Maintaining An Online Publication List

Tamara G. Kolda

Sandia National Labs

*Webpage Expert**

* Self-proclaimed

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Importance of Online Publication List

- Take advantage of your rights to make your work accessible
  - Many journals allows the *Author's Final Version* to be posted on preprint servers like arXiv *
  - Some journals allow the *Published Version* to be posted on the author's home page *
- Make preprints available
  - Especially useful during job search
- Accuracy
  - Unusual names (O'Leary, van de Geijn)
  - Common names (Meza, Conroy)
- Two options
  - Use a tool like Google Scholar
  - Maintain your own list
  - *Not mutually exclusive options*

Author's Final Version:
Final accepted version *before* copyediting and formatting by journal staff

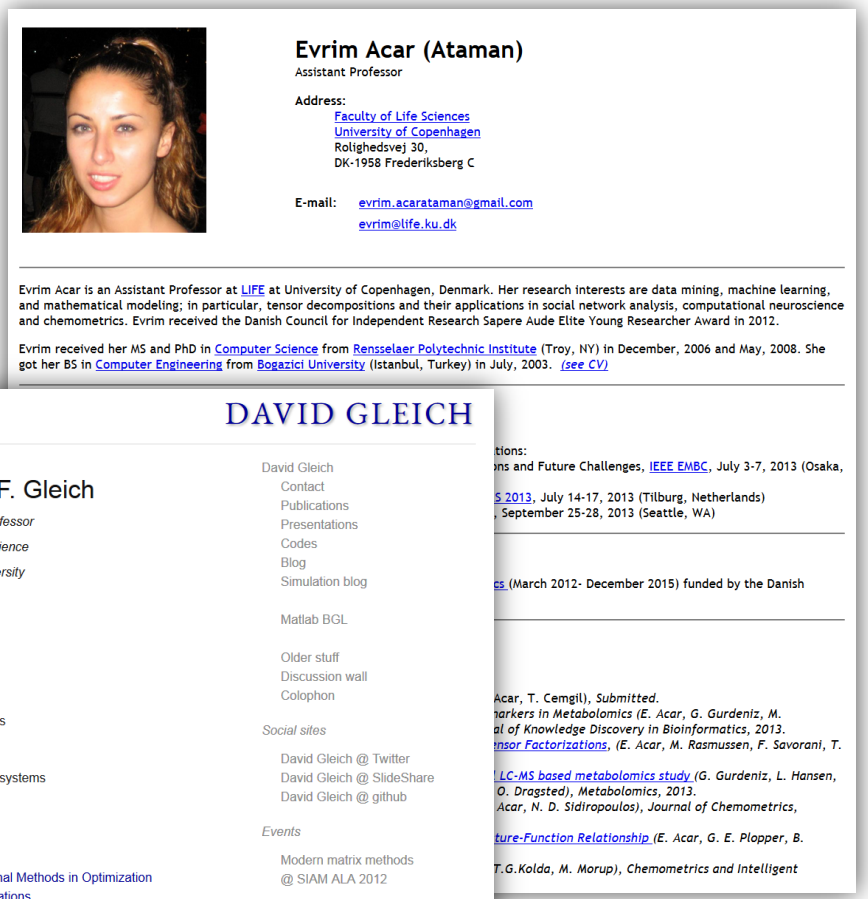
Published Version:
Final version that appears in the journal *after* copyediting and formatting by journal staff

* SIAM allows authors these rights.

Interlude: Home Page Basics

- Critical Information
  - Actual clickable email
  - Work or mobile phone
  - Snail mail address
  - Brief bio
  - Publication list
- Optional Information
  - Picture
  - Skype, Twitter, Google+ ids
  - Software downloads
  - Awards
  - Service activities
  - Copies of talks
- Keep it up to date
  - Don't make it too complicated
  - Update with each new paper!
- Avoid personal information

Mathematicians generally fail to provide short bios, requiring the visitor to piece together a profile by clicking many links.



Evrim Acar (Ataman)
Assistant Professor

Address:
Faculty of Life Sciences
University of Copenhagen
Rolighedsvej 30,
DK-1958 Frederiksberg C

E-mail: evrim.acarataman@gmail.com
evrim@life.ku.dk

Evrim Acar is an Assistant Professor at LIFE at University of Copenhagen, Denmark. Her research interests are data mining, machine learning, and mathematical modeling; in particular, tensor decompositions and their applications in social network analysis, computational neuroscience and chemometrics. Evrim received the Danish Council for Independent Research Sapere Aude Elite Young Researcher Award in 2012.

