

Wiki

for the NMR community

Evgeny Fadeev

University of California, Irvine

Topics:

what is wiki

what works for wiki's

what doesn't work

some info about nmrwiki.org

wiki =
open, flexible
collaborative record
keeping system

NMRWIKI.ORG

The screenshot shows the main page of NMRWiki.org. The browser window title is "Main Page - NMR Wiki - Mozilla Firefox". The address bar shows the URL "http://nmrwiki.org/wiki/index.php?title=Main_Page". The page features a navigation bar with "article", "discussion", "edit", and "history" tabs. The main content area is titled "NMRWIKI.ORG" and includes the tagline "The NMR resource you can edit™". It contains sections for "Introduction", "NMR", "Organizations and Websites", and "EPR and MRI". The "Introduction" section mentions the site's launch on Nov. 8th 2007 and encourages users to edit. The "NMR" section lists various topics like "Most topics have exportable citations & paper links", "Instrument Manuals & Reference", "Experiments", "Topics", "Software", "Data", and "Journals". The "Organizations and Websites" section lists "Non-commercial NMR Organizations", "Commercial NMR Organizations", "Other NMR community sites", "Websites", "Supplies & Vendors", "Newsgroups", and "Scientific wikis". The "EPR and MRI" section includes "Introduction to EPR" and "Basics of MRI". A sidebar on the left contains a search box, a "toobox" with links like "What links here", "Related changes", "Upload file", "Special pages", "Printable version", and "Permanent link", and a "navigation" menu with links like "Main Page", "Community portal", "Current events", "Recent changes", "Random page", "Help", and "Donations".

150 articles about NMR in (hopefully) “plain English” in 4 months

NMRWiki uses same software as Wikipedia

What can go into NMR wiki.

- manuals
- lectures
- pulse sequences
- sample NMR data
- software
- scripts
- tips and tricks
- organized bibliography
- personal biographical information
- a.k.a. blogs
- web applets/tools

Why?

- **organize bits of information for easier life**
- **improve sense of community**
- **improve awareness of what is and has been happening in the NMR/EPR/MRI world**

Audience for NMR wiki.

NMR community ~10.000 people (?)

most likely contributors

generally very computer literate people

-increases chance of active participation

Chemists ~ 0.5 million people

mostly consumers and perhaps

supporters

Why funny name?



Name comes from name of Hawaii **airport bus wiki-wiki** (“quick” in Hawaiian)
WikiWikiWeb was first developed in **14 years ago** by Ward Cunningham
W. Cunningham: **“Wiki is the simplest web database that could possibly work”**
Wikipedia is the biggest wiki website. **7% internet users check it daily.**

Editing wiki page is simple

- 1) find the page you want to edit
- 2) click on a link that says “edit”
- 3) type in your changes
- 4) click “save” button

<30 s for a trivial update

Editing wiki page

1) click there to edit

... or here to upload file

edit

edit

edit

edit

unit	example	meaning
pts	5pts	point number of the data point in data vector; numbering of data points starts at 1
%	5.5%	by percent offset from the beginning of data vector
ppm	10.35ppm	by ppm coordinate
hz	1603.5hz	by offset of the point in hertz from the beginning of the data vector

option	type of value	default value	meaning
-ord	integer		order of fitting polynomial
-auto	no value		turns on automatic determination of baseline nodes; nodes are automatically determined for separately each data vector; -auto function should only be used in the frequency domain parameter -nl can be used together with -auto in order to force certain points into the baseline definition. If the data is complex, node points are searched in the real component, but fitting and baseline abstraction is performed in both real and imaginary parts

NMRWiki uses same software as Wikipedia

Editing wiki page

Editing NMRPipe:POLY and BASE baseline correction (section)

2) type text here

3) click "save"

