
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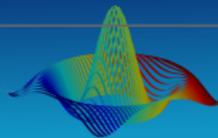- The perils of "compatibility flags"

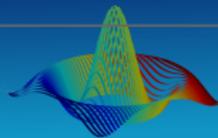# The interface

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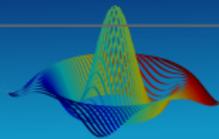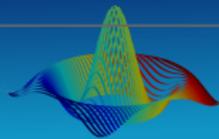
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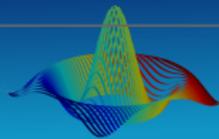- Tons of existing GUIs, though.

Lines of code

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Core

- About 600,000 lines of C++
- About 100,000 lines of m-scripts
- About 50,000 lines of Fortran
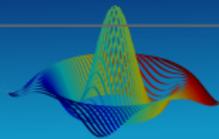
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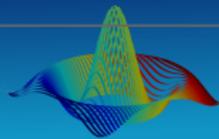- About 50,000 lines of Fortran

Octave-Forge

- About 200,000 lines of C++
- About 330,000 lines of m-scripts
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Features

Current features

- N-d arrays, linear algebra, sparse matrices
- Nonlinear equations
- Differential equations
- Image processing
- Signal processing
- Statistics
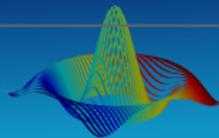- Control theory
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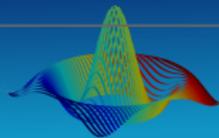
Features in development
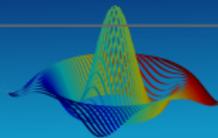
- JIT compiling
- classdef OOP
- GUI
- Least squares spectral analysis

Outline

In the beginning...
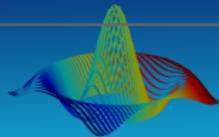
- Chemical reactor textbook needed companion software
- John W. Eaton (hereafter, jwe) started coding in 1993
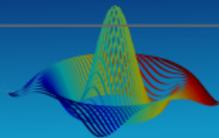
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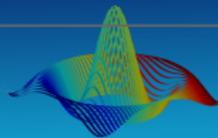## Rawlings said...

Why don't you call it "Octave"?

jwe is a lone wolf...

jwe works almost completely alone for first four or five years.
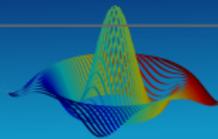
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In the very beginning...

- No mailing lists
- No widespread announcements
- No VCS (these were dark times)

Contributions slowly trickle in

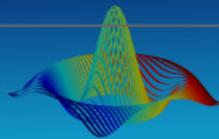## Timeline

1989 Planning stages

1992 Development begins

1993 First public announcement

1994 Version 1.0

1996 Version 2.0

1998 Version 2.1 development

2004 Version 2.9 in preparation for 3.0 release

2007 Version 3.0 major upgrade

2010 Version 3.2.4, last before using hg branchily

2011 Version 3.4.0

2012 Version 3.6.0
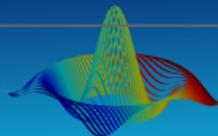
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1994 Most of the current basic functionality already in. (Much was written during its first two years!)
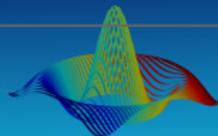
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2001 Octave-Forge's first commit

2006 MEX interface in core

2007 Implementation of handle graphics

2009 OpenGL plotting

2010 -forge option for pkg.m

**2012?** Nested functions

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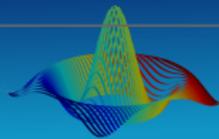2012? Nested functions

2013? GUI? JIT compiling?

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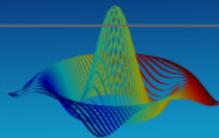
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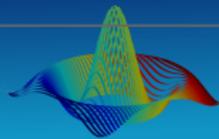
Casual users

- Mailing lists
- #octave channel in Freenode
- Octave wiki
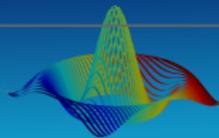- Savannah bug tracker

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Developers

- All of the above
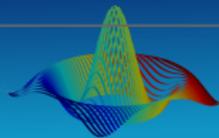- Mercurial and svn repositories
- Octave-Forge list

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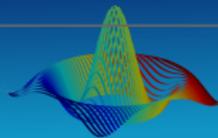
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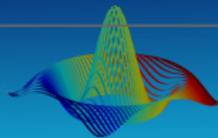- 12 current core developers (with write access to repo)

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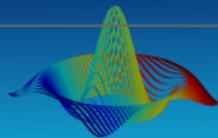- 296 total contributors over all time

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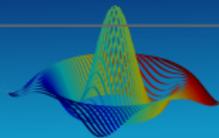- How many users? Thousands? Millions?

From user to developer
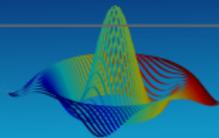
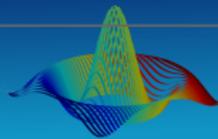This is a FAQ

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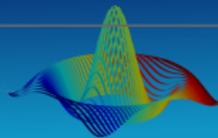
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Stick around this conference if you want to learn more about how to get involved!