Evrim received her MS and PhD in Computer Science from Rensselaer Polytechnic Institute (Troy, NY) in December, 2006 and May, 2008. She got her BS in Computer Engineering from Bogazici University (Istanbul, Turkey) in July, 2003. *(see CV)*

DAVID GLEICH

David F. Gleich
Assistant Professor
Computer Science
Purdue University

David Gleich
Contact
Publications
Presentations
Codes
Blog
Simulation blog

Matlab BGL

Older stuff
Discussion wall
Colophon

Social sites
David Gleich @ Twitter
David Gleich @ SlideShare
David Gleich @ github

Events
Modern matrix methods
@ SIAM ALA 2012

INTERESTS

Matrix-based network computations
PageRank
Spectral graph theory
Parameterized models of physical systems
Large scale data computations

CLASSES

Spring 2013, CS520 - Computational Methods in Optimization
Fall 2012, CS515 - Matrix Computations
Spring 2012, Computational Methods in Optimization
Fall 2011, Network and Matrix Computations

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“HELPER” SITES

Google Scholar

- Benefits
  - Easy to set up
  - Automatically finds articles
  - Easy to correct
  - Counts citations (generously)
  - People can “follow” you
  - You can track citations to your work
- Cons
  - Doesn’t always link to the correct PDF
  - Generates poor BibTeX (no DOI)
- How to gets started
  - Requires Google (aka Gmail) account
- Highly Recommended
  - Extremely low maintenance

Nicholas J. Higham

Richardson Professor of Applied Mathematics, The University of Manchester, UK

Mathematics - Numerical analysis - Numerical linear algebra - Mathematical software

Verified email at ma.man.ac.uk

Homepage

Citation indices

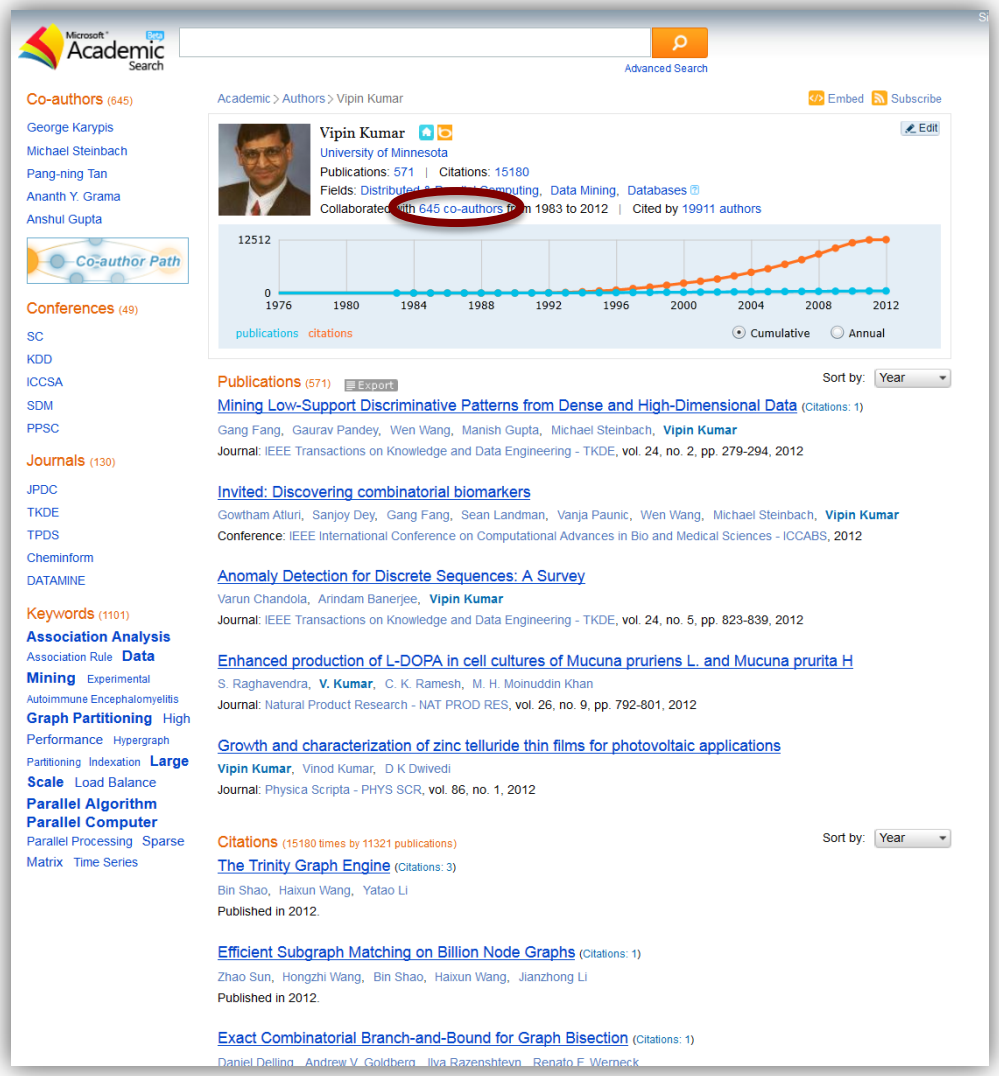
	All	Since 2008
Citations	10705	5178
h-index	52	34
i10-index	113	93

Show: 20 **1-20** Next >

Title / Author	Cited by	Year
Accuracy and Stability of Numberical Algorithms NJ Higham Siam	2795	1996
Functions of matrices: theory and computation NJ Higham Siam	482	2008
MATLAB guide DDJ Higham, NJ Higham Siam	319	2005
Computing the nearest correlation matrix—a problem from finance NJ Higham IMA journal of Numerical Analysis 22 (3), 329-343	300	2002
Computing a nearest symmetric positive semidefinite matrix NJ Higham Linear algebra and its applications 103, 103-118	264	1988
Computing the polar decomposition-with applications NJ Higham SIAM Journal on Scientific and Statistical Computing 7 (4), 1160-1174	248	1986
Handbook of writing for the mathematical sciences NJ Higham Siam	216	1998
The scaling and squaring method for the matrix exponential revisited NJ Higham SIAM Journal on Matrix Analysis and Applications 26 (4), 1179-1193	194	2005
FORTRAN codes for estimating the one-norm of a real or complex matrix, with applications to condition estimation NJ Higham ACM Transactions on Mathematical Software (TOMS) 14 (4), 381-396	189	1988
A survey of condition number estimation for triangular matrices NJ Higham Siam Review 29 (4), 575-596	179	1987
Matrix nearness problems and applications NJ Higham University of Manchester Department of Mathematics	170	1988
The accuracy of floating point summation		

