

Why PGFPlots is better than Matlab's figures?

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What is PGFPlots ?

A plot in a high-end \LaTeX document should:

- ▶ be font-consistent,
- ▶ be high-quality,
- ▶ be based on (scientific) data,
- ▶ be scalable.

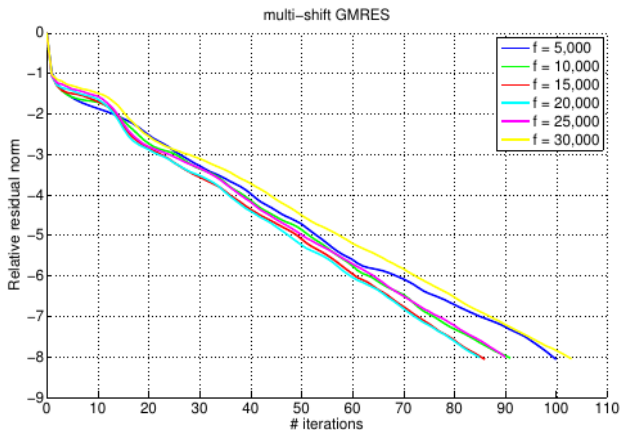
What is PGFPlots ?

A plot in a high-end \LaTeX document should:

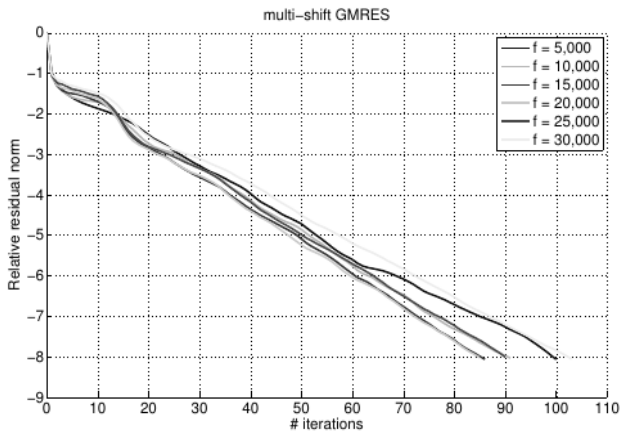
- ▶ be font-consistent,
- ▶ be high-quality,
- ▶ be based on (scientific) data,
- ▶ be scalable.

Hence, PGFPlots is what you need...

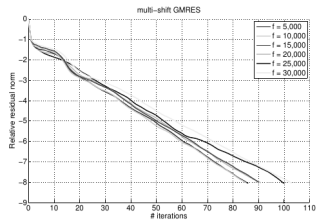
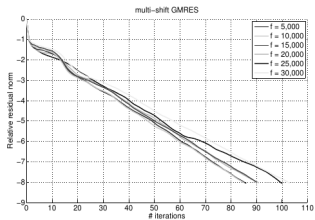
Example: The young Manuel...



Example: How it looks in SISC

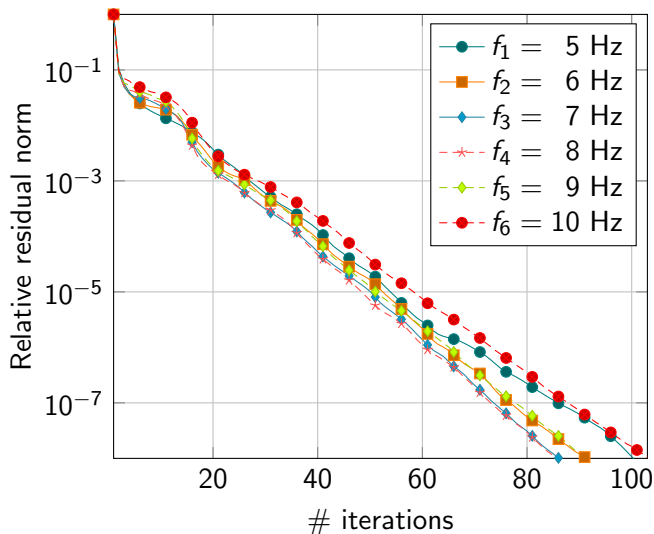


Example: How it REALLY looks in SISC



Example: What PGFPlots can do...

Convergence of multi-shift GMRES



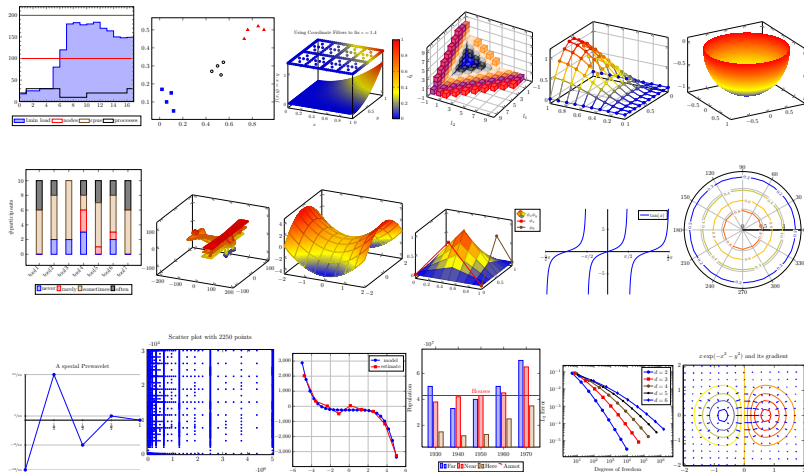
Example: What PGFPlots can do...

```
\begin{semilogyaxis}[width  = 12cm,  
                    height = 10cm,  
                    title   = {multi-shift GMRES},  
                    xlabel  = {\# iterations},  
                    ylabel  = {Relative residual norm},  
                    xmin    = 1,  
                    xmax    = 103,  
                    ymax    = 1,  
                    ymin    = 1e-8,  
                    grid    = major,  
                    mark repeat = {5},  
                    cycle list name = my_style ]
```

```
\addplot table [x = {iters}, y = {f1}] {resvec.dat};  
\addplot table [x = {iters}, y = {f2}] {resvec.dat};  
\legend{$f_1=5$ Hz,$f_2=6$ Hz}
```


More examples (C. Feuersänger)

► <http://pgfplots.sourceforge.net>



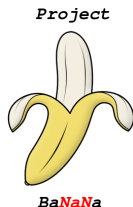
Further reading

Many information are available online:

- ▶ <http://pgfplots.sourceforge.net/>
- ▶ <http://pgfplots.sourceforge.net/gallery.html>
- ▶ <http://wissrech.ins.uni-bonn.de/people/feuersaenger/>

These slides, and much more, will be published at:

- ▶ <http://projectbanana.github.io/>



We need to talk about...

Short report of 2014-15:

- ▶ I count # 63 members
- ▶ 500\$ are spent :P
- ▶ We did: SSC Krylov Day, TATA Steel visit, BBQ, movie night, baNaNa talks, Mathias' seminar, ...

Ideas for the new academic year:

- ▶ new webmaster ... who?
- ▶ more baNaNa talks ... who?
- ▶ *SIAM* CFD²ay 2016 (Thea ?),
Modeling Day (Behrouz ?), ...
- ▶ chess competition (Reinaldo ?)

