



# Today's Research Driving Tomorrow's Technology

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& Guide to Computing Literature, please visit  
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# 2017



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Association for  
Computing Machinery

# Knowledge That Inspires

ACM was established when computer science was in its infancy. We've published the work of the early pioneers whose ideas have had a profound effect on the world around us, shaping the technology that is now part of our everyday lives.

Today, ACM continues to bring the discoveries of those working at the forefront of computer science to the attention of the world. Through our conferences, journals, magazines, newsletters and books, we provide the fuel that inspires tomorrow's innovations.



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## ABOUT ACM

More than 60 years of history. Over 110,000 members in 190 countries worldwide. 37 Special Interest Groups covering the breadth of computer science and IT.  
*Welcome to ACM.*

# Facilitating Innovation & Discovery

For over 60 years, ACM has been the place where the best minds in computer science have come to meet, share ideas, publish their work and change the world.

In addition to ACM's world-renowned publishing program, our range of Special Interest Groups (SIGs) convene hundreds of conferences and workshops each year, providing professionals, researchers, and academics alike with opportunities to meet and discuss the latest advances across the spectrum of computer science.

ACM is also highly active in furthering the future of computing, helping to shape educational curricula and policy across the world, and awarding — among other prestigious awards and prizes — the sought-after A.M. Turing Award that recognizes the key advances in computing and IT and which comes with a \$1,000,000 prize provided by Google.

All of this is made possible by our dedicated and passionate members and fellows, many of whom volunteer their time to serve on our boards, driving all of our activities and ensuring that ACM truly is the voice of the global computing community.



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## ABOUT THE ACM DIGITAL LIBRARY

The ACM Digital Library is the premier source for computing literature. Over 450,000 articles. Over 7,500 conference proceedings. Content from over 89 journals, magazines, and newsletters. All with a curated index containing over 2.6 million citations to the world's computing literature.

# Our Complete Collection

The world's most renowned computer scientists, scholars, researchers, and practitioners volunteer their time to help ACM provide the global computer science community with the highest-quality resources — from conferences and workshops to magazines, newsletters, and many of the field's highest-impact scholarly journals — all through subscription to the ACM Digital Library.

Each year over 24,000 newly published articles from our journals, magazines and newsletters, as well as over 500 annual conference volumes — representing nearly 20% of the world's scholarly computing literature — are added to the complete full-text archive of over 450,000 ACM articles dating back to 1951.

### The greatest minds

ACM publishes research from the leading names in computing, much of which has proven crucial to developing technology in widespread use today — including key achievements from Vint

Cerf, Shafi Goldwasser, Silvio Micali, Charles Thacker, Marvin Minsky, and other prominent researchers recognized by the A.M. Turing Award.

The next major technological advances will stem from research that is being undertaken today and published within the ACM Digital Library, covering fields as diverse as computer graphics, networking, gaming, artificial intelligence, and beyond.

