# Lecture Notes in Computer Science 13541

### **Founding Editors**

Gerhard Goos

Karlsruhe Institute of Technology, Karlsruhe, Germany

Juris Hartmanis

Cornell University, Ithaca, NY, USA

#### **Editorial Board Members**

Elisa Bertino

Purdue University, West Lafayette, IN, USA

Wen Gao

Peking University, Beijing, China

Bernhard Steffen

TU Dortmund University, Dortmund, Germany

Moti Yung

Columbia University, New York, NY, USA

More information about this series at https://link.springer.com/bookseries/558

Gianmaria Silvello · Oscar Corcho · Paolo Manghi · Giorgio Maria Di Nunzio · Koraljka Golub · Nicola Ferro · Antonella Poggi (Eds.)

# Linking Theory and Practice of Digital Libraries

26th International Conference on Theory and Practice of Digital Libraries, TPDL 2022 Padua, Italy, September 20–23, 2022 Proceedings



Editors
Gianmaria Silvello
University of Padua
Padua, Italy

Paolo Manghi © CNR-ISTI – National Research Council Pisa, Italy

Koraljka Golub Linnaeus University Växjö, Sweden

Antonella Poggi Sapienza University of Rome Rome, Italy Oscar Corcho (1)
Universidad Politécnica de Madrid
Madrid, Spain

Giorgio Maria Di Nunzio University of Padua Padua, Italy

Nicola Ferro D University of Padua Padua, Italy

ISSN 0302-9743 ISSN 1611-3349 (electronic) Lecture Notes in Computer Science ISBN 978-3-031-16801-7 ISBN 978-3-031-16802-4 (eBook) https://doi.org/10.1007/978-3-031-16802-4

#### © Springer Nature Switzerland AG 2022

Chapters "Should We Preserve the World's Software History, And Can We?", "Extracting Funder Information from Scientific Papers - Experiences with Question Answering", "Implementation Issues for a Highly Structured Research Report" and "B!SON: A Tool for Open Access Journal Recommendation" are licensed under the terms of the Creative Commons Attribution 4.0 International License (http://creativecommons.org/licenses/by/4.0/). For further details see license information in the chapters.

This work is subject to copyright. All rights are reserved by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors, and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, expressed or implied, with respect to the material contained herein or for any errors or omissions that may have been made. The publisher remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

This Springer imprint is published by the registered company Springer Nature Switzerland AG The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

#### **Preface**

These proceedings contain the full papers, short papers, and accelerating innovation papers selected for presentation at the 26th International Conference on Theory and Practice of Digital Libraries (TPDL 2022)<sup>1</sup>. The event was organized by the Information Management Systems (IMS) research group<sup>2</sup> of the Department of Information Engineering<sup>3</sup> of the University of Padua<sup>4</sup>, Italy. The conference was held from September 20 to September 23, 2022, in Padua, Italy.

Over the years TPDL has established an important international forum focused on digital libraries and associated technical, practical, and social issues. TPDL encompasses the many meanings of the term digital libraries, including new forms of information institutions; operational information systems with all manner of digital content; new means of selecting, collecting, organizing, and distributing digital content; and theoretical models of information media, including document genres and electronic publishing. Digital libraries may be viewed as a new form of information institution or as an extension of the services libraries currently provide.

TPDL historically approached digital libraries embracing the field at large, and also recognizing three key areas of interest that can be synthesized as scholarly communication (e.g., research data, research software, digital experiments, digital libraries), e-science/computationally-intense research (e.g., scientific workflows, virtual research environments, reproducibility) and library, archive, and information science (e.g., governance, policies, open access, open science).

TPDL 2022 received a total of 107 submissions in three categories: 51 full papers, 50 short papers, and 6 accelerating innovation papers.

Full papers present high quality, original research of relevance to the TPDL community. Submissions should detail their methods and techniques in sufficient detail to enable replication and reuse. The accepted papers are published in these conference proceedings and were presented as long conference talks.