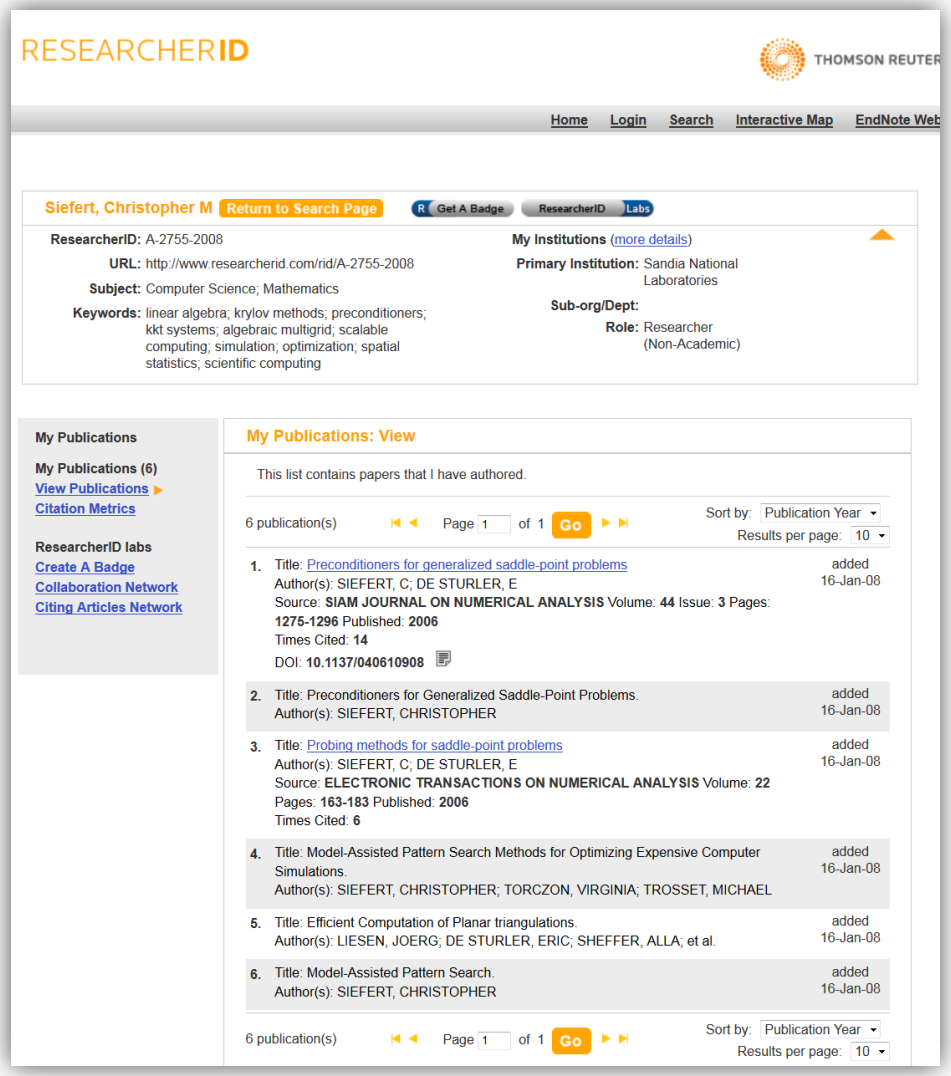
Microsoft Academic Search

- Benefits
  - Most of what Google Scholar offers
  - Includes DOI (unlike Google)
  - Co-author graph
  - Top keywords, conferences, journals
- Cons
  - Slow to find papers and preprints
  - Lots of mistakes
  - Fewer statistics (e.g., H-index)
- How to Get Started
  - academic.research.microsoft.com
- No Recommendation
  - Lags behind Google in finding papers
  - But really easy to set up…