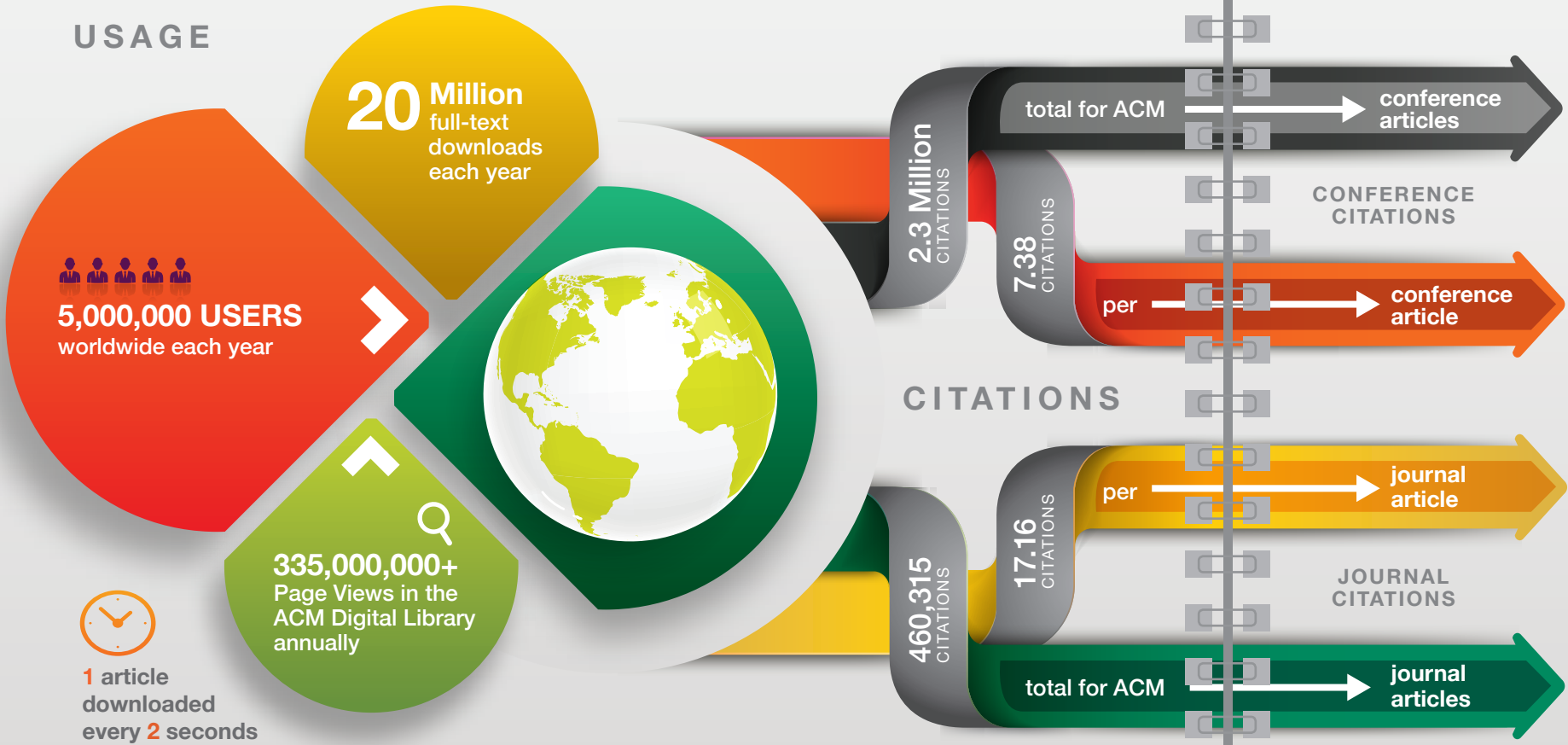
### Covering the breadth of computing

ACM's 37 Special interest Groups (SIGs) represent virtually every major area of computing, from Artificial Intelligence to the Web. Most SIGs publish regular newsletters with a practical focus, and sponsor a number of conferences and workshops. The ACM Digital Library includes the complete archive of each SIG's publications, proceedings from relevant events, and supporting multimedia materials.

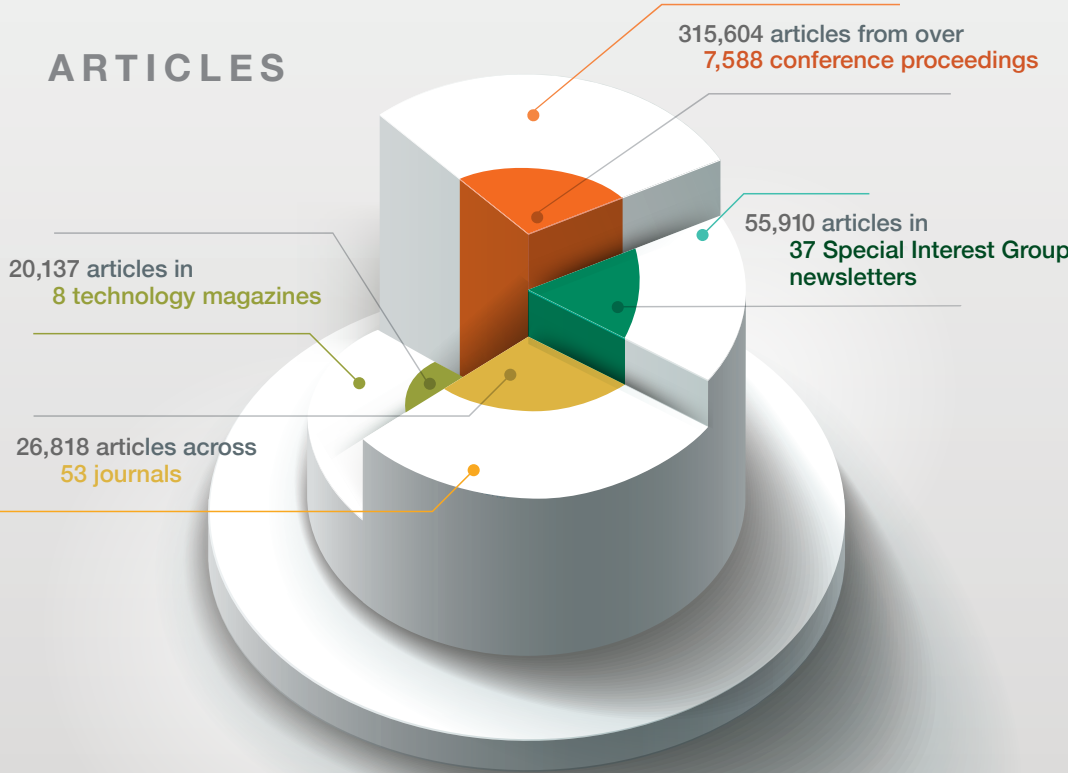
KEY FACTS ABOUT THE DIGITAL LIBRARY

Every 2 seconds, a researcher, practitioner, educator or student downloads an article from the ACM Digital Library. Our users come from over 190 countries around the world and rely heavily on the ACM Digital Library in their daily work.

