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www.mgrafit.com/065MB2013/iscb.html#3

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Motivation | Communication of abstract ideas is challenging

Sometimes, our colleagues in clinical teams do NOT understand what we* are talking about!



$$D_i = \frac{Dose_i^h \times E_{max}}{(Dose_i^h + ED_{50}^h)}$$

$$P_{ij} = \alpha \times t_{ij}$$

$$Y_{ij} = Y_{oi} + P_{ij} + D_i \times I(t_{ij} > 0) + \varepsilon_{ij}$$

$$Y_{oi} \sim N(Y_o, \omega_1^2)$$

$$\varepsilon_{ij} \sim N(0, \sigma_{res}^2)$$

"The power to understand and predict the quantities of the world should not be restricted to those with a freakish knack for manipulating abstract symbols"
 Brett Victor (worrydream.com)

*Statisticians, epidemiologist, pharmacometricians, ...

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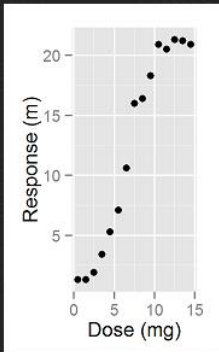
http://www.mgrafit.com/06SMB2013/iscb.html#0

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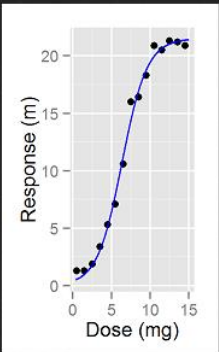
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Today | What are we communicating on stat. models?

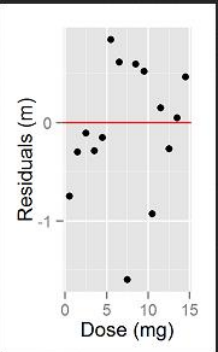
We present loads of (static) graphics ...