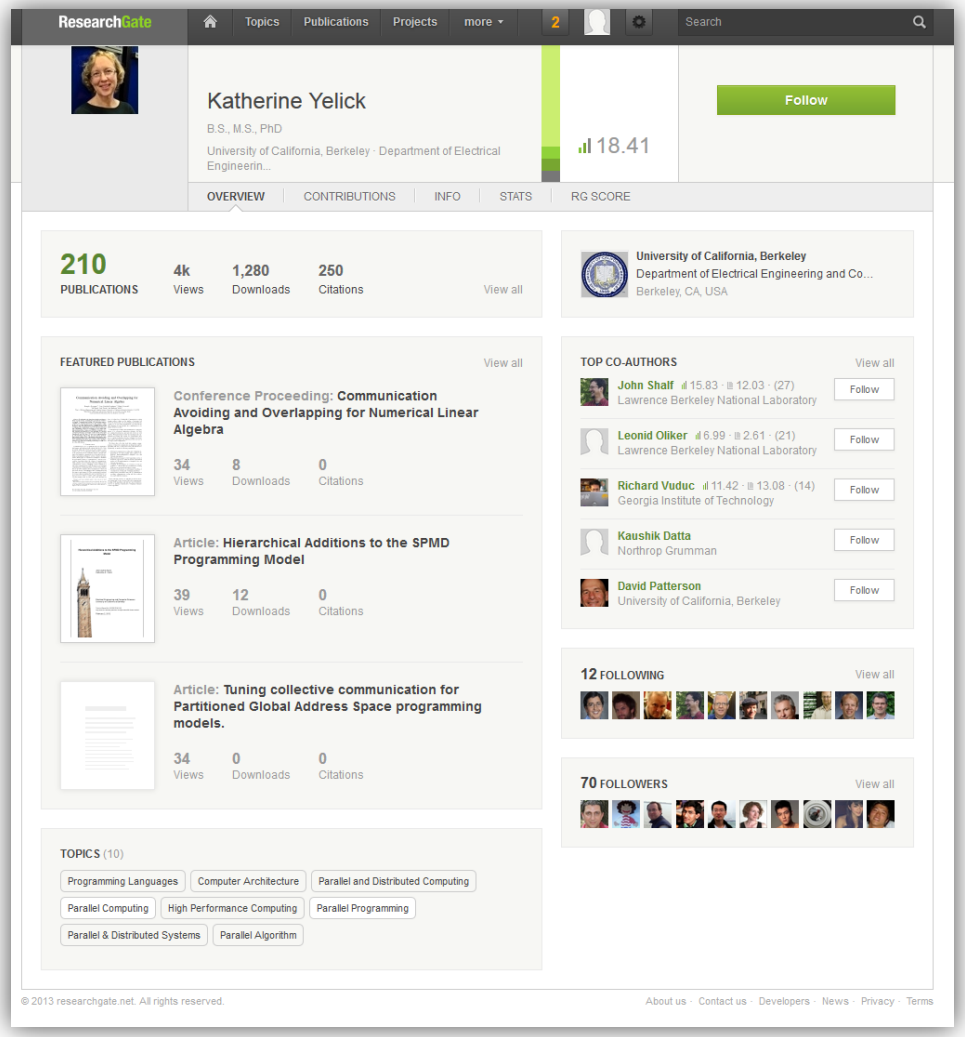
ResearcherID (Thomson Reuters)

- Benefits
  - Import from Web of Science, etc.
  - Some useful metrics
  - BibTeX export
- Cons
  - No preprints!
  - Fewer cites than Google Scholar (partly due to mistakes)
  - Manual updating
  - No merge capability
  - Stupidly confused by upper/lowercase
  - Only includes researchers that have manually set up an account
- How to Set Up
  - www.researcherid.com
- Not Recommended
  - Too hard to make corrections



