

## Why GeoInformatica?

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- Wide Audience:** Articles in the journal were downloaded over 32,000 times in 2015
- Varied Content:** Submission of expanded workshop and conference papers is encouraged
- Timely Review:** Average time to first decision was 55 days in 2015
- Submission Flexibility:** Option to publish open access

*GeoInformatica* is an international journal publishing papers on advances in Computer Science for Geographic Information Systems (GIS). It is included in the Springer package available in over 7,700 institutions world-wide. Its articles are downloaded and read around the world including Asia-Pacific (37%), Europe (29%), North America (20%), Latin America (6%), Middle East (5%) and Africa (3%). In 2015 alone, its articles were downloaded over 32,000 times. The journal's articles are indexed by popular indexing services. In a major peer review published, *GeoInformatica* is ranked in the top tier of journals in the field of GIS.

**Abstracted/Indexed** in Science Citation Index Expanded (SciSearch), Journal Citation Reports/Science Edition, SCOPUS, Google Scholar, EBSCO, CSA, Academic OneFile, Academic Search, ACM Digital Library, ASFA, Computer Abstracts International Database, Computer Science Index, CSA Environmental Science, Current Contents/Engineering, Computing and Technology, Current Geographical Publications, DBLP, EI-Compendex, Gale, GeoArchive, Geobase, io-port.net, OCLC, Referativnyi Zhurnal (VINITI), SCImago, STMA-Z, Summon by ProQuest.

*GeoInformatica* welcomes new submissions which advance Computer Science for GIS including extended versions of papers published in conference proceedings (e.g., ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems, International Symposium on Spatial and Temporal Databases, International Conference on Geographic Information Science) with at least a third new material and intellectual contributions. Compared to conference submissions, papers submitted to a journal receive more detailed review and may be revised to address reviewers' concerns, giving authors the chance to improve the quality of their manuscript (Source: M. Y. Vardi, Conference vs. Journals in Computing Research, Communications of the ACM, 52(5), 2009, <http://doi.acm.org/10.1145/1506409.1506410>). Relative to conference proceedings, journals, e.g., *GeoInformatica*'s page limit is high enough to accommodate an overview of related literature as well as of a broader set of results, e.g., proofs, experimental observations. Thus, the journal version of a publication is often cited more than the shorter conference version. Google Scholar shows over 100 citations each for more than two dozen articles published in *GeoInformatica*.

Annually, *GeoInformatica* receives over a hundred submissions and publishes over thirty articles across four issues. It also publishes special sections on hot topics as well as best papers from GIS conferences and symposia. All articles are published online within two to three weeks of acceptance. The Online First (OF) service lets users access peer reviewed articles well before print publication. With Online First, papers are published in electronic form as OF papers shortly after proofs have been corrected by the author and returned to Springer. These articles are searchable and citable by their DOI (Digital Object Identifier) and hence significantly reduce the time it takes for critical discoveries to reach the research community.

A new content-sharing initiative **SharedIt** enables authors and subscribers to post links to free-to-read versions of primary research article anywhere, including social media platforms, repositories, websites, scholarly collaborative networks and via emails.

*GeoInformatica*'s continuing popularity in the GIScience community is proved by various metrics, including impact factor. In 2016, *GeoInformatica* reached an impact factor of 2.392, exceeding the impact factor of many reputable journals including, ACM Transactions of Information Systems (IF: 2.312), ACM Transactions on Knowledge Discovery from Data (IF: 1.895) and Journal of the ACM (IF: 1.855). *GeoInformatica* also ranked among the top GIScience journals ahead of venerable IEEE Transactions Geoscience and Remote Sensing in a 2008 study on GIScience Journals Ranking and Evaluation based on not only impact factor but also reputation.



### Editors-in-Chief:

- Shashi Shekhar**  
University of Minnesota, USA
- Elisa Bertino**  
Purdue University, USA
- Chris Brunsdon**  
National University of Ireland,  
Maynooth, Ireland

Full Journal Title	Journal Impact Factor (2016)
...	...
International Journal of Geographical Information Science	2.502
<b>GeoInformatica: An International Journal on Advances of Computer Science for Geographic Information Systems</b>	<b>2.392</b>
ACM Transactions on Information Systems	2.312
ACM Transactions on Knowledge Discovery From Data	1.895
Journal of the ACM	1.855
ACM Transactions on Database Systems	1.52

### "Thomson Reuters InCites Journal Citation Reports" for 2016 (search Keywords: "computer science", "information systems")

Journal	Rank
International Journal of Geographic Information Science	1
International Journal of Remote Sensing	1
Photogrammetric Engineering & Remote Sensing (PE&RS)	1
Computers and Geosciences	1
Transactions in GIS	1
<b>GeoInformatica</b>	<b>1</b>
Geomatica	1
Cartography and Geographic Information Sciences	2
Environment and Planning B	2
IEEE Transactions Geoscience and Remote Sensing	2

Claude Caron, et al., "Ranking of GIScience Journals from GIScience Journals Ranking and Evaluation: An International Delphi Study", Transactions in GIS, 2008, 12(3), pp: 293-321, Publisher: Wiley Online Library.