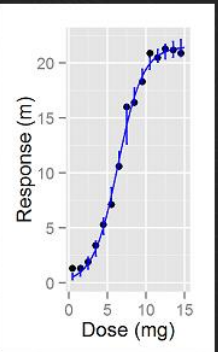
Data



**Trends *i.e.* model
parameter
estimates**

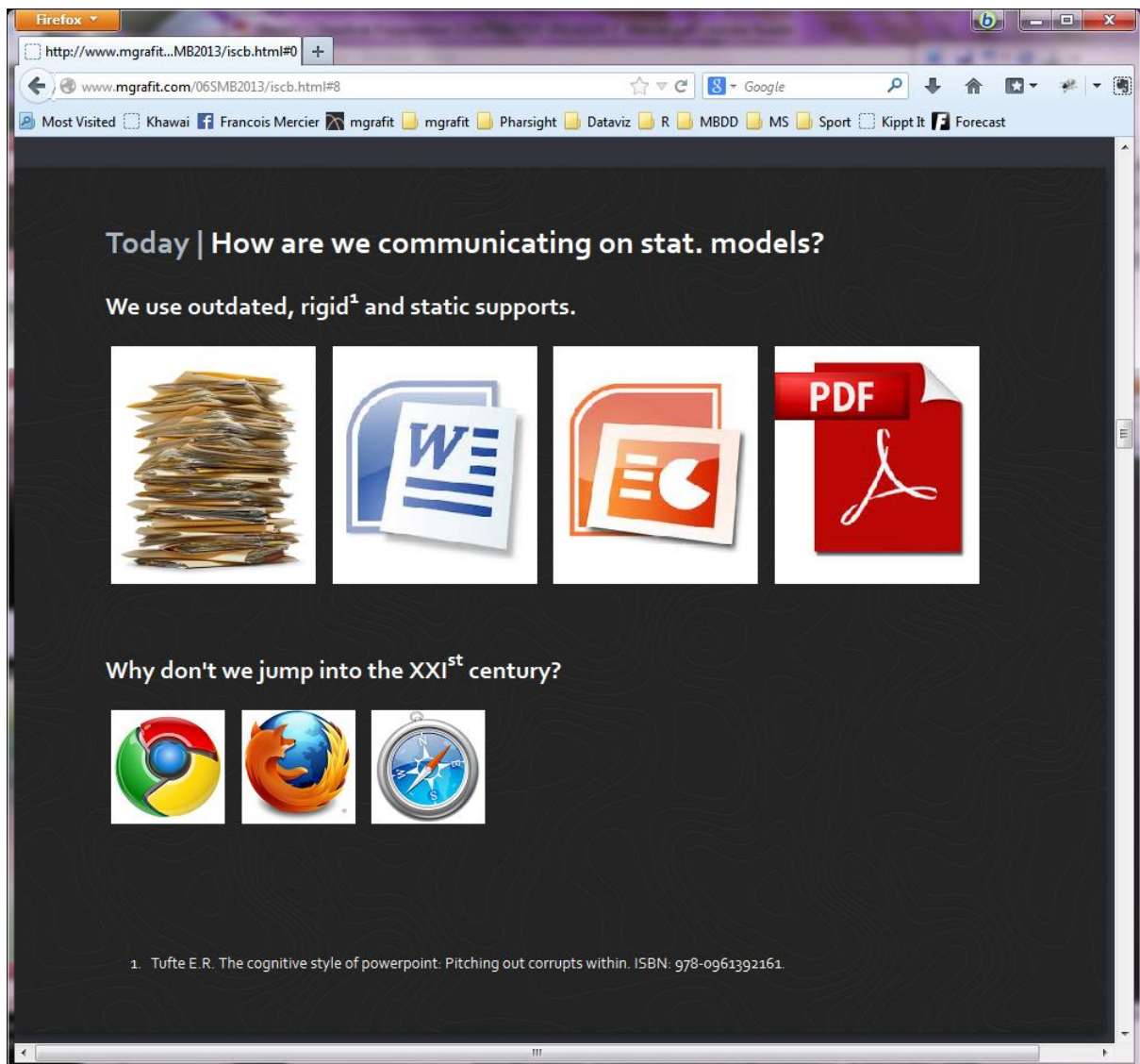


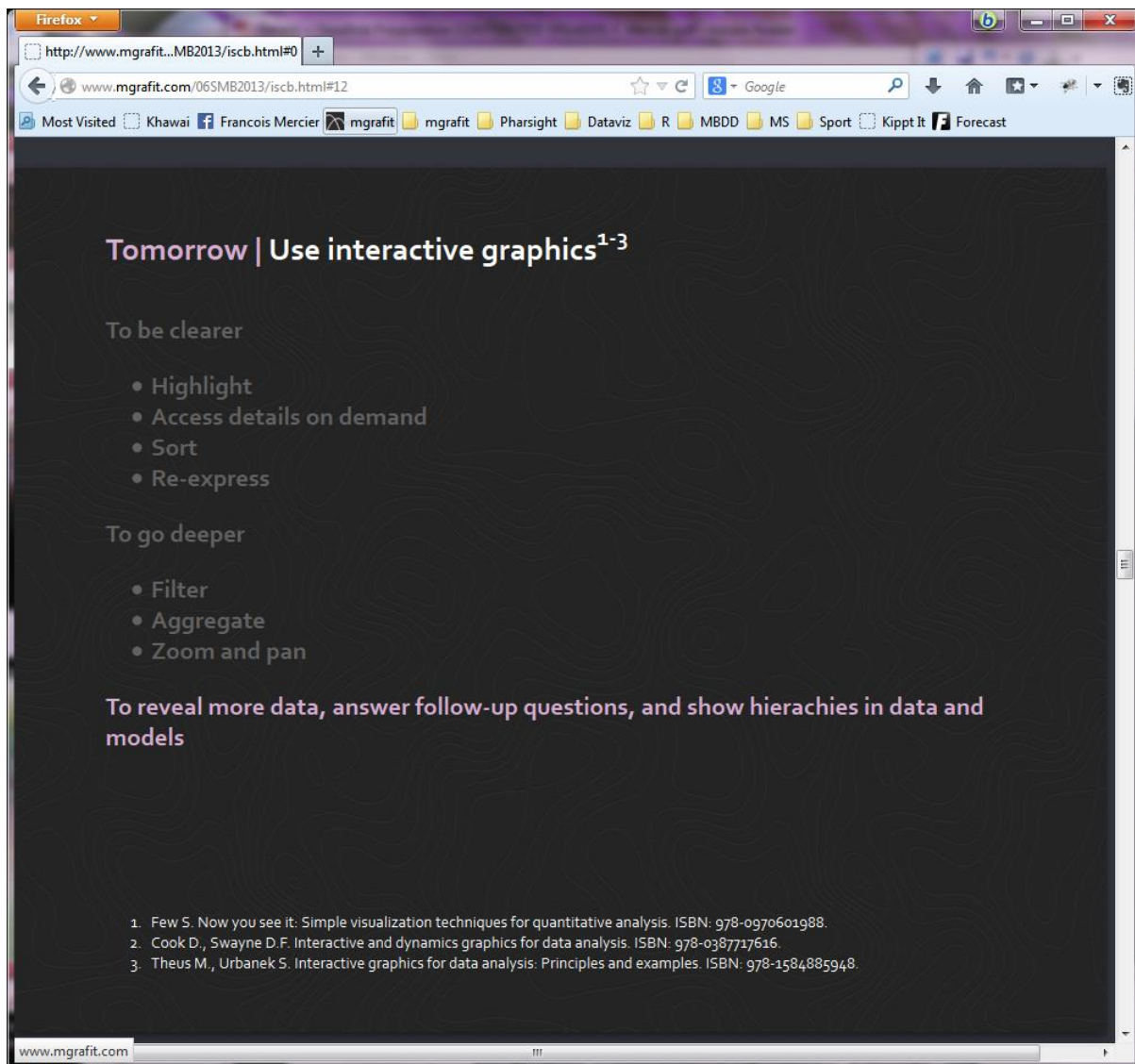
**Deviations *i.e.*
residuals,
shrinkage**