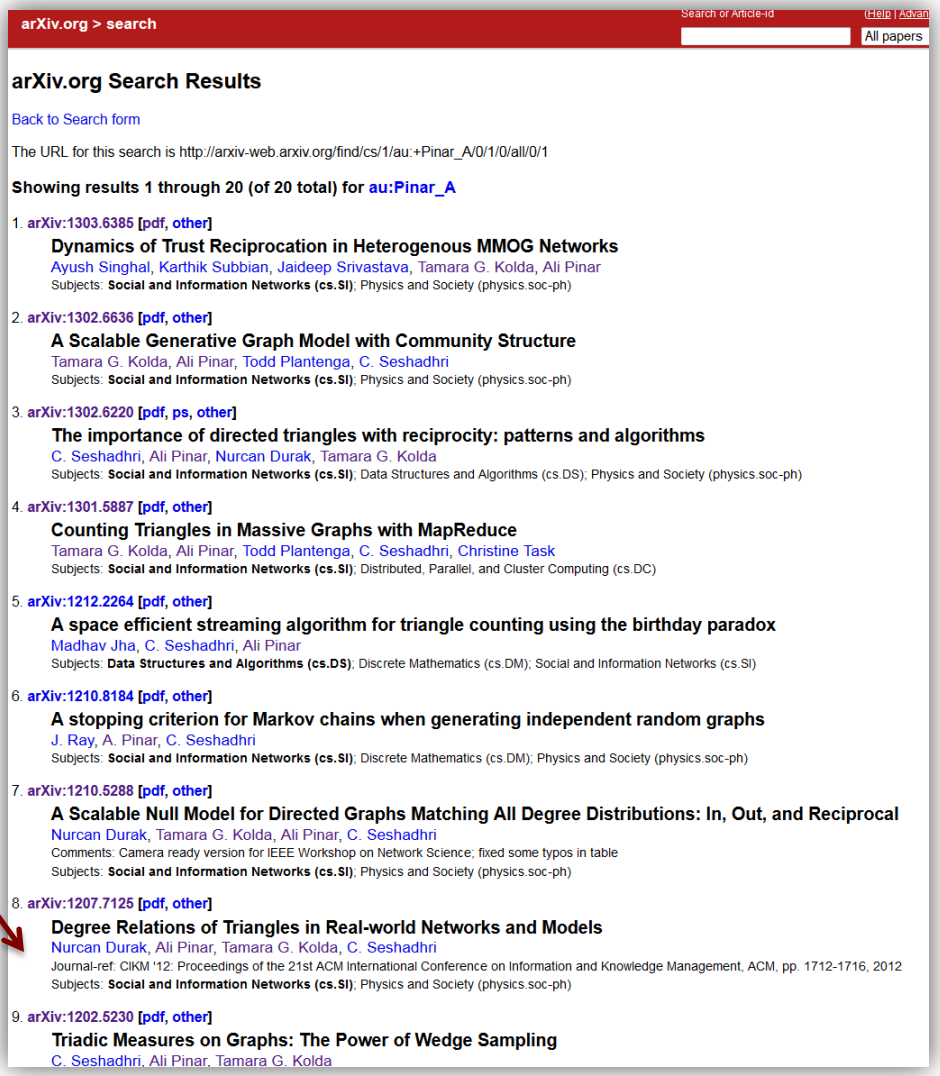
ResearchGate

- Pros
  - Social network for publications
  - Allows user to upload PDF versions
  - Recommends papers and keeps you updated on publications of colleagues, etc.
- Cons
  - Insists that I work in Albuquerque!
  - No export to BibTeX!
  - Does not link to DOI!
  - Makes up its own “impact” score
  - “Spam” emails
- Getting Started
  - www.researchgate.net
- No Recommendation
  - Might be useful for technical social networking
  - Can be overwhelming



Other Sites

- ArXiv.org
  - Highly recommended as preprint server
  - Many researchers follow certain topics
  - Quickly indexed by Google
  - Easy to post revisions
  - Can append final citation and comments
- LinkedIn
  - Manual input
  - Hard to maintain
- Institutional Repositories
  - Common in the UK
  - Work much like arXiv, but local
  - Benefit: Can post published version in some cases



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Showing results 1 through 20 (of 20 total) for au:Pinar_A

1. arXiv:1303.6385 [pdf, other]
   Dynamics of Trust Reciprocation in Heterogenous MMOG Networks
   Ayush Singhal, Karthik Subbian, Jaideep Srivastava, Tamara G. Kolda, Ali Pinar
   Subjects: **Social and Information Networks (cs.SI)**; Physics and Society (physics.soc-ph)

2. arXiv:1302.6636 [pdf, other]
   A Scalable Generative Graph Model with Community Structure
   Tamara G. Kolda, Ali Pinar, Todd Plantenga, C. Seshadhri
   Subjects: **Social and Information Networks (cs.SI)**; Physics and Society (physics.soc-ph)

3. arXiv:1302.6220 [pdf, ps, other]
   The importance of directed triangles with reciprocity: patterns and algorithms
   C. Seshadhri, Ali Pinar, Nurcan Durak, Tamara G. Kolda
   Subjects: **Social and Information Networks (cs.SI)**; Data Structures and Algorithms (cs.DS); Physics and Society (physics.soc-ph)

4. arXiv:1301.5887 [pdf, other]
   Counting Triangles in Massive Graphs with MapReduce
   Tamara G. Kolda, Ali Pinar, Todd Plantenga, C. Seshadhri, Christine Task
   Subjects: **Social and Information Networks (cs.SI)**; Distributed, Parallel, and Cluster Computing (cs.DC)

5. arXiv:1212.2264 [pdf, other]
   A space efficient streaming algorithm for triangle counting using the birthday paradox
   Madhav Jha, C. Seshadhri, Ali Pinar
   Subjects: **Data Structures and Algorithms (cs.DS)**; Discrete Mathematics (cs.DM); Social and Information Networks (cs.SI)

6. arXiv:1210.8184 [pdf, other]
   A stopping criterion for Markov chains when generating independent random graphs
   J. Ray, A. Pinar, C. Seshadhri
   Subjects: **Social and Information Networks (cs.SI)**; Discrete Mathematics (cs.DM); Physics and Society (physics.soc-ph)

7. arXiv:1210.5288 [pdf, other]
   A Scalable Null Model for Directed Graphs Matching All Degree Distributions: In, Out, and Reciprocal
   Nurcan Durak, Tamara G. Kolda, Ali Pinar, C. Seshadhri
   Comments: Camera ready version for IEEE Workshop on Network Science; fixed some typos in table
   Subjects: **Social and Information Networks (cs.SI)**; Physics and Society (physics.soc-ph)

8. arXiv:1207.7125 [pdf, other]
   Degree Relations of Triangles in Real-world Networks and Models
   Nurcan Durak, Ali Pinar, Tamara G. Kolda, C. Seshadhri
   Journal-ref: CIKM '12: Proceedings of the 21st ACM International Conference on Information and Knowledge Management, ACM, pp. 1712-1716, 2012
   Subjects: **Social and Information Networks (cs.SI)**; Physics and Society (physics.soc-ph)

9. arXiv:1202.5230 [pdf, other]
   Triadic Measures on Graphs: The Power of Wedge Sampling
   C. Seshadhri, Ali Pinar, Tamara G. Kolda