## Societal Context:

The last 15 years have witnessed significant//tremendous advances in mobile technology, much of it accessible to everyday citizens///users. Smartphones, mobile apps, and on-demand services are but a few of the transformative innovations disrupting traditional business models and improving people's lives. GPS users now number over one billion, exceeding the number of Microsoft Windows users. On the horizon are unmanned aerial vehicles, self-driving vehicles, and ever more sophisticated computing tools for harnessing Big Data. While various disciplines have contributed to these new advances, spatial computing and GIS techniques are no doubt playing a key role here. Localization is a fundamental issue for smartphones, ride-hailing services, unmanned aerial vehicles, and connected and self-driving vehicles. Location information and location privacy are essentials of location-based services. Check-in recommendations are a key function of mobile social networks. The study of spatial big data, such as GPS traces of vehicles and global climate data, helps researchers better understand human mobility patterns as well as Earth climate change. In 2011 an influential McKinsey report on big data included a chapter on location-based big data.

To acknowledge the growth, the Association of Computing Machinery (ACM) formed SIG-Spatial, a special interest group, whose annual meeting attracts over 300 attendees. In 2012, the Computing Research Association's Computing Community Consortium organized a multi-sector multi-disciplinary workshop at the National Academies titled "From GPS and Virtual Globes to Spatial Computing 2020" to assess the state of the art and catalyze visionary new research. A summary of the workshop report appeared in the Communications of the ACM in January 2016 as the cover article titled "Spatial Computing." In summary, there is strong interest within GIS-related fields as well as other disciplines in understanding these new spatial technologies. Therefore, we believe it is time to develop the second edition of the encyclopedia and include entries on these emerging topics.

## Aim & Scope:

GeoInformatica is located at the confluence of two rapidly advancing domains: Computer Science and Geographic Information Science; nowadays, Earth studies use more and more sophisticated computing theory and tools, and computer processing of Earth observations through Geographic Information Systems (GIS) attracts a great deal of attention from governmental, industrial and research worlds.

Geoinformatica aims to promote the most innovative results coming from the research in the field of computer science applied to geographic information systems. It provides an effective forum for disseminating original and fundamental research and experience in the rapidly advancing area of the use of computer science for spatial studies.

As indicated by its subtitle, GeoInformatica focuses on Advances in Computer Science for GIS. Usually reviewers expect computer science advances for GIS to be general, e.g., applicable to more than one application domain. Reviewers often find the following types of papers outside GeoInformatica's scope:

- (a) application of a previously known computer science concept or application of software to a new GIS problem, and
- (b) computer science advances with a tenuous connection to GIS problems.

Many topics in the field of computer science involve a very specific approach in the domain of geographic information systems; therefore, the topics that are addressed include, but are not limited to:

**Spatial Modeling:** spatial data models integrating the geometric and semantic aspects of geographic information, requirements analysis for GIS applications, GIS performance modeling and evaluation, qualitative aspects of geographic information, impact of spatial information handling on computing models.

**Spatial Databases:** spatio-temporal data structures, spatial data storage and indexing techniques, query processing and optimization, spatial database knowledge discovery, GIS metadata, multidatabase GIS.

**Human-Computer Interfaces for GIS:** graphic user interfaces for GIS, graphic browser interfaces for navigating spatial databases, multimedia applied to GIS, virtual reality for representing spatial data.

**Digital Cartography at the Core of GIS:** multidimensional digital map display technology, cartographic generalization for multiscale representation, computer-aided cartographic design, automated map aesthetics management, dynamic cartography, animated map technology.

**Space Imagery in GIS:** remote sensing, spatial image processing, shape recognition from aerial and satellite images, spatial information measurement and retrieval.

**Parallelism, Distribution and Communication through GIS:** parallel, distributed processing of spatial data, client-server architecture for GIS, GIS and cooperative work, manipulation of geographic information over the Internet, interoperability among heterogeneous GIS, electronic geographic data interchange standards, concurrent and distributed spatial objects.

**Spatio-Temporal Reasoning: reasoning in GIS,** spatio-temporal knowledge processing, fuzzy spatio-temporal information, artificial intelligence in GIS, genetic and neural algorithms in GIS, moving objects within GIS, real-time GIS, active spatio-temporal objects.

## Recent Special Issues:

**Geo-social Media Analytics:** edited by Arnold Boedihardjo (Army Corps of Engineers), Feng Chen (University of Albany), Chang-Tien Lu (Virginia Tech)

**Mobile Computing Support for Geospatial Systems:** edited by Moustafa Youssef (Egypt-Japan University of Science and Technology), Petteri Nurmi (University of Helsinki), Chenren Xu (Peking University)

**Spatial Computing in Emergency Management:** edited by Yan Huang (University of North Texas, USA), Danhuai Guo (Chinese Academy of Sciences, China), Yi Liu (Institute of Public Safety Research of Tsinghua University, China), Jean-Claude Thill (University of North Carolina at Charlotte, USA), Hui Zhang (Tsinghua University, China)

**Advances in Spatio-temporal Data Analysis and Management:** edited by Feifei Li (University of Utah, USA), Kyuseok Shim (Seoul National University, Korea), Kai Zheng (Soochow University, China)

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