GNU FDL
FREE DOC
LICENSE

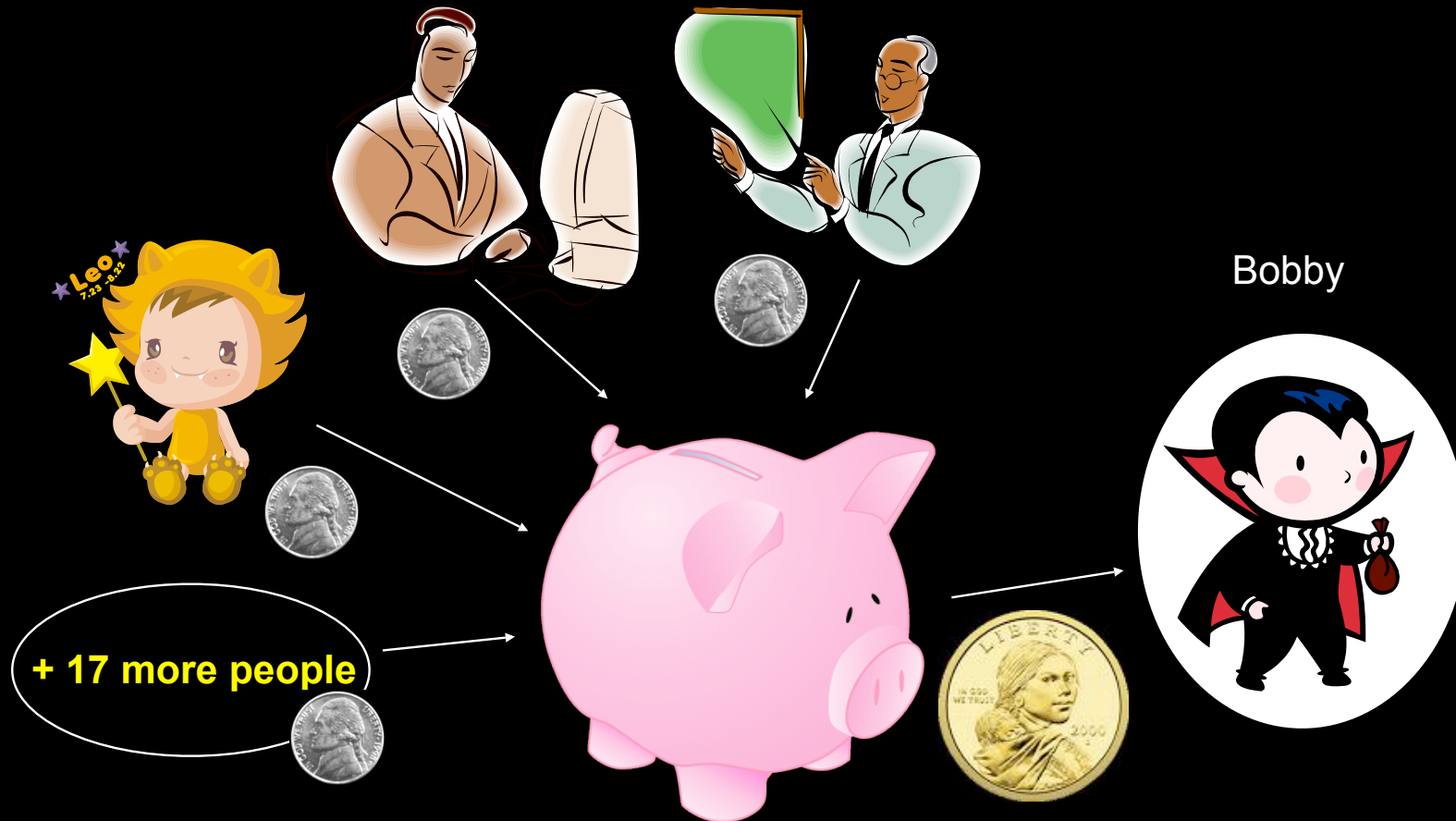
Privacy policy About NMR Wiki Disclaimers

Powered By
MediaWiki

Done

< 30 s for a trivial edit or file upload
free-format presentation achievable from text-only input & uploads

Why wiki's work?



**Information banking system: you bring 5 cents today, take \$1 tomorrow.
Copying information costs nearly nothing, the bank stays full.**

Why wiki's work? “90-10-1 rule”.