Global Impact



ARTICLES





## KEY FEATURES OF THE DIGITAL LIBRARY

Our complete collection of journals, conference proceedings, magazines and newsletters also includes an integrated bibliography covering the entire field.

# A Cutting Edge Platform

### Sophisticated Searching

Powerful search tools and sophisticated interlinking of records offer users unparalleled access and insight into emerging trends.

### Variety of Authentication Options

Access authenticated by IP address, Shibboleth, OpenAthens, Domain Name, and Remote Access via ACM Web Account.

### Remote Access

Now offering the ability to access remotely by utilizing an ACM Web Account tethered to an institution's IP authentication system.

### Mobile Access

Smartphone and tablet apps allow users to search, browse, save, read and share content from the ACM Digital Library, wherever and whenever suits them.

### Personalization

Users can build personalized views of ACM Digital Library content, including binders for quicker access to the information they need and the ability to integrate conference schedules seamlessly with calendars.

### Easy Citation Export

One-click export of citations into a variety of formats such as BibTeX, EndNotes and ACM Ref.

### Computing's Most Comprehensive Bibliographic Index

*The Guide to Computing Literature* is included in the ACM Digital Library — a continually updated index containing over 2.6 million publication records from over 5,000 publishers worldwide.

### Author and Article Bibliometrics

Detailed metrics on downloads and citations are available for authors and articles.

### Institutional Profile Pages

Publication data aggregated at the institutional level to provide a single snapshot of an entire institution's publication history in the field of computing, including the combined usage and citation statistics for all authors affiliated with that institution.

### Multimedia

A variety of multimedia file types are included in the ACM Digital Library relating to computer graphics, animation, and entertainment computing.

IMAGE BY EVERYTHING POSSIBLE





## ACM CONFERENCES

More than any other field, conferences are a vital publication venue in computing — this is where the most cutting edge research is presented and discussed.

# Reports From the Front-Line

ACM and its Special Interest Groups convene more than 170 events each year, ranging in size and scope from the world-renowned KDD and SIGGRAPH conferences to focused symposia serving niche research communities.

Proceedings from each of these events are included in the ACM Digital Library, along with more than 8,600 supplementary files — representing a unique wealth of knowledge through the ACM Digital Library.

### A selection of key ACM SIG events:

- The International Conference and Exhibition on Computer Graphics and Interactive Techniques
- The International Conference on Supercomputing
- The ACM Conference on Human Factors in Computing Systems

- Design Automation Conference
- The ACM SIGKDD Conference on Knowledge Discovery and Data Mining
- The International Conference on Management of Data
- The ACM International Conference on Multimedia
- International ACM SIGIR Conference on Research and Development in Information Retrieval
- The International Conference on Software Engineering
- The ACM Symposium on Operating Systems Principles

**More information about ACM Conference Proceedings can be found at [dl.acm.org/events.cfm](http://dl.acm.org/events.cfm)**

ACM JOURNALS AND MAGAZINES

Our Journal Editors are thought leaders in their fields, and our emphasis on rapid publication ensures minimal delay in communication of exciting new ideas and discoveries.

Leading Research, News and Opinion

Communications of the ACM

cacm.acm.org

DL Citation Count: 182,234 • Impact Factor: 3.301

#1

by Citations in CS Software Engineering

#2

by Impact Factor in CS Software Engineering

#2

by Citations in CS Hardware & Architecture

#3

by Citations in CS Theory & Methods

Communications of the ACM is the leading print and online magazine for the computing and information technology fields. Industry leaders use Communications as a platform to present and debate various technology implications, public policies, engineering challenges, and market trends.

Computing Surveys

surveys.acm.org

DL Citation Count: 47,917 • Impact Factor: 5.243

#2

by Impact Factor in CS Theory & Methods

Computing Surveys, a comprehensive collection of survey papers and symposia, provides a guided tour of such computing disciplines as multimedia, artificial intelligence, software engineering, and many more.



