Topical Issue title	An Outlook on Computer Science for Digital Libraries: Algorithms, Systems, and Applications
Topical Issue keywords	Document Analysis, Document Engineering, Recommendation systems, libraries, archives and Moseums, Information retrieval
The need for Topical Issue (in 300 words)	This special issue aims to explore essential computer science principles critical to advancing digital libraries. Topics include advanced information retrieval and data management algorithms, innovative system architectures for large-scale digital collections, and applications in fields like academic research and cultural heritage preservation. Given recent advancements in computer science—particularly the impact of large language models—this issue is timely. These developments transform how we interact with, build, and maintain digital libraries and their services. A focused investigation of the underlying computer science techniques powering digital libraries is now timely and necessary. We invite contributions on theoretical insights, architectural frameworks, data models, tools, services, and infrastructures supporting the evolution of digital libraries.
Guest Editor(s) Please provide name & affiliation and attach detailed CV along with short profile	**Donatella Firmani**, University of Rome - Sapienza Short Profile: Donatella Firmani works on data quality, knowledge extraction, and responsible data science. She is currently an Associate Professor at the Department of Statistical Sciences at Sapienza University of Rome. In 2013, she earned her Ph.D. from the Department of Computer, Control, and Management Engineering at the same university, with a thesis on large-scale graph algorithms. In 2012, she was visiting student at AT&T Labs, funded by Rutgers University, where she worked on data integration and data streaming. She is the co-winner of the Best Paper Award at the IEEE Services Congress 2019. She is the Program Chair of SEBD 2025 (33rd Symposium on Advanced Database Systems) and IRCDL 2025 (22nd Italian Research Conference on Digital Libraries). She regularly serves as a program committee member for flagship conferences such as SIGMOD, VLDB, and ICDE. Since 2020, she has been an Associate Editor for the ACM Journal of Data and Information Quality. **Gianmaria Silvello**, University of Padova Short Profile: A computer engineer, Gianmaria Silvello is professor at the Department of Information Engineering of the University of Padua. His research spans knowledge management, intelligent information systems, information access, algorithmic fairness, digital libraries and data provenance and citation. He has published 200+ scientific papers in national and international venues. He is the coordinator of the Horizon Europe project HEREDITARY (HetERogeneous sEmantic Data integratIon for the guT-bRain interplaY, 2024-2027). More information at https://www.dei.unipd.it/~silvello/

	Beatrice Portelli, University of Udine Short Profile: Beatrice Portelli is a PhD Student in the National PhD program in Artificial Intelligence, a joint PhD program at the University of Udine and the University of Naples Federico II (Italy), and a member of the Artificial Intelligence Laboratory of Udine (AILAB Udine). She works employing Deep Learning and Natural Language Processing techniques. She has worked on several projects related to Language Models for Adverse Drug Event extraction and normalization from social media texts, as well as Fact Verification Models. Her current research interests are Machine Learning and Deep Learning methods for risk management in the agricultural-forestry sector. **Sara Tonelli**, Fondazione Bruno-Kessler Short Profile: Sara Tonelli is the head of the Digital Humanities research group at Fondazione Bruno Kessler, Trento. She is a member of ELLIS, the European Laboratory for Learning and Intelligent Systems, and part of the board of the Italian Association for Computational Linguistics (AILC). Between 2021 and 2024 she served as Liaison Representative of the ACL Special Interest Group on Language Technologies for the Socio-Economic Sciences and Humanities (SIGHUM). She is currently involved in the HYBRIDS MSCA network, whose goal is to fight disinformation using AI and human-in-the-loop approaches, as well as in the AI4Trust and AI-CODE H2020 projects, both aimed at supporting fact-checkers with AI technologies for text and image analysis. Between January 2021 and December 2022 she was also the scientific coordinator of the KID ACTIONS European project, aimed at addressing cyberbullying among children and adolescents through interactive education and gamification. Her research interests include tha analysis of toxic speech from online sources, the study of non-standard and specialised languages and the use of synthetic data from generative LLMs in classification tasks. **Stefano Mizzaro**, University of Udine Stefano Mizzaro is full professor at Department of Mathematics, Informatics, and Physics of the University of Udine. His research interests include information retrieval, misinformation assessment, crowdsourcing, artificial intelligence. He has published 150+ scientific papers in national and international venues. His more cited paper, of which he is the single author, has more than 1000 citations on Google Scholar.
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Publishing plan including: ● the tentative date of paper submission ● 1st round of review deadline ● final round of review deadline and ● publication deadline	Paper submission: 15 April 2025 1st review round: not after 15 July 2025 final round: not after 15 October 2025 Publication deadline: 15 December 2025

List of tentative papers (with names and affiliations of authors)-necessary in case of Topical Issues drawn from Conferences/workshops	To be decided Date: Mid-January 2025
Link of Conference (if Topical Issue is drawn from a conference), along with links of previously published Issues	https://ircdl2025.uniud.it/

Special Issue Workflow	Special Issue Workflow: Computer Science Foundations for Digital Libraries: Algorithms, Systems, and Applications (IRCDL 2025)
	
	1. **Paper Submission (Mid-December 2024)**
	   Authors submit their papers to the IRCDL 2025, focusing on computer science foundations relevant to digital libraries, including algorithms, systems, and applications.
	
	2. **Peer Review (Mid-January 2025)**
	   Each submission undergoes three rounds of peer review. Reviewers provide detailed evaluations, and a meta-reviewer consolidates opinions and recommendations. The program chairs validate the final acceptance or rejection decisions.
	
	3. **Invitation for Extended Versions (End-January 2025)**
	   Selected authors are invited to submit extended versions of their papers for consideration in a special issue of the *International Journal on Digital Libraries (IJDL)*.
	
	4. **Conference Presentation and Feedback (February 2025)**
	   Accepted papers are presented at IRCDL 2025. Authors engage in discussions, receiving feedback to refine their extended versions for the special issue.
	
	5. **Confirmation of Extended Submissions (End-February 2025)**
	   Authors confirm their intention to submit extended versions to the special issue.
	
	6. **Extended Paper Submission (15 April 2025)**
	   Authors submit extended versions of their papers to the IJDL special issue, integrating feedback from the conference and initial reviews.
	Also papers not originally submitted to IRCDL 2025 are accepted to be reviewed provided a first evaluation by the guest editors.
	
	7. **Reviewer Selection and Initial Review Round (Mid-May - 15 July 2025)**
	   Reviewers are assigned, and the first review round concludes by mid-July, focusing on the depth and quality of the extended submissions.
	
	8. **Final Review Round (By 15 October 2025)**
	   Authors submit revisions, and final decisions are made following this last review cycle.
	
	9. **Publication Deadline (15 December 2025)**
	   The special issue is finalized and published by mid-December 2025.