90% - readers

10% - occasional contributors

1% - active contributors

90-10-1 seems to be a “behavioral invariant”

1% is not a bad number

*(this 1% is what makes wiki's outperform
traditional websites)*

wiki is accessible to non-computer nerds

How to make wiki work better?

Dedicated maintainer & first contributor required

For internet: short memorable domain name
(not important for intranet sites)

Maximize openness

Critical mass of useful information

“People-magnet” tools (applets etc.)

Take a look at www.wikipatterns.com

**Remember that most contributors
should be volunteers**

How to make wiki work better?

Wiki is a behavioral phenomenon

Good behavior is key to success

Explain how to contribute

Welcoming new users

Acknowledge contributions

Organize planned improvement events

“Wiki champion”

“Patron” - High profile proponent

“Gardener”

Use of real names

Use typo's to entice people participate

Invite people to participate

Create personal profiles (like MySpace)

What does not work?

Blank appearance

Copyright infringement

Hired contributors

Being annoying

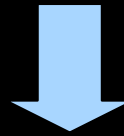
Barriers to participation

Claiming page ownership

Complicated site navigation

Extension mechanism: flexibility

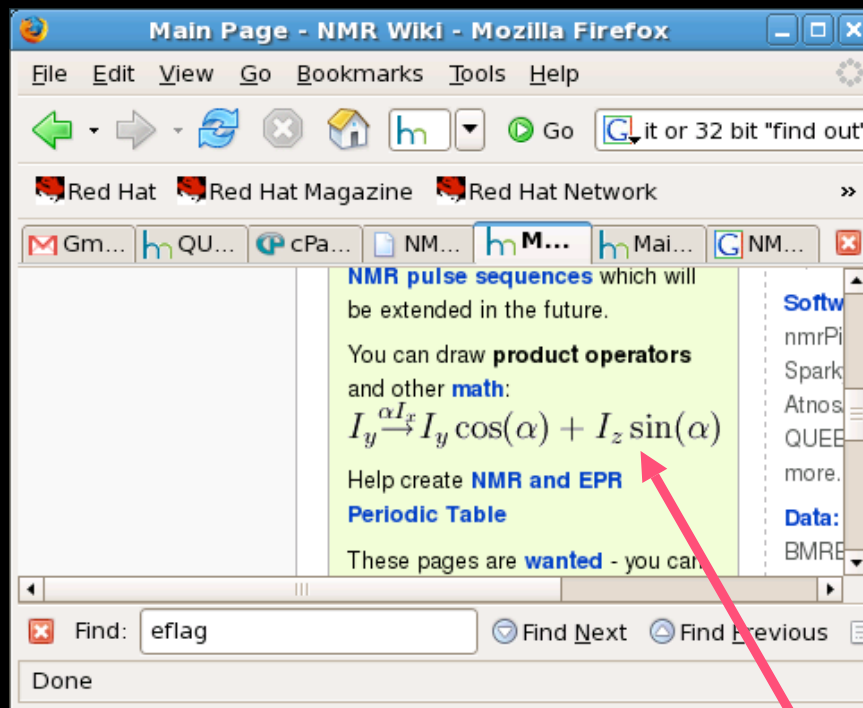
`<special_tag>some text input </special_tag>`



some special
presentational result

Math equations: LaTeX

```
<math>I_y \stackrel{\alpha I_x}{\longrightarrow} I_y \cos(\alpha) + I_z \sin(\alpha)</math>
```



$$I_y \xrightarrow{\alpha I_x} I_y \cos(\alpha) + I_z \sin(\alpha)$$

Bibliography

<bibtex>

```
@article{fu1995bdn,  
  title={Broadband decoupling in NMR with frequency-modulated 'chirp' pulses},  
  author={Fu, R. and Bodenhausen, G.},  
  journal={Chemical Physics Letters},  
  volume={245},  
  number={4-5},  
  pages={415--420},  
  year={1995},  
  publisher={Elsevier},  
  url={http://dx.doi.org/doi:10.1016/0009-2614(95)01037-A}  
}
```

</bibtex>


BibTeX wiki-tags


DOI taken from online journal publication
or <http://www.doi.org/search.html>


Copied from *GoogleScholar*
(first set BibTeX in Scholar Preferences)