Short papers present high quality, original research or tools or applications that are of relevance to the TPDL community. The accepted papers are published in these conference proceedings and were presented as short conference talks.

Finally, the newly introduced "accelerating innovation" papers aim to speed up the transfer and exchange of new ideas and late-breaking results in order to accelerate and drive innovation. The accepted papers were presented in a gong show-style and with a poster at the conference.

The geographical distribution of the authors of the submitted papers was as follows: 81.3% were from Europe (38.5% from Germany, 18% from Italy, and 15% from Greece),

<sup>1</sup> http://tpdl2022.dei.unipd.it/.

<sup>&</sup>lt;sup>2</sup> http://ims.dei.unipd.it/.

<sup>&</sup>lt;sup>3</sup> http://www.dei.unipd.it/.

<sup>4</sup> http://www.unipd.it/en/.

8.3% from Asia, 8% from North and South America, 1.2% from Africa, and 0.6% from Australasia.

All submissions were reviewed by at least three members of an international Program Committee and by one senior meta-reviewer. Of the full papers submitted to the conference, 18 were accepted for oral presentation (35%), nine were accepted as short papers (17.6%), and two as accelerating innovation papers (0.04%). Of the short papers, 18 were accepted for oral presentation (36%) and 10 were accepted as accelerating innovation papers (20%). Finally, TPDL 2022 accepted four out of the six submitted accelerating innovation papers.

We thank all Program Committee members for their time and effort in ensuring the high quality of the TPDL 2022 program.

Additionally, TPDL 2022 hosted two workshops covering a range of digital library topics. These were selected by the workshop committee.

The workshops were

- The 1st International Workshop on Digital Platforms and Resources for Access to Literary Heritage (DIPRAL 2022); and
- The 2nd International Workshop on Archives and Linked Data (Linked Archives 2022).

We would like to thank our invited speakers for their contributions to the program: Roberto Di Cosmo (Inria - National Institute for Research in Digital Science and Technology, France) and Georgia Koutrika (Athena Research Center, Greece). Short descriptions of these talks are included in the proceedings.

TPDL 2022 was held under the patronage of the University of Padua, and the Department of Information Engineering.

Finally, we would like to thank our sponsors: ExaMode and the Universidad Politecnica de Madrid (gold level); the Department of Information Engineering of the University of Padua (silver level); and MDPI and Springer (bronze level). The conference was supported by the Coalition for Networked Information.

August 2022

Gianmaria Silvello Oscar Corcho Paolo Manghi Giorgio Maria Di Nunzio Koraljka Golub Nicola Ferro Antonella Poggi

## **Organization**

**General Chair** 

Gianmaria Silvello University of Padua, Italy

**Program Chairs** 

Oscar Corcho Universidad Politcnica de Madrid, Spain

Paolo Manghi ISTI-CNR, Italy

**Short Program Chairs** 

Giorgio Maria Di Nunzio University of Padua, Italy Koraljka Golub Linnaeus University, Sweden

**Accelerating Innovation Program Chairs** 

Nicola Ferro University of Padua, Italy

Antonella Poggi Sapienza University of Rome, Italy

Workshop Chair

Leonardo Candela ISTI-CNR, Italy

**Doctoral Consortium Chairs** 

Gerd Berget Oslo Metropolitan University, Norway

Trond Aalberg Norwegian University of Science and Technology,

Norway

**Organization Chair** 

Fabio Giachelle University of Padua, Italy

**Senior Program Committee** 

Trond Aalborg Norwegian University of Science and Technology,

Norway

Maristella Agosti University of Padua, Italy

#### Organization

viii

Omar Alonso Amazon, USA

Amir Aryani Swinburne University of Technology, Australia

Sören Auer Leibniz Universität Hannover, Germany

José Borbinha Universidade de Lisboa, Portugal George Buchanan University of Melbourne, Australia

Donatella Castelli ISTI-CNR, Italy

Fabien Duchateau Université Claude Bernard Lyon 1 - LIRIS, France

Edward Fox Virginia Tech, USA

Norbert Fuhr University of Duisburg-Essen, Germany

Carole Goble University of Manchester, UK
Mark Michael Hall The Open University, UK

