



CALL FOR PAPERS

Paper Submission Deadline (**extended**): May 18, 2022

The 2022 (18th) International Conference on Data Science (ICDATA)

(former International Conference on Data Mining, DMIN; merged with ABDA, Int. Conf. on Advances on Big Data Analytics)

<https://icdata.org>

July 25-28, 2022, Luxor (MGM property), Las Vegas, USA

Part of CSCE'22 – <https://american-cse.org/csce2022/>

You are invited to submit a paper for consideration. All accepted papers will be published in printed conference books/proceedings (Springer Nature, each with a unique international ISBN/ISSN). In addition, like prior years, extended versions of selected papers will appear in journals and edited research books; publishers include, Springer, Elsevier, BMC Genomics, BMC Bioinformatics, IEEE Access, and others. The Congress is composed of a number of tracks (joint-conferences, tutorials, sessions, workshops, poster and panel discussions); all will be held simultaneously, same location and dates: July 25-28, 2022. The complete list of CSCE joint conferences can be found [here](#). ICDATA is part of the Congress.

This year's Congress will be a hybrid event that combines a "live" in-person event with a "virtual" online component. We anticipate that most speakers will physically be attending (ie, most talks are expected to be face-to-face).

IMPORTANT DATES (**extended deadlines**):

This is for authors who missed the earlier deadlines. Due to numerous requests, the paper submission deadline is extended as shown below. Authors who have submitted their papers in response to earlier announcements, will receive the decision/status report of their papers according to the original announced dates. Authors who have already received a decision on their papers are to follow the instructions and the deadlines that appeared in the notification that they have already received.

May 18, 2022:	Submission of papers Full/Regular Research Papers (max of 10 pages) Short Research Papers (max of 6 pages) Abstract/Poster Papers (max of 3 pages)
May 26, 2022:	Notification of acceptance (+/- two days)
June 7, 2022:	Registration
June 20, 2022	Final papers + Copyright + Registration
July 25-28, 2022:	The 2022 International Conference on Data Science (ICDATA'22) World Congress in Computer Science, Computer Engineering, and Applied Computing (CSCE'22: Las Vegas, USA); Including all affiliated federated/joint conferences; see https://www.americancse.org/csce2022

SCOPE: Submitted papers should be related to Data Mining, Data Science, Machine Learning, Big Data and similar topics.

Topics of interest include, but are not limited to, the following:

- **Data Mining/Machine Learning Tasks**
 - Regression/Classification
 - Time series forecasting
 - Segmentation/Clustering/Association
 - Deviation and outlier detection
 - Explorative and visual data mining
 - Web mining
 - Mining text and semi-structured data
 - Temporal and spatial data mining
 - Multimedia mining (audio/video)
 - Mining "big data"
 - Others

- **Data Mining Algorithms**
 - Artificial neural networks / Deep Learning
 - Fuzzy logic and rough sets
 - Decision trees/rule learners
 - Support vector machines
 - Evolutionary computation/meta heuristics
 - Statistical methods
 - Collaborative filtering
 - Case based reasoning
 - Link and sequence analysis
 - Ensembles/committee approaches
 - Others

- **Data Mining Integration**
 - Mining large scale data/big data
 - Distributed and grid based data mining
 - Data and knowledge representation
 - Data warehousing and OLAP integration
 - Integration of prior/domain knowledge
 - Metadata and ontologies
 - Agent technologies for data mining
 - Legal and social aspects of data mining

- **Data Mining Process**
 - Data cleaning and preparation
 - Feature selection and transformation
 - Attribute discretisation and encoding
 - Sampling and rebalancing
 - Missing value imputation
 - Model selection/assessment and comparison
 - Induction principles
 - Model interpretation
 - Others

- **Data Mining Applications**
 - Bioinformatics
 - Medicine Data Mining
 - Business/Corporate/Industrial Data Mining
 - Credit Scoring
 - Direct Marketing
 - Database Marketing
 - Engineering Mining
 - Military Data Mining
 - Security Data Mining
 - Social Science Mining
 - Data Mining in Logistics
 - Others

We particularly encourage submissions of industrial applications and case studies from practitioners. These will not be evaluated using solely theoretical research criteria, but will take general interest and presentation into consideration.

- **Data Mining Software**
All aspects, modules, frameworks
- **Alternative and additional examples of possible topics include:**
 - Data Mining for Business Intelligence
 - Emerging technologies in data mining
 - Big Data
 - Computational performance issues in data mining
 - Data mining in usability
 - Advanced prediction modelling using data mining
 - Data mining and national security
 - Data mining tools
 - Data analysis
 - Data preparation techniques (selection, transformation, and preprocessing)
 - Information extraction methodologies
 - Clustering algorithms used in data mining
 - Genetic algorithms and categorization techniques used in data mining
 - Data and information integration
 - Microarray design and analysis
 - Privacy-preserving data mining
 - Active data mining
 - Statistical methods used in data mining
 - Multidimensional data
 - Case studies and prototypes
 - Automatic data cleaning
 - Data visualization
 - Theory and practice - knowledge representation and discovery
 - Knowledge Discovery in Databases (KDD)
 - Uncertainty management
 - Data reduction methods
 - Data engineering
 - Content mining
 - Indexing schemes
 - Information retrieval
 - Metadata use and management
 - Multidimensional query languages and query optimization
 - Multimedia information systems
 - Search engine query processing