Bibliography

<bibtex>

```
@article{fu1995bdn,  
  title={Broadband decoupling in NMR with frequency-modulated 'chirp' pulses},  
  author={Fu, R. and Bodenhausen, G.},  
  journal={Chemical Physics Letters},  
  volume={245},  
  number={4-5},  
  pages={415--420},  
  year={1995},  
  publisher={Elsevier},  
  url={http://dx.doi.org/doi:10.1016/0009-2614(95)01037-A}  
}
```

</bibtex>



Shows as:

Fu, R., Bodenhausen, G. - **Broadband decoupling in NMR with frequency-modulated 'chirp' pulses**

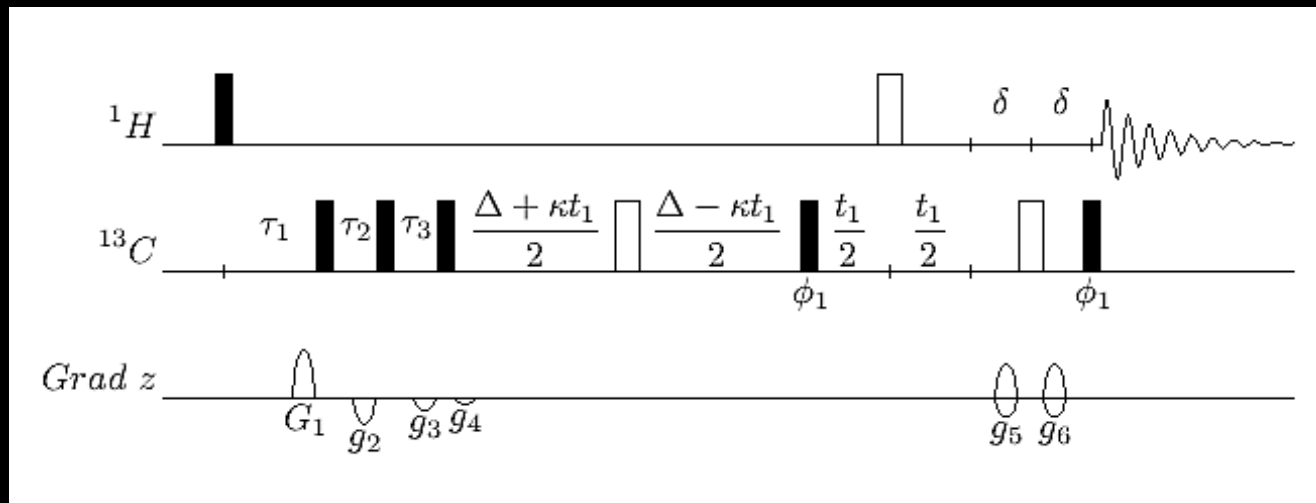
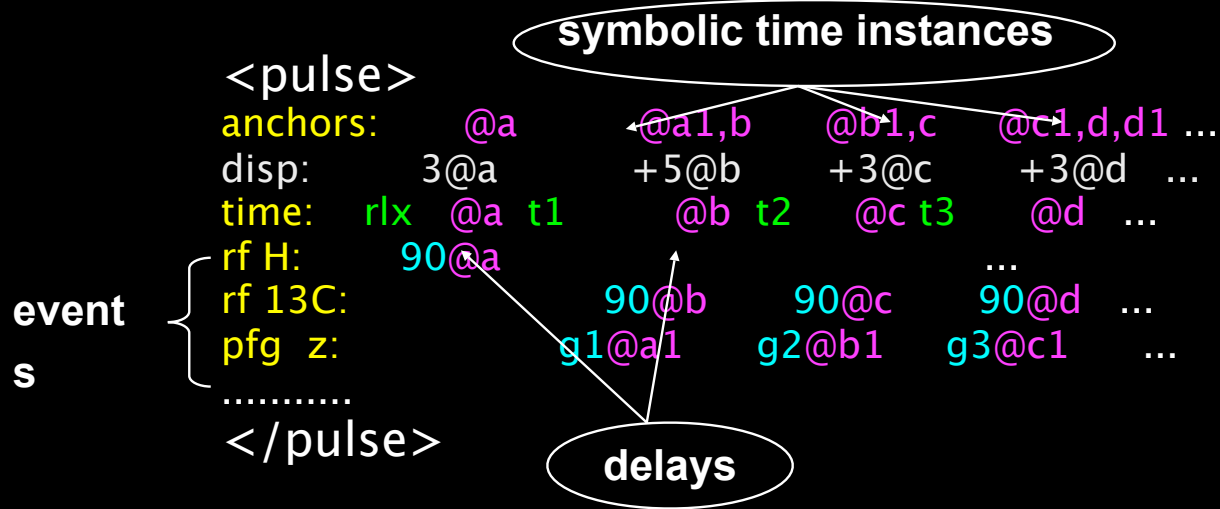
Chemical Physics Letters 245(4-5):415--420, 1995

