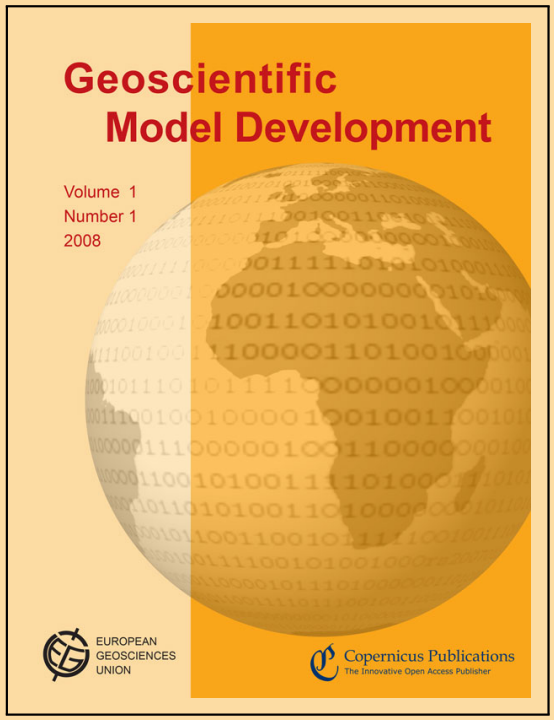
2008 - 2018: Celebrating 10 Years of Geoscientific Model Development (GMD)

Rolf Sander, Lutz Gross, David Ham, Julia Hargreaves, Astrid Kerkweg & Didier Roche



The first volume of GMD was published 10 years ago, in 2008. Join us to celebrate our anniversary!

DATE:	Monday
TIME:	19:00
LOCATION:	PICO spot 5a (Hall X5)

Real Programmers...

- Don't comment their code. If it was hard to write, it should be hard to understand.
- Real programmers still use FORTRAN77.
- Are you a real programmer? Can you predict the result of the f77 code below by just looking at the source code?

```
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
       PROGRAM OBFUSCATE
        CONSTANT = 5.
          INVERSE = 1./CONSTANT
              photo1 = 5.*INVERSE + 5.
                  pH = CONSTANT + 3.
                  X = photo1 * pH
C         strange combination of pH and photolysis...
     GOTO      1
                  X = X + 17.
   1      CONTINUE
        IF (X .LT. 60.) THEN X = X + 7.
      PRINT *,'RESULT=',X
            STOP
        END
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
```

- Download: `http://www.rolf-sander.net/tmp/obfuscate.f`
- Compile
- Explain
- Submit solution
  - EGU booth
  - or `rolf.sander@mpic.de`
- Win one out of 3 GMD T-shirts:

Geoscientific Model Development (GMD) is an international scientific journal dedicated to the publication and public discussion of the description, development, and evaluation of numerical models of the Earth system and its components. The following manuscript types can be considered for peer-reviewed publication:

- Geoscientific model descriptions, from statistical models to box models to GCMs.
- Development and technical papers, describing developments such as new parameterizations or technical aspects of running models such as the reproducibility of results.
- New methods for assessment of models, including work on developing new metrics for assessing model performance and novel ways of comparing model results with observational data.
- Papers describing new standard experiments for assessing model performance or novel ways of comparing model results with observational data.
- Model experiment descriptions, including experimental details and project protocols.
- Full evaluations of previously published models