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MAINTAINING YOUR OWN LIST

Maintaining Your Own List

- Pros
  - Accuracy
  - Includes published PDF (if allowed)
  - Additional comments
    - Pointers to software
    - Notes about paper prizes, special issues, etc.
    - Corrections
- Cons
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  - Maintain publication database
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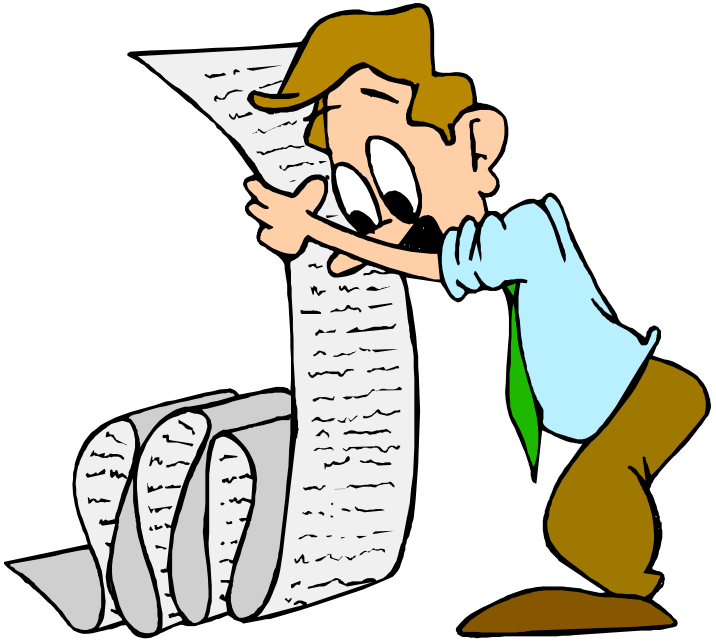
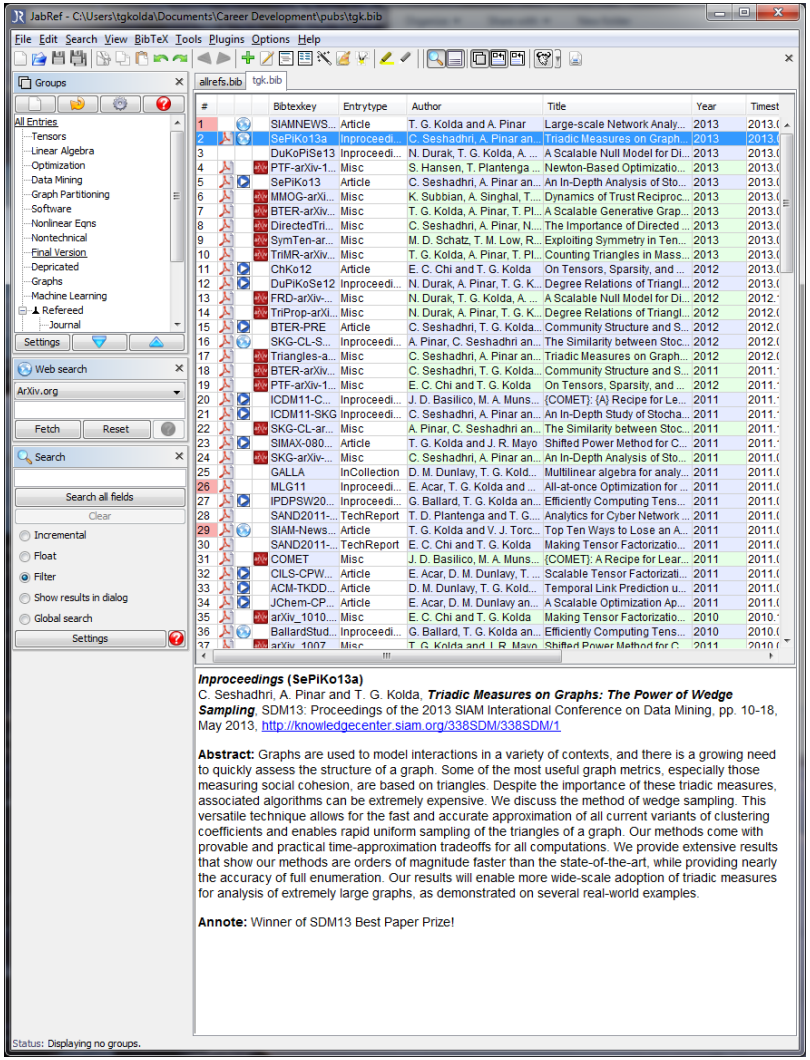


JabRef BibTex Reference Manager

- Features
  - Highly-customizable, advanced BibTeX editor
  - Java based, so works on Windows, Mac, Linux, etc.
  - Open source, active project, continually being improved
  - Import from arXiv, Google Scholar, IEEEXplore, etc.
  - Understands DOIs and hyperlinks
  - Downloads and manages PDFs and related files
  - Custom export to HTML (*)
- Getting Started
  - http://jabref.sourceforge.net/
- Tammy's Export Filter
  - http://tinyurl.com/ljwnqz5