[WWW](#) | [BibTeX](#)



Link to original article

Drawing pulse sequences



JHMBc pulse sequence, Sorensen et al.

Drawing pulse sequences

```
<pulse>
anchors:   @a      @a1,b   @b1,c   @c1,d,d1   @e   @f   @g   @h   @j0,j,j1   @i--k   @l
disp:      3@a     +5@b     +3@c     +3@d     +9@e +9@f +4@g +4@h +3@j +3@i +10@l
time:  rlx @a t1   @b t2   @c t3   @d T1a   @e T1b @f T12 @g T12 @h d   @j   d @i--k aq @l
rf H:      90@a                                180@g                                acq@k-----l
rf 13C:    90@b   90@c   90@d   180@e 90@f=p1                                180@j 90@i=p1
pfg z:    g1@a1   g2@b1   g3@c1 g4@d1                                g5@j0 g6@j1
```

```
delay T1b: show_at=13C label=\frac{\Delta-\kappa t_1}{2}
delay T1a: show_at=13C label=\frac{\Delta+\kappa t_1}{2}
delay t2: show_at=13C label=\tau_2
delay t1: show_at=13C label=\tau_1
delay t3: show_at=13C label=\tau_3
delay T12: show_at=13C label=\frac{t_1}{2}
delay rlx: hide=true
delay d: label=\delta
```

```
rfchan 13C: label=^13C
rfchan H: label=^1H
pfgchan z: label=Grad.\ z
```

```
pulse p1: phase=phi1
acq: phase=phi2 type=fid
```

```
phase phi1: label=\phi_1 table=0,2
phase phi2: label=\phi_2 table=1,3
```

```
gradient g1: strength=70 label=g_1
gradient g2: strength=-40 label=g_2
gradient g3: strength=-20 label=g_3
gradient g4: strength=-10 label=g_4
gradient g5: strength=50,-30 label=g_5
gradient g6: strength=-30,50 label=g_6
</pulse>
```

more readable than real code

one line per channel

hardware delays are not entered in main part

can be extended to produce real code

Author: Evgeny Fadeev, UCI

NMRWIKI.ORG

Started on November 8th 2007 (4 months online)

Number of articles ~150

Unique visitors ~700-1000

(not yet advertised except once via ammrl list)

Number of contributors 11

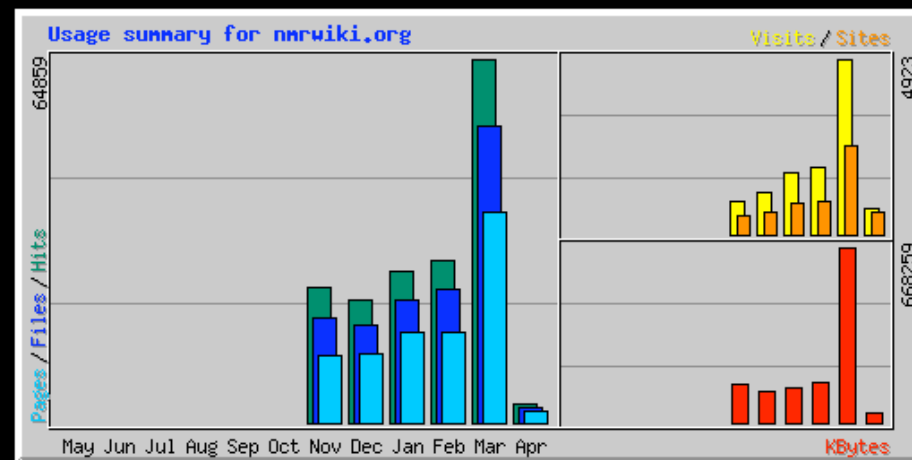
Registered users 12

only 2 spam postings

(nmrwiki is not password protected)