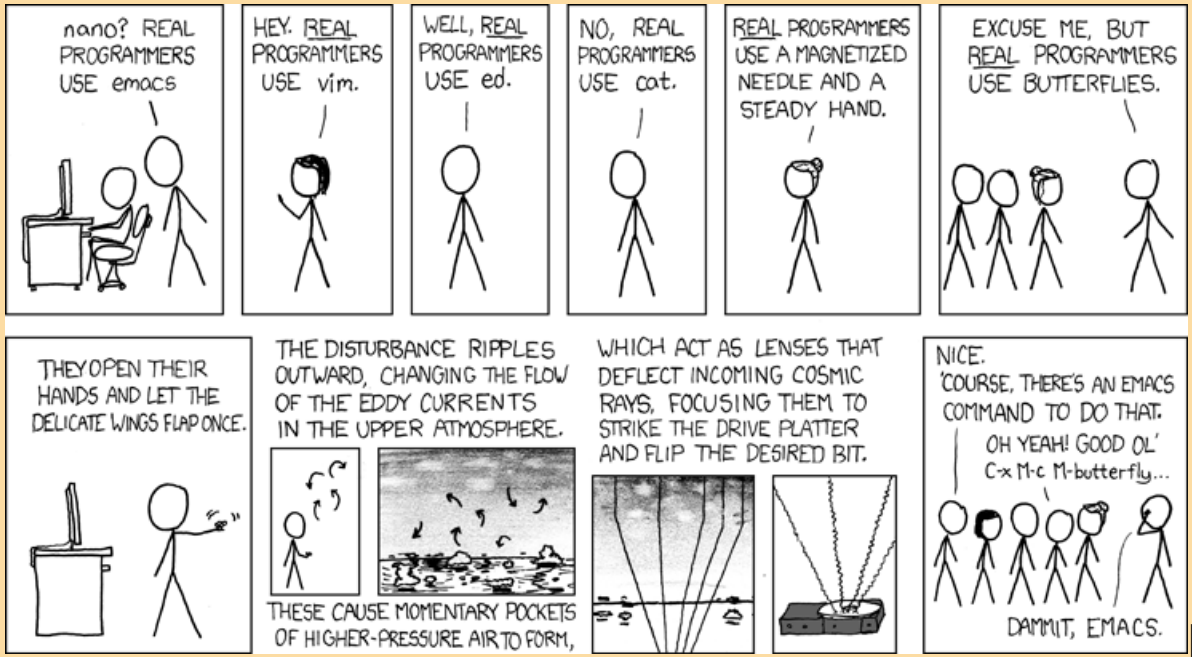
"I believe that the time is ripe for significantly better documentation of programs, and that we can best achieve this by considering programs to be works of literature." (Donald E. Knuth, Literate Programming, 1984)

"Essentially, all models are wrong, but some are useful." (George E. P. Box, Robustness in the strategy of scientific model building, 1979)

Real Programmers...

- don't comment their code. If it was hard to write, it should be hard to understand [1].
- never work 9 to 5. If they are around at 9 AM, it's because they were up all night [1].
- write perfect code which they don't share with others (in order not to embarrass them).
- never read GMD papers. To understand any code, they only need to look at it. Why RTFM*?
- don't publish in GMD. Why waste time in documenting code which is self-explanatory to the average genius?

* Read The Fantastic Manual



[2]

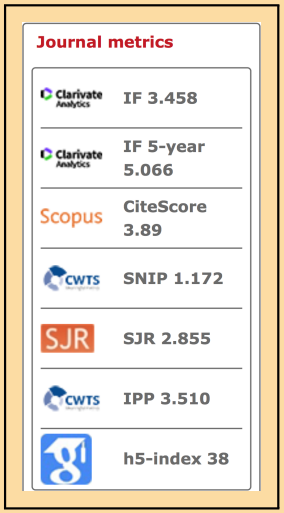
[1] Tom Van Vleck http://multicians.org/thvv/realprogs.html
[2] Randall Munroe https://xkcd.com/378/

Real programmers still use FORTRAN77. Are you a real programmer? Can you predict the result of the f77 code below by just looking at the source code?

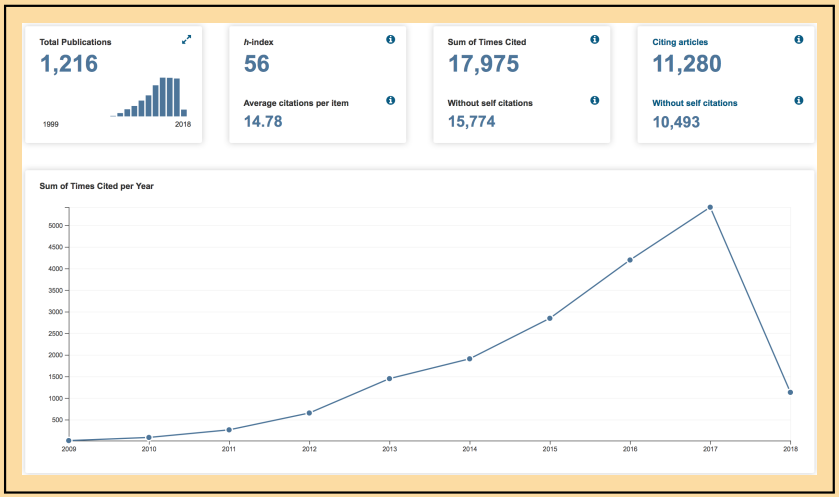
```
C23456789012345678901234567890123456789012345678901234567890123456789012
      PROGRAM OBFUSCATE
        CONSTANT = 5.
           INVERSE = 1./CONSTANT
              photo1 = 5.*INVERSE + 5.
                 pH = CONSTANT + 3.
                 X = photo1 * pH
C             strange combination of pH and photolysis...
      GOTO       1
                 X = X + 17.
    1       CONTINUE
          IF (X .LT. 60.) THEN X = X + 7.
        PRINT *,'RESULT=',X
             STOP
          END
C23456789012345678901234567890123456789012345678901234567890123456789012
```

- Be careful, the correct answer is neither 55 nor 47!
- Download the code at `http://www.rolf-sander.net/tmp/obfuscate.f` (→ QR code) and compile it with gfortran or another FORTRAN77 compiler.
- Explain why the code produces the result that it produces!
- Submit your solution at the EGU booth (or email it to `rolf.sander@mpic.de` before 22 April) and win one out of 3 GMD T-shirts.

