

ACM Transactions on Information Systems

- Article 6** **X. Xue** Modeling Reformulation Using
(34 pages) **W. B. Croft** Query Distributions
- Article 7** **S. J. Pan** Transfer Joint Embedding for
(27 pages) **Z. Toh** Cross-Domain Named Entity Recognition
 J. Su
- Article 8** **W. Ke** Studying the Clustering Paradox and Scalability
(36 pages) **J. Mostafa** of Search in Highly Distributed Environments
- Article 9** **X. Zhu** Sparse Hashing for Fast Multimedia Search
(24 pages) **Z. Huang**
 H. Cheng
 J. Cui
 H. T. Shen
- Article 10** **H. Bast** Efficient Fuzzy Search in Large Text Collections
(59 pages) **M. Celikik**



ACM Transactions on Information Systems

ACM
2 Penn Plaza, Suite 701
New York, NY 10121-0701
Tel.: (212) 869-7440
Fax: (212) 869-0481

TOIS Home Page: <http://tois.acm.org/>

Editor-in-Chief

Jamie Callan Carnegie Mellon University, USA / <http://www.cs.cmu.edu/~callan/>

Associate Editors

Ricardo Baeza-Yates Yahoo! Research, Chile / <http://www.baeza.cl>
Tat-Seng Chua National University of Singapore, Singapore / <http://www.comp.nus.edu.sg/~chuats/>
Maarten de Rijke University of Amsterdam, The Netherlands / <http://staff.science.uva.nl/%7Emdr/>
Norbert Fuhr University of Duisburg-Essen, Germany / <http://www.is.informatik.uni-duisburg.de/staff/fuhr.html>
Ee-Peng Lim Singapore Management University, Singapore / <http://www.sis.smu.edu.sg/faculty/infosys/eplim.asp>
Tie-Yan Liu Microsoft Research Asia, China / <http://research.microsoft.com/en-us/people/tyliu/>
Donald Metzler Google, USA / <http://don-metzler.net/web/home.html>
Alistair Moffat University of Melbourne, Australia / <http://cs.mu.oz.au/~alistair/>
Douglas W. Oard University of Maryland, USA / <http://www.glue.umd.edu/~oard>
Edie Rasmussen University of British Columbia, Canada / <http://www.slais.ubc.ca/people/faculty/faculty-bio/rasmussen-bio.htm>
Stefan Rueger The Open University, UK / <http://kmi.open.ac.uk/people/stefan/>
Fabrizio Sebastiani Consiglio Nazionale delle Ricerche, Italy / <http://nmis.isti.cnr.it/sebastiani/>
Luo Si Purdue University, USA / <http://www.cs.purdue.edu/homes/lisi/>
John Tait Information Retrieval Facility, Austria / <http://www.johntait.net/>
Jaime Teevan Microsoft Research, USA / <http://research.microsoft.com/en-us/um/people/teevan/>
Ji-Rong Wen Microsoft Research Asia, China / <http://research.microsoft.com/en-us/um/people/jrwen/>
Ryen White Microsoft Research, USA / <http://research.microsoft.com/en-us/um/people/ryenw/>
ChengXiang Zhai University of Illinois at Urbana-Champaign, USA / <http://www.faculty.cs.uiuc.edu/~czhai>
Yi Zhang University of California Santa Cruz, USA / <http://users.soe.ucsc.edu/%7Eyiz/>
Justin Zobel University of Melbourne, Australia / <http://www.cs.mu.oz.au/%7Ejz/>

Assistant to the Editor-in-Chief

Dana Houston Carnegie Mellon University / dhouston@cs.cmu.edu

Headquarters Journals Staff

Laura Lander Journal Manager
Irma Strolia Editorial Assistant
Media Content Marketing Production

The ACM Transactions on Information Systems (ISSN:1046-8188) is published quarterly in Spring, Summer, Fall, and Winter by the Association for Computing Machinery (ACM), 2 Penn Plaza, Suite 701, New York, NY 10121-0701. Spring 2013. Periodicals class postage paid at New York, NY 10001, and at additional mailing offices. Printed in the U.S.A. POSTMASTER: Send address changes to ACM Transactions on Information Systems, ACM, 2 Penn Plaza, Suite 701, New York, NY 10121-0701.