Journal Article

```
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  Title  = {On Tensors, Sparsity, and Nonnegative Factorizations},
  Author = {Eric C. Chi and Tamara G. Kolda},
  Journal = {SIAM Journal on Matrix Analysis and Applications},
  Month = dec,
  Number = {4},
  Pages = {1272-1299},
  Volume = {33},
  Year = {2012},
  Abstract = {Tensors have found application in a variety of fields,
              ranging from chemometrics to signal processing and beyond…},
  Doi = {10.1137/110859063},
  Keywords = {nonnegative tensor factorization, nonnegative CANDECOMP-PARAFAC,
              Poisson tensor factorization, Lee-Seung multiplicative updates,
              majorization-minimization algorithms},
  Oldversion = {PTF-arXiv-1112.2414},
  Pdf = {ChKo12.pdf},
}
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Journal Article

E. C. Chi and T. G. Kolda, ***On Tensors, Sparsity, and Nonnegative Factorizations***, SIAM Journal on Matrix Analysis and Applications 33(4):1272-1299, December 2012, doi:10.1137/110859063. [PDF] [BibTeX] {*older version*}

Abstract: Tensors have found application in a variety of fields, ranging from chemometrics to signal processing and beyond. In this paper, we consider the problem of multilinear modeling of sparse count data. Our goal is to develop a descriptive tensor factorization model of such data, along with appropriate algorithms and theory. To do so, we propose that the random variation is best described via a Poisson distribution, which better describes the zeros observed in the data as compared to the typical assumption of a Gaussian distribution. Under a Poisson assumption, we fit a model to observed data using the negative log-likelihood score. We present a new algorithm for Poisson tensor factorization called CANDECOMP-PARAFAC alternating Poisson regression (CP-APR) that is based on a majorization-minimization approach. It can be shown that CP-APR is a generalization of the Lee-Seung multiplicative updates. We show how to prevent the algorithm from converging to non-KKT points and prove convergence of CP-APR under mild conditions. We also explain how to implement CP-APR for large-scale sparse tensors and present results on several data sets, both real and simulated.

Keywords: nonnegative tensor factorization, nonnegative CANDECOMP-PARAFAC, Poisson tensor factorization, Lee-Seung multiplicative updates, majorization-minimization algorithms

Specified PDF file expected to live in "pubfiles" subdirectory

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Hyperlink to preprint entry

Journal Article

E. C. Chi and T. G. Kolda, ***On Tensors, Sparsity, and Nonnegative Factorizations***, SIAM Journal on Matrix Analysis and Applications 33(4):1272-1299, December 2012, doi:10.1137/110859063. [PDF] [BibTeX] {*older version*}

Abstract: Tensors have found application in a variety of fields, ranging from chemometrics to signal processing and beyond. In this paper, we consider the problem of multilinear modeling of sparse count data. Our goal is to develop a descriptive tensor factorization model of such data, along with appropriate algorithms and theory. To do so, we propose that the random variation is best described via a Poisson distribution, which better describes the zeros observed in the ...sumption of a Gaussian distribution. Under a Poisson ...rved data using the negative log-likelihood score. We present ...factorization called CANDECOMP-PARAFAC alternating ...based on a majorization-minimization approach. It can be shown that CP-APR is a generalization of the Lee-Seung multiplicative updates. We show how to prevent the algorithm from converging to non-KKT points and prove convergence of CP-APR under mild conditions. We also explain how to implement CP-APR for large-scale sparse tensors and ...

Keyw... ...or facto...

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BibTeX:

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@article{ChKo12,
  author = {Eric C. Chi and Tamara G. Kolda},
  title = {On Tensors, Sparsity, and Nonnegative Factorizations},
  journal = {SIAM Journal on Matrix Analysis and Applications},
  month = {December},
  year = {2012},
  volume = {33},
  number = {4},
  pages = {1272-1299},
  doi = {10.1137/110859063}
}
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Conference Proceedings

```
@Inproceedings{SePiKo13a,
  Title =          {Triadic Measures on Graphs: The Power of Wedge
                   Sampling},
  Author =         {C. Seshadhri and Ali Pinar and Tamara G. Kolda},
  Booktitle =      {SDM13: Proceedings of the 2013 SIAM International
                   Conference on Data Mining},
  Pages =          {10--18},
  Year =           {2013},
  Month =          may,
  Abstract =       {Graphs are used to model interactions...},
  Annote =         {Winner of SDM13 Best Paper Prize!},
  Keywords =       {triangle counting, directed triangle counting,
                   clustering coefficient, Hoeffding's inequality},
  Oldversion =     {Triangles-arXiv-1202.5230},
  Pdf =            {SePiKo13a-SDM13.pdf},
  Url =            {http://knowledgecenter.siam.org/338SDM/338SDM/1}
}
```

Conference Proceedings

C. Seshadhri, A. Pinar and T. G. Kolda, ***Triadic Measures on Graphs: The Power of Wedge Sampling***, SDM13: Proceedings of the 2013 SIAM International Conference on Data Mining, pp. 10-18, May 2013, http://knowledgecenter.siam.org/338SDM/338SDM/1. [PDF] [BibTeX] {*older version*}

Abstract: Graphs are used to model interactions in a variety of contexts, and there is a growing need to quickly assess the structure of a graph. Some of the most useful graph metrics, especially those measuring social cohesion, are based on triangles. Despite the importance of these triadic measures, associated algorithms can be extremely expensive. We discuss the method of wedge sampling. This versatile technique allows for the fast and accurate approximation of all current variants of clustering coefficients and enables rapid uniform sampling of the triangles of a graph. Our methods come with provable and practical time-approximation tradeoffs for all computations. We provide extensive results that show our methods are orders of magnitude faster than the state-of-the-art, while providing nearly the accuracy of full enumeration. Our results will enable more wide-scale adoption of triadic measures for analysis of extremely large graphs, as demonstrated on several real-world examples.

Keywords: triangle counting, directed triangle counting, clustering coefficient, Hoeffding's inequality

Winner of SDM13 Best Paper Prize!

URL
(DOI preferred)

Annote

arXiv