Graphics (TOG)

tog.acm.org

DL Citation Count: 78,690 • Impact Factor: 4.218

#1

by Impact Factor in CS Software Engineering

#2

by Citations in CS Software Engineering

Leading researchers discuss new developments in computer-aided design, image generation, rendering, modeling, and more in TOG.

Journal of the ACM

jacm.acm.org

DL Citation Count: 85,594 • Impact Factor: 1.803

#5

by Citations in CS Hardware & Architecture

#5

by Citations in CS Software Engineering

#6

by Citations in CS Theory & Methods

Journal of the ACM serves as an international venue for careful presentation of theoretical research in core computing areas, such as: complex algorithms, computer architecture, system modeling, database theory, and data structures.

53 Scholarly Peer-Reviewed Journals  
8 Technology Magazines

Citation and Impact Factor Journal Ranking Statistics ??? Journal Citation Reports® / ©Thomson Reuters  
DL Citation counts as of January ???



## ACM JOURNALS AND MAGAZINES

ACM publishes high-quality content in virtually every area of computing: from the practical to the theoretical, and from established to emerging fields.

# Broad Coverage of Topics

### ACM Magazines

- Communications of the ACM
- Computers in Entertainment
- eLearn
- Inroads
- Interactions
- acmqueue
- Ubiquity
- XRDS: The ACM Magazine for Students

### Journals and Transactions

- Journal of the ACM
- Journal of Data and Information Quality
- Journal of Experimental Algorithmics
- Journal on Emerging Technologies in Computing Systems
- Journal on Computing and Cultural Heritage
- Autonomous and Adaptive Systems
- Accessible Computing
- Architecture and Code Optimization
- Algorithms
- Asian Language and Low-Resource Information Processing
- Applied Perception
- Cyber-Physical Systems
- Economics and Computation
- Embedded Computing Systems
- Interactive Intelligent Systems
- Information and System Security
- Intelligent Systems and Technology
- Knowledge Discovery from Data
- Management Information Systems
- Computing Education
- Computer-Human Interaction



- Computational Logic
- Computer Systems
- Computational Theory
- Design Automation of Electronic Systems
- Database Systems
- Graphics
- Information Systems
- Internet Technology
- Modeling and Computer Simulations
- Multimedia Computing and Communications
- Modeling and Performance Evaluation of Computing Systems
- Mathematical Software
- Parallel Computing
- Programming Languages and Systems
- Storage
- Software Engineering and Methodology
- Sensor Networks
- Reconfigurable Technology and Systems
- Spatial Algorithms and Systems
- The Web

**More information about these ACM titles can be found at [acm.org/publications/journals](http://acm.org/publications/journals)**

### Affiliated publications

In addition to resources published by the ACM and its Special Interest Groups, the ACM Digital Library incorporates full text access to a curated list of high quality journals published by third parties. Please note that archival and perpetual access rights do not apply to Affiliated Publications.

- Computational Linguistics
- Evolutionary Computation
- International Journal of Network Management
- Journal of Computing Sciences in Colleges
- The Journal of Machine Learning Research
- Journal of Usability Studies
- Linux Journal
- Personal and Ubiquitous Computing
- Proceedings of the VLDB Endowment
- The VLDB Journal — International Journal On Very Large Databases



## ACM SIG NEWSLETTERS

In addition to conference proceedings and journals publishing the latest research in their fields, many ACM Special Interest Groups publish regular technical newsletters.

# Topical Highlights

The following list highlights some of the subjects covered in these publications:

- Accessibility and Computing
- Ada Programming Language
- Algorithms and Computational Theory
- Applied Computing
- Artificial Intelligence
- Bioinformatics, Computational Biology, and Biomedical Informatics
- Computer Architecture
- Computer Graphics and Interactive Techniques
- Computer-Human Interaction
- Computer Science Education
- Computers and Society
- Data Communication
- Design Automation
- Design of Communication
- Electronic Commerce
- Evolutionary Computation
- Fortran Forum Newsletter
- Genetic and Embedded Systems
- High Performance Computing

- Hypertext, Hypermedia and Web
- Information Retrieval
- Information Technology Education
- Knowledge Discovery in Data
- Management Information Systems
- Management of Data
- Measurement and Evaluation
- Microarchitecture
- Mobility of Systems, Users, Data and Computing
- Multimedia Systems
- Operating Systems
- Programming Languages
- Security, Audit and Control
- Simulation and Modeling
- Software Engineering
- Spatial Information
- Symbolic and Algebraic Manipulation
- University and College Computing Services