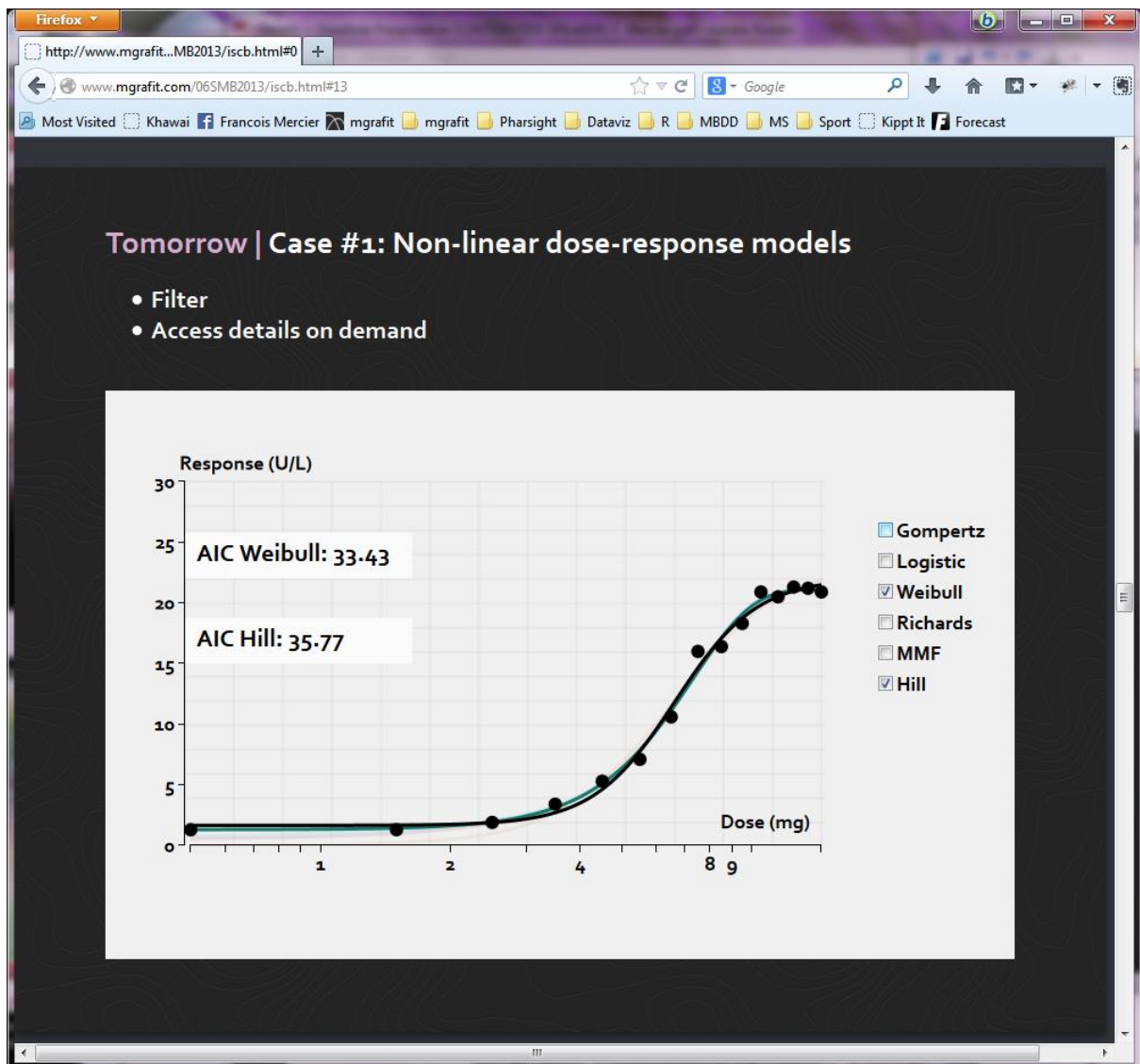


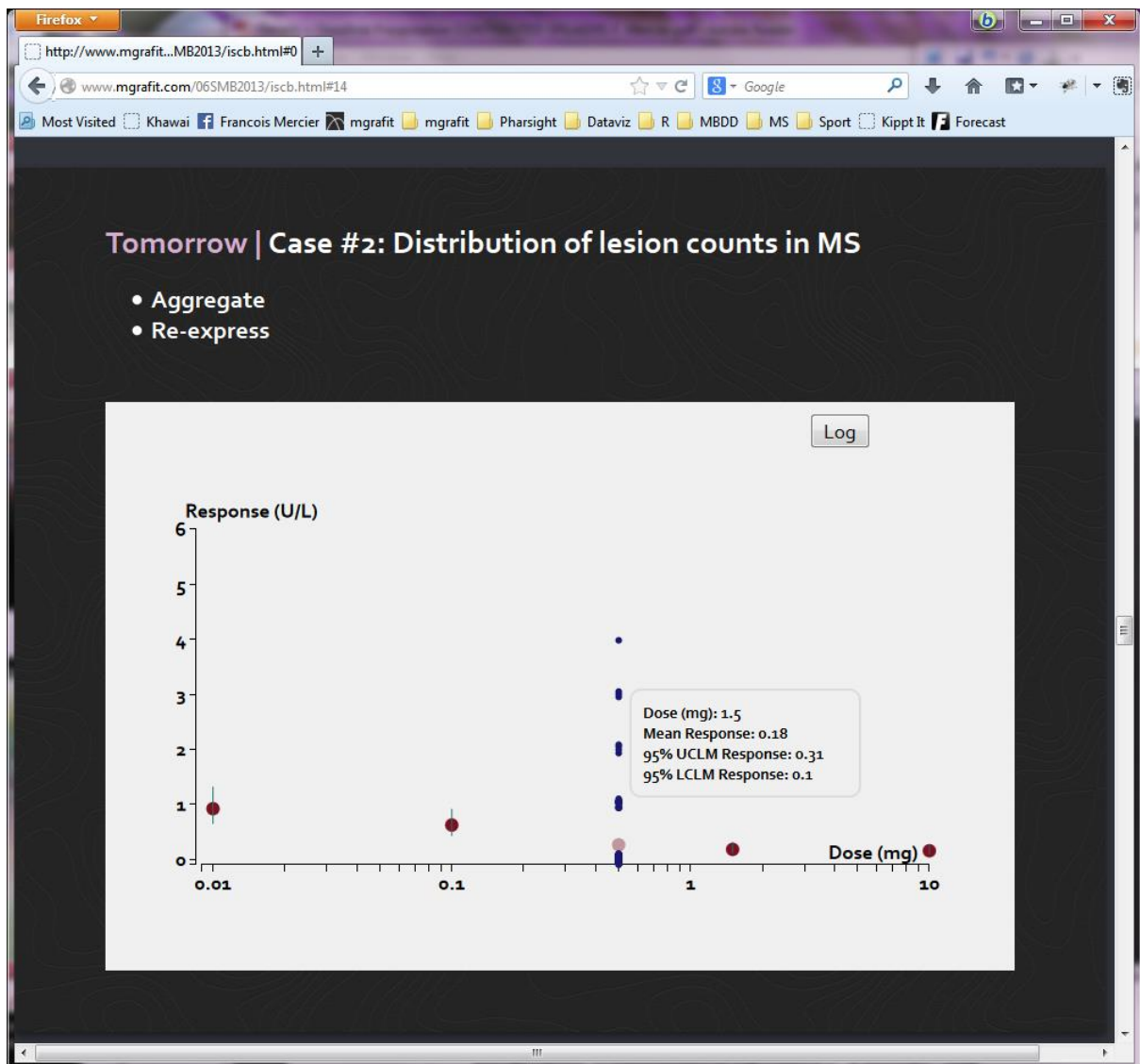