- Pattern mining
- Applications (examples: data mining in education, marketing, finance and financial services, business applications, medicine, bioinformatics, biological sciences, science and technology, industry and government, ...)
- **Algorithms for Big Data**
 - Data and Information Fusion
 - Algorithms (including Scalable methods)
 - Natural Language Processing
 - Signal Processing
 - Simulation and Modeling
 - Data-Intensive Computing
 - Parallel Algorithms
 - Testing Methods
 - Multidimensional Big Data
 - Multilinear Subspace Learning
 - Sampling Methodologies
 - Streaming
 - Others
- **Big Data Fundamentals**
 - Novel Computational Methodologies
 - Algorithms for Enhancing Data Quality
 - Models and Frameworks for Big Data
 - Graph Algorithms and Big Data
 - Computational Science
 - Computational Intelligence
 - Others
- **Infrastructures for Big Data**
 - Cloud Based Infrastructures (applications, storage & computing resources)
 - Grid and Stream Computing for Big Data
 - High Performance Computing, Including Parallel & Distributed Processing
 - Autonomic Computing
 - Cyber-infrastructures and System Architectures
 - Programming Models and Environments to Support Big Data
 - Software and Tools for Big Data
 - Big Data Open Platforms
 - Emerging Architectural Frameworks for Big Data
 - Paradigms and Models for Big Data beyond Hadoop/MapReduce, ...
 - Others
- **Big Data Management and Frameworks**
 - Database and Web Applications
 - Federated Database Systems
 - Distributed Database Systems
 - Distributed File Systems
 - Distributed Storage Systems
 - Knowledge Management and Engineering
 - Massively Parallel Processing (MPP) Databases
 - Novel Data Models
 - Data Preservation and Provenance
 - Data Protection Methods
 - Data Integrity and Privacy Standards and Policies
 - Data Science
 - Novel Data Management Methods

- Crowdsourcing
- Stream Data Management
- Scientific Data Management
- Others

- **Big Data Search**
 - Multimedia and Big Data
 - Social Networks
 - Data Science
 - Web Search and Information Extraction
 - Scalable Search Architectures
 - Cleaning Big Data (noise reduction), Acquisition & Integration
 - Visualization Methods for Search
 - Time Series Analysis
 - Recommendation Systems
 - Graph Based Search and Similar Technologies
 - Others

- **Privacy in the Era of Big Data**
 - Cryptography
 - Threat Detection Using Big Data Analytics
 - Privacy Threats of Big Data
 - Privacy Preserving Big Data Collection
 - Intrusion Detection
 - Socio-economical Aspect of Big Data in the Context of Privacy and Security
 - Others

- **Applications of Big Data**
 - Big Data as a Service
 - Big Data Analytics in e-Government and Society
 - Applications in Science, Engineering, Healthcare, Visualization, Business, Education, Security, Humanities, Bioinformatics, Health Informatics, Medicine, Finance, Law, Transportation, Retailing, Telecommunication, all Search-based applications, ...
 - Others

SUBMISSION OF PAPERS FOR EVALUATION:

Prospective authors are invited to submit their papers by uploading them to the ICDATA evaluation web site via <https://icdata.confmaster.net/> .

Submissions must be uploaded by the due date (see IMPORTANT DATES) and must be in pdf format (up to 10 pages for Regular Research Papers; up to 6 pages for Short Research Papers; up to 3 pages for Extended Abstract/Poster Papers - the number of pages include all figures, tables, and references).

For typesetting etc. please have a look at the ICDATA website (Submission – Paper Submission Guidelines). Later, the authors of accepted papers will be asked to upload their final paper on a different system organized by CSCE. Papers must not have been previously published or currently submitted for publication elsewhere.

The first page of the paper should include the followings:

- Title of the paper
- Name, affiliation, postal address, and email address of each author (identify the name of the Contact Author)
- Abstract (between 100 and 120 words)
- A maximum of 5 topical keywords that would best represent the work described in the paper
- While submitting, choose your paper type as "Regular Research Paper", "Short Research Paper", or "Extended Abstract/Poster Paper".
- The actual text of the paper can start from the first page (space permitting).

Type of Submissions/Papers:

- **Full/Regular Research Papers (maximum of 10 pages):**
Regular Research Papers should provide detail original research contributions. They must report new research results that represent a contribution to the field; sufficient details and support for the results and conclusions should also be provided. The work presented in regular papers are expected to be at a stage of maturity that with some additional work can be published as journal papers.
- **Short Research Papers (maximum of 6 pages):**
Short Research Papers report on ongoing research projects. They should provide overall research methodologies with some results. The work presented in short papers is expected to be at a stage of maturity that with some additional work can be published as regular papers.
- **Extended Abstract/Poster Papers (maximum of 3 pages):**
Poster papers report on ongoing research projects that are still in their infancy (i.e., at very early stages). Such papers tend to provide research methodologies without yet concrete results.

Authors are to conform to the common CODE OF ETHICS FOR AUTHORS (The document for the Code of Ethics is part of the paper submission guidelines. Please have a look at the ICDATA website for details).

Each paper will be peer-reviewed by at least two experts in the field for originality, significance, clarity, impact, and soundness. In cases of contradictory recommendations, a member of the conference program committee would be charged to make the final decision (accept/reject); often, this would involve seeking help from additional referees. Papers whose authors include a member of the conference program committee will be evaluated using the double-blinded review process. (Essay/philosophical papers will not be refereed but may be considered for discussion/panels).

ALL ACCEPTED PAPERS will be published in the corresponding proceedings by Publisher: Springer Nature - Book Series: Transactions on Computational Science & Computational Intelligence <https://www.springer.com/series/11769>

Indexation: Subject to Springer science indexation which includes: [online Springer Link](#), [Scopus](#), SCI Compendex, [El Compendex](#), EMBASE, Web of Science, Inspec, ACM digital library, Google Scholar, EBSCO, and others.

GENERAL INFORMATION:

Please have a look at the [ICDATA website](#) and the [CSCE website](#).

CONTACT: Inquiries should be sent to the [ICDATA'22 Conference Chair](#) or CSCE'22 Conference Secretariat: cs@american-cse.org