**More information about ACM SIG  
Newsletters can be found at [acm.org/sigs](http://acm.org/sigs)**

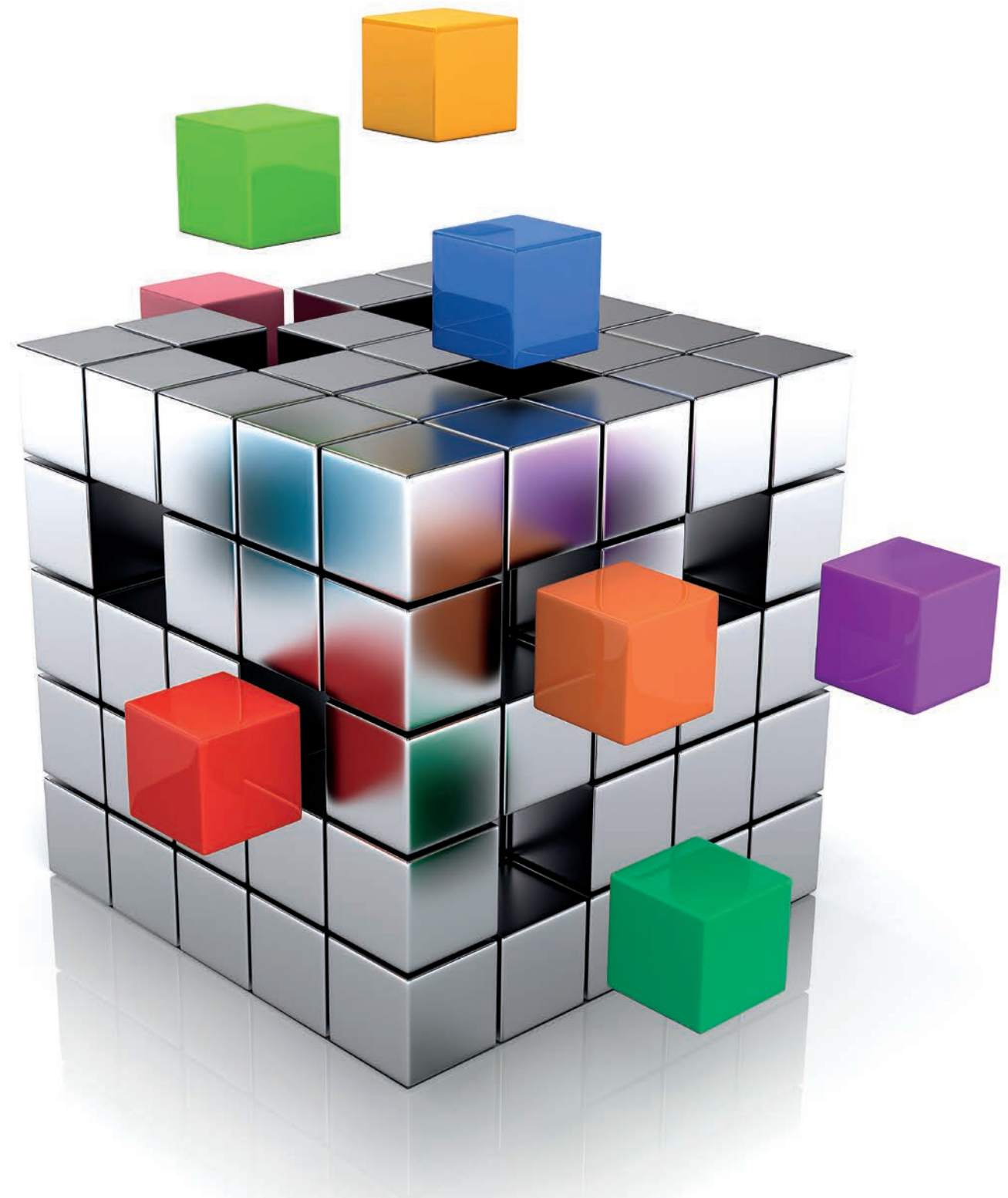


IMAGE BY SASHKIN



## ACM BOOKS

ACM Books is an all new series of high quality, advanced level books for the computer science community.

*Editor in Chief: M. Tamer Ozsu, University of Waterloo*

# In-Depth Insights

Books in the series cover the full spectrum of computer science, with an initial focus on four types of texts: graduate level textbooks, research monographs, practitioner texts, and books focusing on the history and social impact of computing.