**Precision *i.e.* CI,
SE**

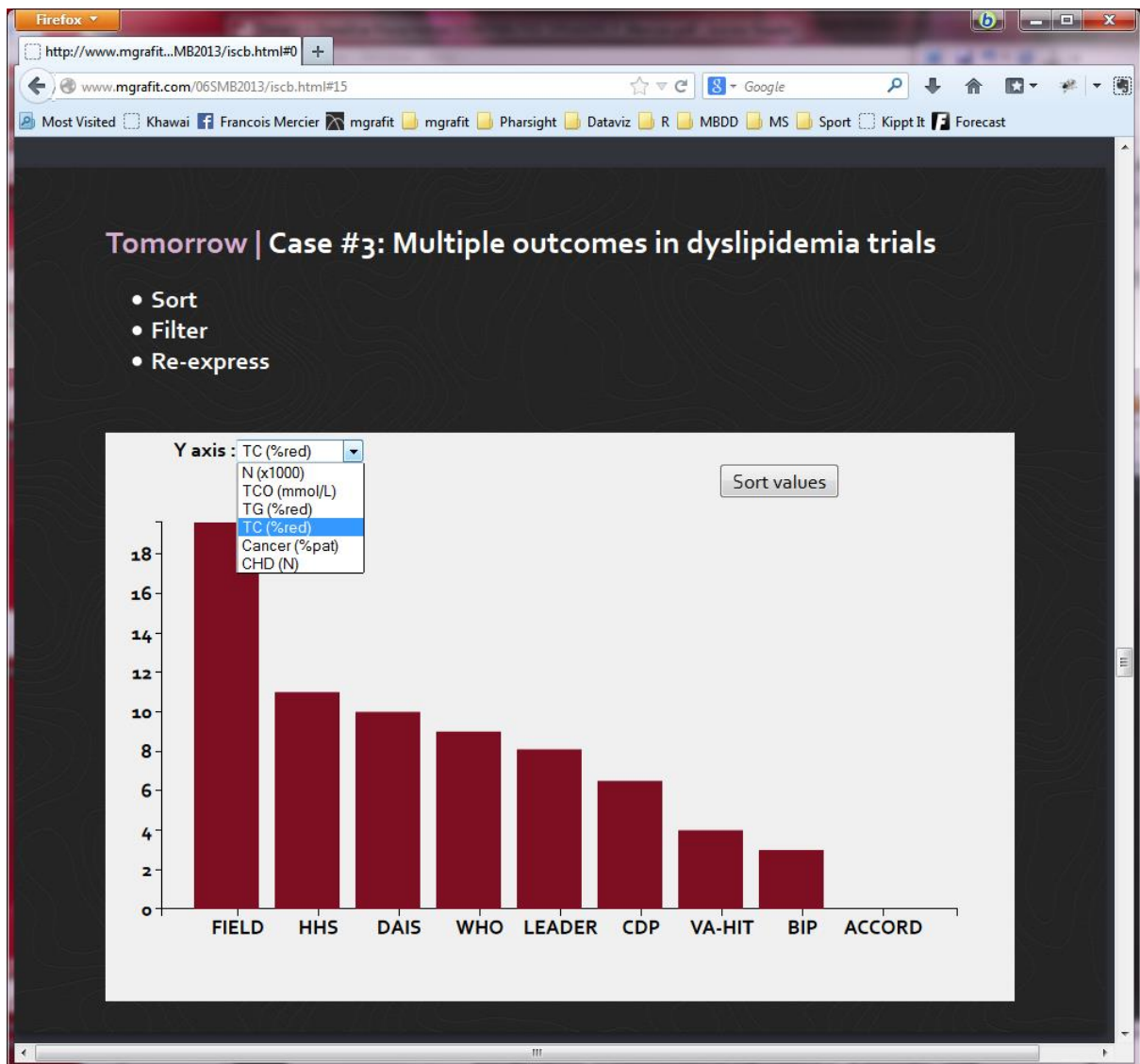
... difficult to integrate for a non-expert audience.