```
@Misc{BTER-arXiv-1112.3644,
   Title =          {Community Structure and Scale-free Collections of
                    {Erd\H{o}s-R\'enyi} Graphs},
   Author =         {C. Seshadhri and Tamara G. Kolda and Ali Pinar},
   HowPublished =   {arXiv:1112.3644},
   Month =          dec,
   Year =           {2011},
   Eprint =         {1112.3644},
   Newversion =     {BTER-PRE},
   Primaryclass =   {cs.SI},
}
```

Note LaTeX macros auto-magically transformed into HTML

C. Seshadhri, T. G. Kolda and A. Pinar, ***Community Structure and Scale-free Collections of Erdős-Rényi Graphs***, arXiv:1112.3644 [cs.SI], December 2011, http://arxiv.org/1112.3644. [PDF] [BibTeX] {*newer version*}

Lists primaryclass, if included

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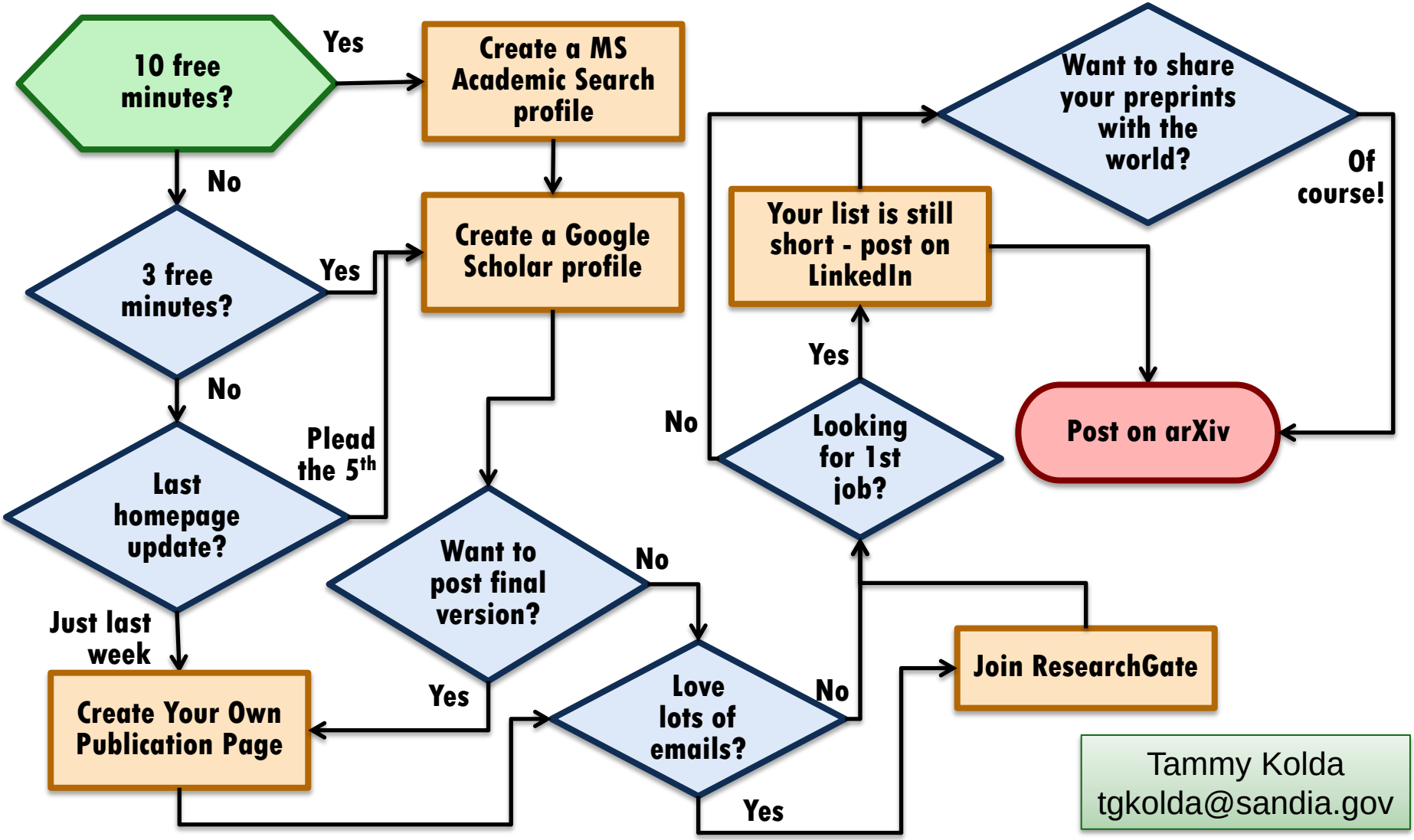

Tammy Kolda
tgkolda@sandia.gov