ACM Books will be available to institutions as Collections. The one-time purchase of each Collection provides perpetual access via the ACM Digital Library to all titles within the Collection. Subject areas currently include the following fields of research:

- Algorithms & complexity
- Bioinformatics
- Cloud computing
- Computer graphics
- Computer networks
- Data management
- History of computing
- Human-centered computing
- Information retrieval & digital libraries
- Machine learning & data mining
- Mobile computing

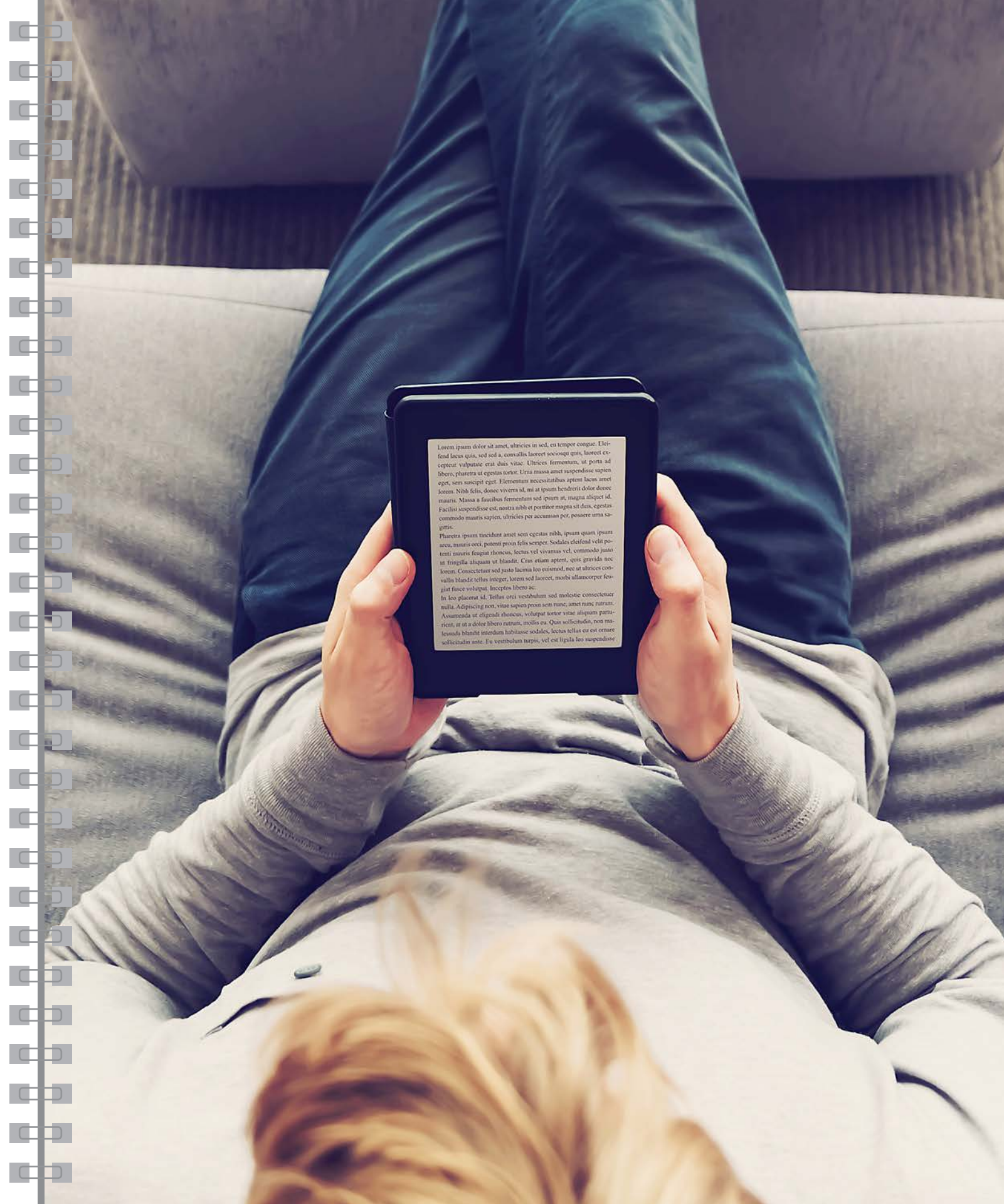


- Multimedia systems
- Parallel computing
- Programming languages
- Security & privacy
- Social computing
- Software engineering
- Web technology & science

**For more information, please visit  
[books.acm.org](http://books.acm.org)**



IMAGE BY MELPOMENE





## ACM COMPUTING REVIEWS

The largest and most comprehensive database of reviews covering computing literature is an essential companion product to the ACM Digital Library.

# Unparalleled Access

The ACM Computing Reviews database provides practitioners, researchers, educators, and students with an unparalleled resource, creating a unique roadmap to the vast ocean of scholarly and practical information in one of the fastest moving fields of knowledge today.

Every year, over 8,000 books, 2,500 dissertations, 20,000 journal articles from over 750 journal titles and over 30,000 conference papers from over 500 conferences are published in the field of computing. This does not include the thousands of master's theses, technical reports, technical manuals, working papers, blog entries, presentations, or other materials published each year. Filtering this vast quantity of information is difficult and there are very few high quality resources available to help individuals to do this well.