For manuscript submissions, subscription, and change of address information, see inside backcover.

Copyright ©2013 by the Association for Computing Machinery (ACM). Permission to make digital or hard copies of part or all of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. Copyrights for components of this work owned by others than ACM must be honored. Abstracting with credit is permitted. To copy otherwise, to republish, to post on servers, or to redistribute to lists, requires prior specific permission and/or a fee. Request permission to republish from: Publications Department, ACM, Inc. Fax +1 212-869-0481 or email permissions@acm.org.



**Association for
Computing Machinery**

Advancing Computing as a Science & Profession

For other copying of articles that carry a code at the bottom of the first or last page or screen display, copying is permitted provided that the per-copy fee indicated in the code is paid through the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

ACM Transactions on Information Systems

<http://tois.acm.org/>

Guide to Manuscript Submission

Submission to the *ACM Transactions on Information Systems* is done electronically through <http://acm.manuscriptcentral.com>. Once you are at that site, you can create an account and password with which you can enter the ACM Manuscript Central manuscript review tracking system. From a drop-down list of journals, choose *ACM Transactions on Information Systems* and proceed to the Author Center to submit your manuscript and your accompanying files.

You will be asked to create an abstract that will be used throughout the system as a synopsis of your paper. You will also be asked to classify your submission using the ACM Computing Classification System through a link provided at the Author Center. For completeness, please select at least one primary-level classification followed by two secondary-level classifications. To make the process easier, you may cut and paste from the list. Remember, you, the author, know best which area and sub-areas are covered by your paper; in addition to clarifying the area where your paper belongs, classification often helps in quickly identifying suitable reviewers for your paper. So it is important that you provide as thorough a classification of your paper as possible.

The ACM Production Department prefers that your manuscript be prepared in either LaTeX or Ms Word format. Style files for manuscript preparation can be obtained at the following location: <http://www.acm.org/publications/submissions>. For editorial review, the manuscript should be submitted as a PDF or Postscript file. Accompanying material can be in any number of text or image formats, as well as software/documentation bundles in zip or tar-gzipped formats.

Questions regarding editorial review process should be directed to the Editor-in-Chief. Questions regarding the post-acceptance production process should be addressed to the Journal Manager, Laura Lander, at lander@hq.acm.org.

Subscription, Single Copy, and Membership Information.

Send orders to:

ACM Member Services Dept.
General Post Office
PO Box 30777
New York, NY 10087-0777

For information, contact:

Mail: ACM Member Services Dept.
2 Penn Plaza, Suite 701
New York, NY 10121-0701
Phone: +1-212-626-0500
Fax: +1-212-944-1318
Email: acmhelp@acm.org
Catalog: <http://www.acm.org/catalog>

Subscription rates for *ACM Transactions on Information Systems* are \$51 per year for ACM members, \$46 for students, and \$220 for nonmembers. Single copies are \$18 each for ACM members and \$40 for nonmembers. Your subscription expiration date is coded in four digits at the top of your mailing label; the first two digits show the year, the last two show the month of expiration.

Notice to Past Authors of ACM-Published Articles. ACM intends to create a complete electronic archive of all articles and/or other materials previously published by ACM. If you have written a work that was previously published by ACM in any journal or conference proceedings prior to 1978, or any SIG Newsletter at any time, and you do NOT want this work to appear in the ACM Digital Library, please inform permission@acm.org, stating the title of the work, the author(s), and where and when published.

About ACM. ACM is the world's largest educational and scientific computing society, uniting educators, researchers and professionals to inspire dialogue, share resources and address the field's challenges. ACM strengthens the computing profession's collective voice through strong leadership, promotion of the highest standards, and recognition of technical excellence. ACM supports the professional growth of its members by providing opportunities for life-long learning, career development, and professional networking.

Visit ACM's Web site: <http://www.acm.org>.

Change of Address Notification. To notify ACM of a change of address, use the addresses above or send an email to coa@acm.org.

Please allow 6-8 weeks for new membership or change of name and address to become effective. Send your old label with your new address notification. To avoid interruption of service, notify your local post office before change of residence. For a fee, the post office will forward 2nd- and 3rd-class periodicals.