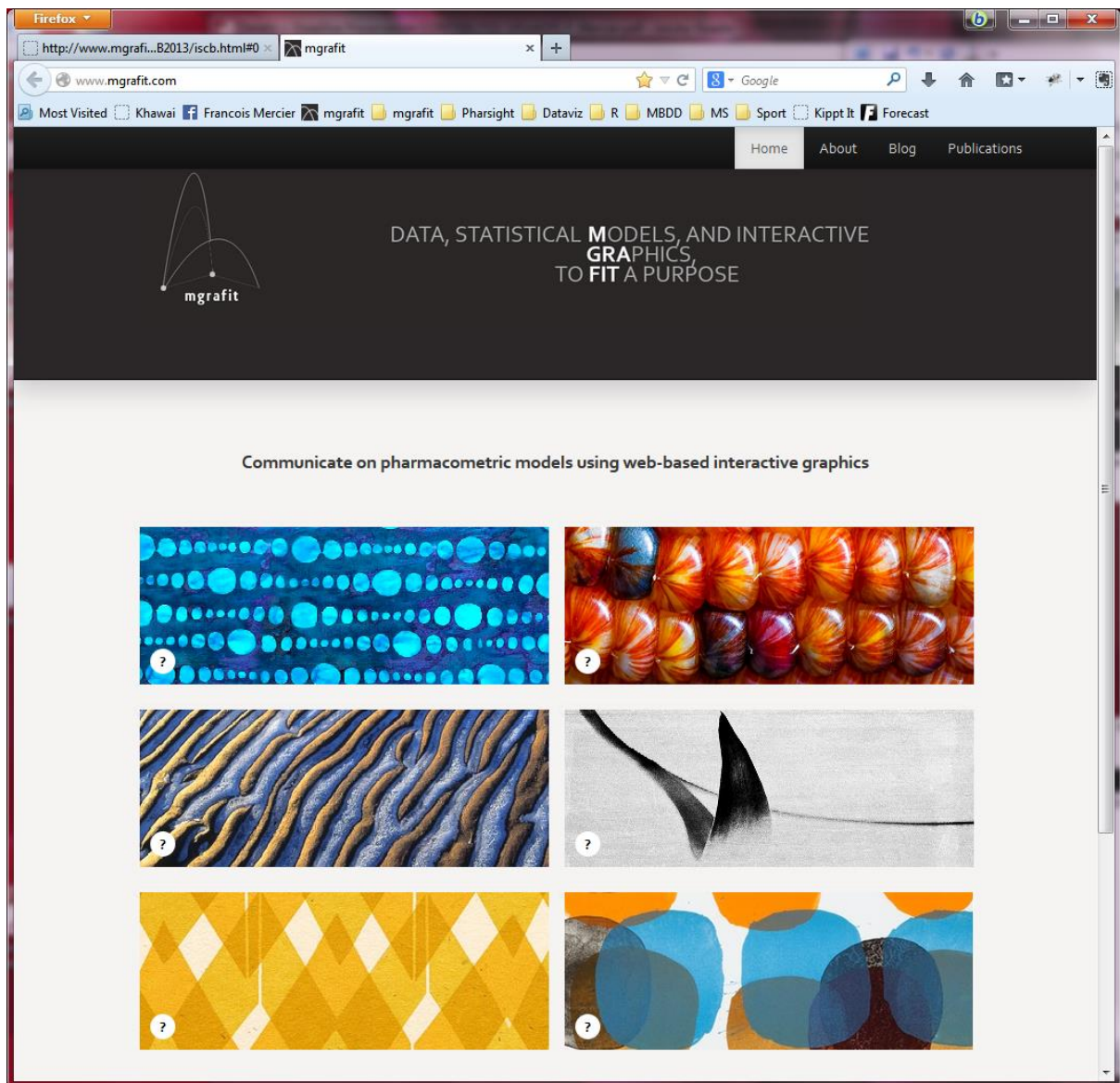












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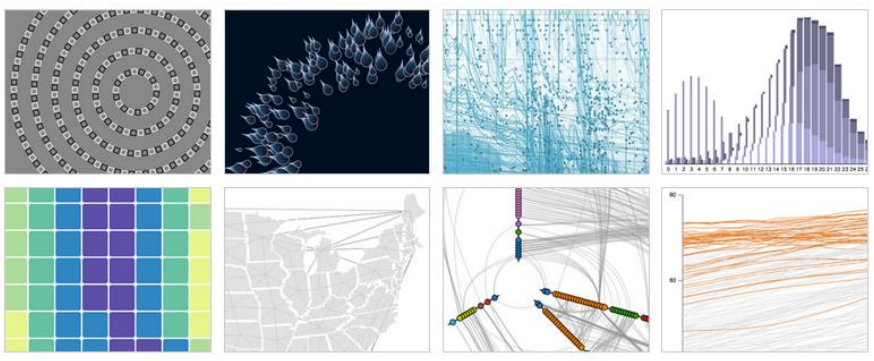
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Tomorrow | D3 - A powerful JavaScript library¹

Overview Examples Documentation Source

Data-Driven Documents

For me on GitHub



- [D3.js website](#)
- [API on the wiki](#)
- [Gallery \(>1000 examples\)](#)
- [Community \(google group, SO\)](#)

¹. Bostock M, Ogievetsky V, Heer J. D3: Data-driven documents. DOI:10.1109/TVCG.2011.185.

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www.mgrafit.com/06SMB2013/iscb.html#21

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Tomorrow | D3 - What you should know before starting

1. Data visualization is hosted on the web
 - Data privacy can be managed by restricting access to intranet or internet pages
 - Modern browsers (Chrome, Firefox, Safari, Opera) shall be used; avoid IE<9
2. Steep learning curve
 - "You basically have to be a JavaScript expert" ... and a CSS expert (not to mention HTML), and being a jQuery expert would help too!
 - Teaching material includes books¹⁻³, videos⁴, tutorial blogs, examples
 - Meetups (SF, London)
3. Low-level programming language
 - Flexibility vs. verbose
 - Re-usable charts
 - Meta-libraries (see a review on mgrafit.com/blog)

1. Murray S. Interactive data visualization. ISBN: 978-1-4493-3972-2.
2. Maclean M. D3 Tips and tricks. Free online.
3. Teller S. Data visualization with d3js. Free online. ISBN: 978-1-7821-6000-7.
4. Johnson I. Enjalot video series. Videos.