Computing Reviews contains the following:

- Most comprehensive coverage of the computing literature
- Expert reviews from over 1,000 subject matters

- Approximately 35,000 reviews covering books, journal articles, and conference proceedings from different publishers and hundreds of thousands of publications
- Commentary from authors and reviewers of reviewed materials
- Powerful search tools
- Searchable archives dating back to 1985
- New reviews published on site daily
- Alerting profiles
- RSS feeds of partial reviews
- Fully indexed and integrated with the ACM Digital Library full text database and *Guide to Computing Literature* bibliographic database
- Affordable pricing
- Simplified IP authentication for institutional subscribers
- Edited by a panel of leading experts

**For more information, please visit [computingreviews.com](http://computingreviews.com)**

IMAGE BY EUGENE SERGEEV





## SUPPORTING AUTHORS

Today's research is the foundation that tomorrow's advances will be based on, and ACM is committed to helping authors ensure their work is discoverable by researchers the world over.

# Reach, Access, and Impact

### Author rights

In recognition of the challenges facing authors in publicizing, preserving, and reusing their published research, ACM's publication program incorporates a series of liberal author rights. Authors who publish with ACM can:

- Post the **peer-reviewed pre-print** of their paper to their personal website and institutional repository
- Add a **single-click link to their final published paper** with the ACM Author-izer tool, enabling readers to access their work for free
- **Re-use any portion of their published work** with the inclusion of a citation and DOI link back to version of record
- Refer to complete statement on **Author-retained Rights**: [acm.org/publications/policies/copyright-policy#permanent-rights](https://www.acm.org/publications/policies/copyright-policy#permanent-rights)

**For more information, please visit [authors.acm.org](https://authors.acm.org)**

### Open access

In many fields of research and scholarship, open access (OA) is an established route to published research — and funders, institutions, and governments across the world increasingly expect research outputs to be freely available to the general public through open access publications and institutional repositories.

To help researchers meet this need, all ACM journals and conference proceedings volumes offer an author-pays option to ensure that their work is freely available, immediately upon publication, via the payment of a one-time Article Processing Charge (APC).

ACM's open access policy includes a completely transparent approach to APC revenues. To prevent the practice dubbed 'double-dipping' by the community — retaining OA revenue that has been charged for content that is also paid for by subscriptions — ACM distributes 100% of hybrid open access revenues to its academic subscriber base.

**For more information, please visit [librarians.acm.org/policies](https://librarians.acm.org/policies)**

IMAGE BY RA2STUDIO





## SUPPORTING THE INFORMATION COMMUNITY

ACM is an active partner in the library and research community, helping to lead several key industry initiatives dedicated to providing and preserving access to research.

# A Leader in Scholarly Communication

### CHORUS

CHORUS (Clearinghouse for the Open Research of the United States) provides a service that interfaces with publishers' manuscript submission systems to help authors identify their funding sources as part of the publishing process, and provide readers with toll-free access to federally funded research. A representative from ACM serves on the board of directors.



**For more information,  
please visit [chorusaccess.org](http://chorusaccess.org)**

### CrossRef

CrossRef serves as the Digital Object Identifier (DOI) registration agency for scholarly and professional publications, seamlessly connecting researchers with the information they need through DOIs. A representative from ACM serves on the board of directors.



**For more information,  
please visit [crossref.org](http://crossref.org)**

### Digital preservation through Portico & CLOCKSS

All ACM Digital Library content is preserved for future generations of researchers through partnerships with Portico and CLOCKSS.

ACM's partnership with Portico ensures that the full content of the ACM Digital Library will transition to new formats as older programs and standards become obsolete, providing a smooth transition for users and guaranteeing that the most important computing research is perpetually available. A representative from ACM serves on the Portico advisory committee.



PORTICO

**For more information,  
please visit [portico.org](http://portico.org)**

CLOCKSS protects and preserves the contents of the ACM Digital Library through a secure archive system distributed across the world, ensuring that content remains as useful and as widely available as possible in the long term.



**For more information,  
please visit [clockss.org](http://clockss.org)**

### ORCID

The ORCID (Open Researcher and Contributor ID) initiative provides researchers with unique IDs, enabling them to distinguish their outputs from those of authors with similar names — and it provides readers the ability to easily discover an author's publication history, tracing the evolution of ideas and research paths through the growing body of published works. A representative from ACM serves on the board of directors.



**For more information,  
please visit [orcid.org](http://orcid.org)**



## PURCHASING AND ACCESSING

The ACM Digital Library represents the core literature in computing, and we are committed to making access to ACM's complete portfolio of publications as cost-effective as possible.