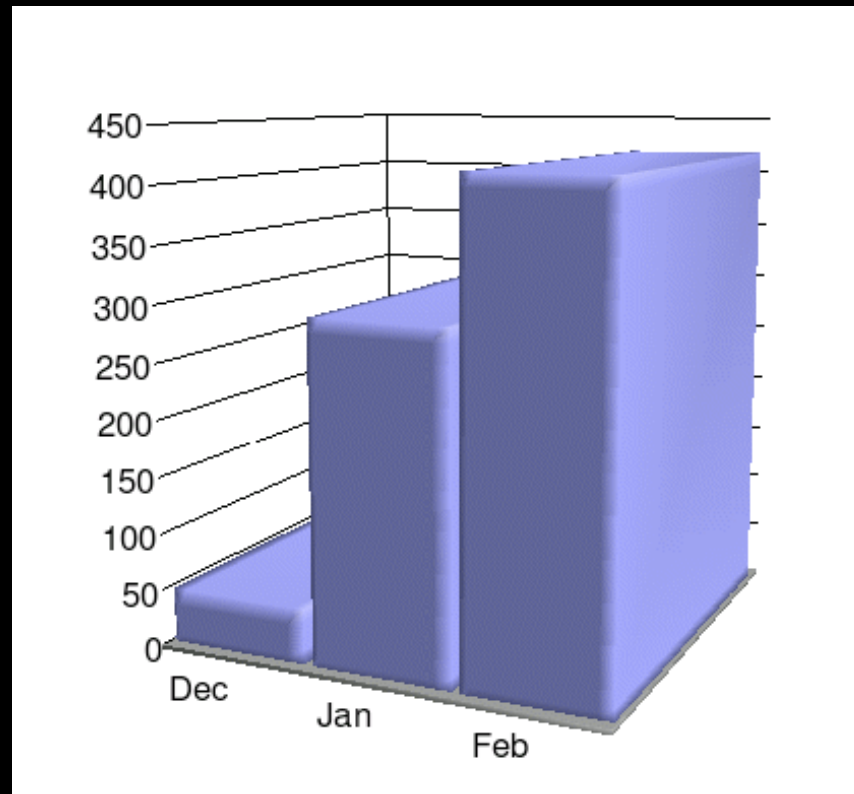
(my) cost to set up ~ \$100/year

Unique visitors and visit counts



Nov'07.....Apr '08 (by April 2nd)

Visits from search engines



**nmrwiki articles are well visible on the web
(count of visits via search engines by month)**

Google searches

January 2008:

states-tppi
hornak mri bibtex
nmr wikipedia
scientific wiki
drawing nmr
hetloc nmr
j-hmbc bruker
locking instrument nmr
nmr calculation software
nmr tppi
talos nmr
xplor wiki
bruker instruments nmr
bruker nmr manuals
bruker probes index

February 2008:

nmr wiki
t4 lysozyme wiki
nmrpipe baseline
nmrpipe mc
scientific wiki
sparky nmr
states/tppi
cosy nmr
couplings.pdf
dipsi2etgpjcsix1
drawing nmr
nmr mars
nmr pulse sequence
nmr reference table
nmrpipe baseline correction

NMRWIKI plans:

Give away site-content backup file – coming very soon.

Some video manuals

Pulse sequence generator – within a year

Sample NMR data-base (strychnine data by Dr. Phil Dennison)

NMR & EPR periodic table

NMR & EPR world map (based on google maps)

**if you have some valuable document
that you can share ...**



Copy/upload it to nmrwiki.org!

THANK YOU!!!