

BU Professional Development Seminar

Research Journals and the Publishing Process
in the area of Dynamical Systems

March 3, 2014

(Partial) Journal List

Dynamical Systems Journals:

- ▶ Advances in Differential Equations
- ▶ Celestial Mechanics and Dynamical Astronomy
- ▶ Chaos
- ▶ Conformal Geometry and Dynamics
- ▶ Discrete and Continuous Dynamical Systems, Series A, B, and S
- ▶ Dynamical Systems: An International Journal
- ▶ Ergodic Theory and Dynamical Systems
- ▶ International Journal of Bifurcation and Chaos
- ▶ Journal of Difference Equations and Applications
- ▶ Journal of Differential Equations
- ▶ Journal of Dynamics and Differential Equations
- ▶ Journal of Nonlinear Science
- ▶ Journal of Statistical Physics
- ▶ Nonlinearity
- ▶ Physica D: Nonlinear Phenomena
- ▶ Qualitative Theory of Dynamical Systems
- ▶ SIAM Journal on Applied Dynamical Systems
- ▶ SIAM Journal on Mathematical Analysis
- ▶ Stochastics and Dynamics

(Partial) Journal List – continued

Broader journals with dynamics content:

- ▶ Annales de l'Inst. Henri Poincaré C, Nonlinear Analysis
- ▶ Annals of Mathematics
- ▶ Archive for Rational Mechanics and Analysis
- ▶ Comm. in Mathematical Physics
- ▶ Communications in PDE
- ▶ Communications in Pure and Applied Mathematics
- ▶ Comptes Rendus
- ▶ Doklady Akad. NAUK
- ▶ Duke Mathematical Journal
- ▶ Fundamenta Mathematicae
- ▶ Indiana University Mathematics Journal
- ▶ Inventiones Mathematicae
- ▶ Journal fuer die Reine und Angewandte Mathematik
- ▶ Journal of Mathematical Analysis and Applications
- ▶ Journal of Mathematical Physics
- ▶ Memoirs of the AMS
- ▶ Physical Review Letters
- ▶ Proceedings of the AMS
- ▶ Publ. Math. IHES
- ▶ SIAM Journal on Applied Mathematics
- ▶ SIAM Multiscale Modeling and Simulations
- ▶ SIAM Review
- ▶ Topology
- ▶ Topology and its Applications
- ▶ Transactions of the American Mathematical Society
- ▶ Zeitschrift fuer Angewandte Mathematik und Physik

(Partial) Journal List – continued

Math-bio journals:

- ▶ Bulletin of Mathematical Biology
- ▶ ESAIM
- ▶ European Journal of Applied Mathematics
- ▶ Journal of Mathematical Biology
- ▶ Journal of Mathematical Neuroscience
- ▶ Journal of Neuroscience
- ▶ Journal of Theoretical Biology
- ▶ Journal of Computational Neuroscience

Fluids journals:

- ▶ Journal of Fluid Mechanics
- ▶ Physics of Fluids

List of math journals (including the above):

www.mathontheweb.org/mathweb/mi-journals.html

Australian Mathematical Society Journal Rankings

Ranking of journals is difficult, and people will have differing opinions. One published ranking that gets mentioned frequently is from the Australian Mathematical Society and can be found here:

<http://www.austms.org.au/AustMS+--+Journal+Ranking+--+2009>

Journals are given an A*, A, B, or C ranking. Examples:

- ▶ A*: Annals, CMP, CPDE, CPAM, ETDS, IU Math Journal, Inventiones, Journal of AMS, JDE, JFM, JMB, Nonlinearity, PNAS, SIAM Applied Math, SIAM Review, Transactions
- ▶ A: Advances in Differential Equations, Bulletin of Math Bio, DCDS A and B, Proceedings of AMS, SIADS, SIMA
- ▶ B: Applied Math Letters, Dynamics of PDE, International Journal of Bifurcation and Chaos, SIAM Multiscale Modeling and Simulation
- ▶ C: Chaos Solitons and Fractals, Fluid Dynamics

** Note: BU wasn't involved in creating this ranking, nor should this be taken as an endorsement. It is just an example.

The Publishing Process

1) Decide where to submit depending on, for example

- ▶ Quality
- ▶ Emphasis of area
- ▶ Turn around time
- ▶ Where you've published before
- ▶ Members of the editorial board

There are also considerations for submitting to, say, a conference proceeding.

2) Submit your paper.

- ▶ Only one journal at a time.
- ▶ Different journals have different submission procedures - follow their online instructions
- ▶ You may need to write a cover letter or some other journal-specific document
- ▶ Possibly also post a preprint version on, eg, [arXiv.org](http://arxiv.org)

3) Wait. Times vary dramatically: $\approx 2 - 20$ months. See for example this list:

<http://www.ams.org/notices/200910/rtx091001316p.pdf>

The Publishing Process - cont

- 4) Receive/respond to referee reports and revise your paper.
 - ▶ Respond promptly and politely (even if the reports are not polite).
 - ▶ Be sure to address each specific comment of each referee
 - ▶ You can make other (minor) changes, as long as you let the referee(s)/editor know
 - ▶ Typically making an itemized list of all changes and including it with your resubmission is a good idea.
- 5) Wait again, and maybe repeat step 4).
- 6) If rejected, submit to a different journal, possibly taking reasons for rejection into account.

Refereeing

When asked to be a referee:

- ▶ Respond with your acceptance/declination soon.
- ▶ Reasons to decline:
 - ▶ You don't feel comfortable with the topic (don't be too restrictive here)
 - ▶ You have recently received a large number of such requests
 - ▶ You have a conflict of interest
- ▶ Reasons to accept:
 - ▶ You will likely learn something interesting
 - ▶ Professional obligation
 - ▶ Good for your CV and goodwill amongst your colleagues
 - ▶ You will meet some of the editors at conferences, grant proposal review panels, ...

How to read a paper in order to referee it:

- ▶ Make sure you understand the big picture
- ▶ You don't necessarily need to check all details (unless, eg, it's a big result)
- ▶ Determine if you believe the result to be correct
- ▶ Perhaps consult other references to determine novelty/impact of the work
- ▶ Determine if the result is interesting/important enough for the journal (this is really your main job)

Refereeing - continued

How to write your referee report:

- ▶ Begin with a brief summary of the results (eg 1-2 paragraphs).
- ▶ Make your recommendation clear to the editor, eg "Subject to the comments and suggestions written below, this paper is suitable for publication in (journal name)."
- ▶ Be polite and professional.
- ▶ Make sure to include some positive feedback.
- ▶ Phrasing can be important: eg "Your proof of ... was confusing because ..." vs "The proof of could have been more clear if ..."
- ▶ Know that useful suggestions and comments are typically appreciated.

Other comments:

- ▶ You may be asked to look at a revised version.
- ▶ This article, though not math specific, may be helpful:

<http://www.docdatabase.net/more-how-to-write-an-effective-manuscript-review-648670.html>

It is from Optics and Photonics News, June 2000, pg 42-43 and it is unfortunately not available via the journal's website.