# A Global Resource

The breadth of content available in the ACM Digital Library, and highly competitive pricing — lower than all other top-tier scholarly publishers — mean that ACM is widely considered to be the most affordable scholarly publisher in the world.

Subscription packages and access options are available to suit all sizes of academic, corporate and governmental organizations, based on a number of factors including Carnegie Classification, usage and corporate revenue.

### Pricing and free trials

For the latest pricing for your organization, please visit [librarians.acm.org](http://librarians.acm.org) or contact [dl-info@acm.org](mailto:dl-info@acm.org). To arrange a free trial, contact [DL-Trial@acm.org](mailto:DL-Trial@acm.org).

### Local Representatives

For information on ACM's global network of subscription agents, please contact [dl-info@hq.acm.org](mailto:dl-info@hq.acm.org)

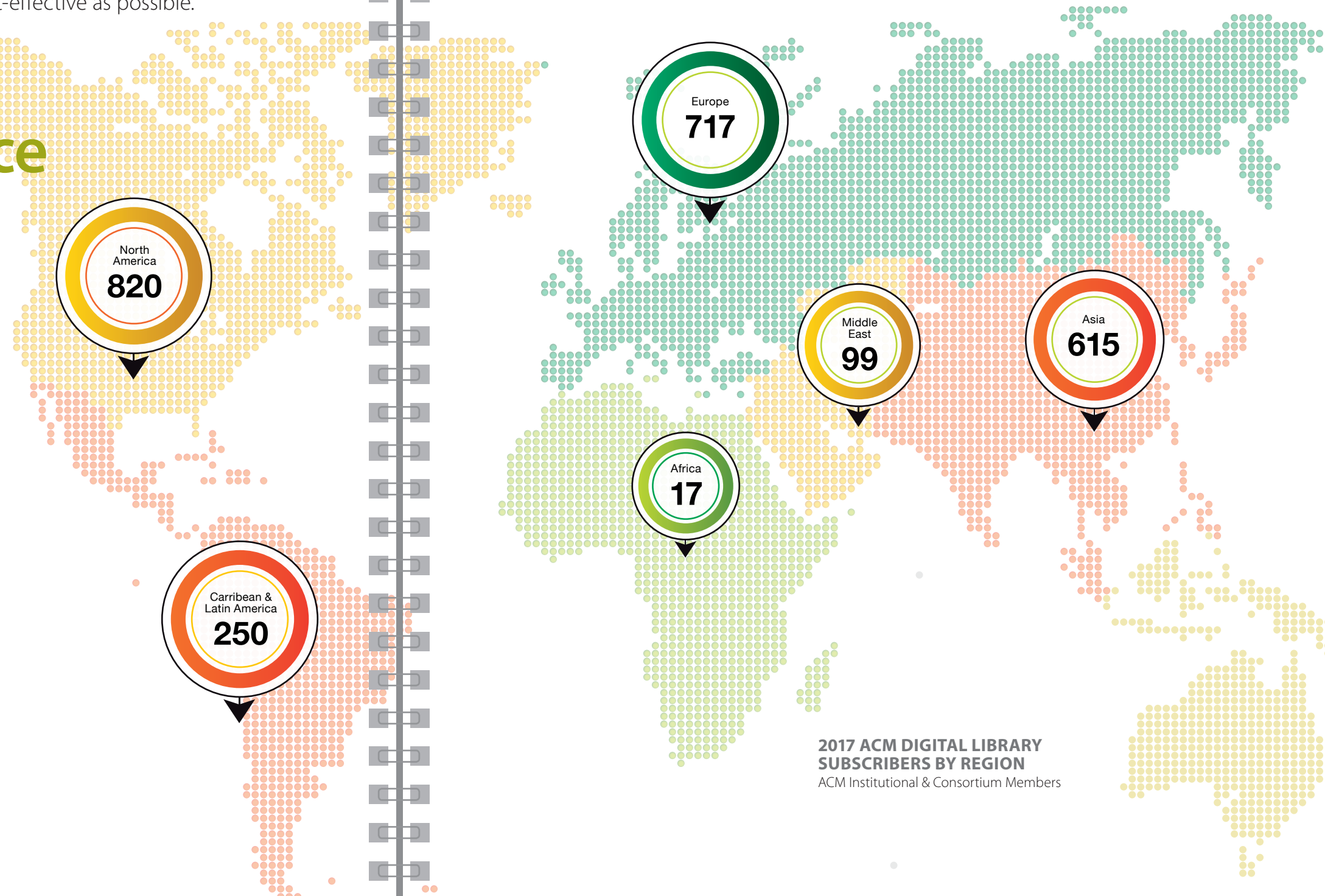
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