- Model code described in GMD is usually open source. In the case of copyright or other legal issues, the code must be made available to the editor at a minimum.
- A "Code availability" section either contains instructions for obtaining the code, or explains why the code is not available.
- Code should be uploaded as a supplement or made available at a data repository with an associated DOI (digital object identifier) for the exact model version described in the paper.

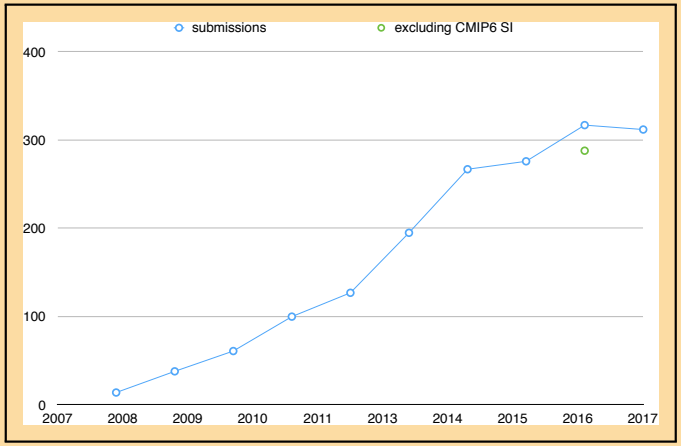


- The 5-year impact factor is higher than the standard (2-year) impact factor.
- It probably takes a while for projects and models to be used.

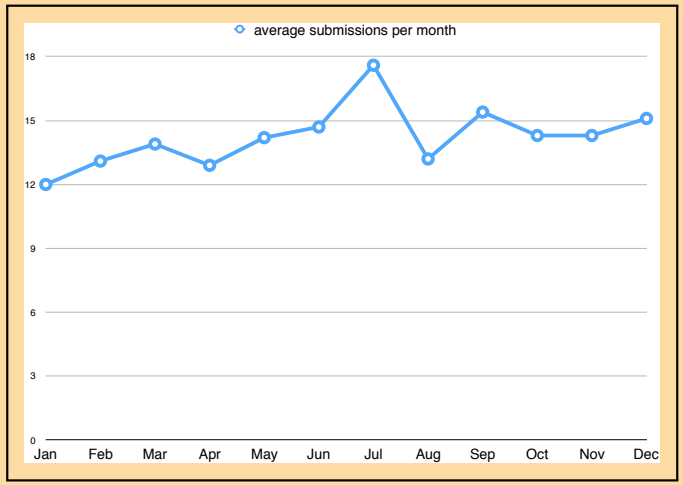


- If GMD was an author, its web of science h-index would be 56.

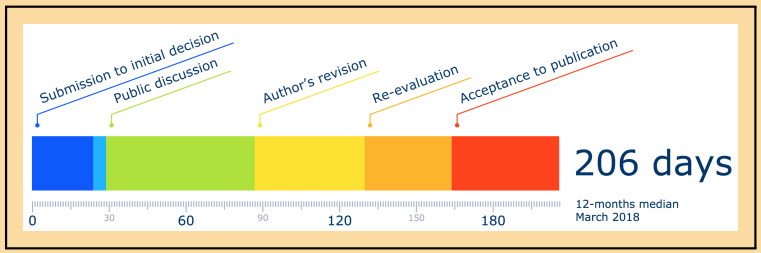
- The overall journal rejection rate is about 20 %, but rejection of papers that pass the initial editor's review and go into the interactive discussion is quite rare, at 5 %. So, if authors make sure their paper fulfills the peer review criteria on the website, and fits clearly into one of the defined manuscript types, then it has a very good chance of being accepted eventually.



- Submissions per year are flattening off
- Stabilizing at about 300, i.e., slightly less than 1 manuscript per day is submitted to GMD.



- Average submissions per month since the start of the journal.
- Peak in July: Be patient if you submit your manuscript just before heading off on holiday!



- The average review duration is currently 206 days.