Martin Klein Los Alamos National Laboratory, USA

Michael Nelson Old Dominion University, USA
Christos Papatheodorou University of Athens, Greece
Gabriella Pasi University of Milano-Bicocca, Italy
Thomas Risse University of Frankfurt, Germany

Herbert Van de Sompel Data Archiving Networked Services, The

Netherlands

Ludo Waltman Leiden University, The Netherlands

#### **Program Committee**

Sawood Alam Internet Archive, USA

Marco Angelini Sapienza University of Rome, Italy
Carlos Badenes-Olmedo Universidad Politcnica de Madrid, Spain

Miriam Baglioni ISTI-CNR, Italy

Wolf-Tilo Balke TU Braunschweig, Germany

Alessia Bardi ISTI-CNR, Italy

Carlos Bobed University of Zaragoza, Spain
José Borbinha University of Melbourne, Australia
Ricardo Campos Polytechnic Institute of Tomar, Portugal

Annalina Caputo Dublin City University, Ireland

Michelangelo Ceci University of Bari, Italy Yinlin Chen Virginia Tech, USA

Marilena Daquino University of Bologna, Italy Boris Dobrov Moscow State University, Russia

Dennis Dosso University of Padua, Italy
Guglielmo Faggioli University of Padua, Italy
Stefano Ferilli University of Bari, Italy
Nuno Freire INESC-ID, Portugal

Yannis Foufoulas University of Athens, Greece Fabio Giachelle University of Padua, Italy

Jose Manuel Gomez-Perez expert.ai, Spain

Antoine Isaac Europeana and VU University Amsterdam,

The Netherlands

Adam Jatowt University of Innsbruck, Austria

Jaap Kamps University of Amsterdam, The Netherlands Johannes Kiesel Bauhaus-Universität Weimar, Germany

Petr Knoth The Open University, UK

Maurizio Lana Università del Piemonte Orientale, Italy Maria Maistro University of Copenhagen, Denmark

Andrea Mannocci ISTI-CNR, Italy

Stefano Marchesin University of Padua, Italy

Reme Melero Spanish National Research Council, Spain Eva Méndez University Carlos III of Madrid, Spain

Nicola Orio University of Padua, Italy
Francesco Osborne The Open University, UK
Silvio Peroni University of Bologna, Italy

Simone Paolo Ponzetto University of Mannheim, Germany
Edie Rasmussen University of British Columbia, Canada
Andreas Rauber Vienna University of Technology, Austria

Cristina Ribeiro University of Porto, Portugal Irene Rodrigues Universidade de Evora, Portugal

Idafen Santana-Perez Universidad de Las Palmas de Gran Canaria,

Spain

Andrea Scharnhorst Royal Netherlands Academy of Arts and

Sciences, The Netherlands

Heiko Schuldt University of Basel, Switzerland

Giuseppe Serra University of Udine, Italy

Markus Stocker German National Library of Science and

Technology (TIB), Germany

Shigeo Sugimoto University of Tsukuba, Japan

Hussein Suleman University of Cape Town, South Africa Atsuhiro Takasu National Institute of Informatics, Japan

Anna Maria Tammaro University of Parma, Italy
Carla Teixeira Lopes University of Porto, Portugal
Francesca Tomasi University of Bologna, Italy
Pertti Vakkari Tampere University, Finland

Marieke Van Erp KNAW Humanities Cluster, The Netherlands

Thanasis Vergoulis Athena Research Center, Greece
Marco Viviani University of Milano-Bicocca, Italy

Stefanos Vrochidis Centre for Research and Technology Hellas,

Greece

David Walsh Edge Hill University, UK
Michele Weigle Old Dominion University, USA

#### Short Program Committee

Hamed Alhoori Northern Illinois University, USA

Robert Allen Independent, USA

Vangelis Banos Aristotle University of Thessaloniki, Greece
Gerd Berget Oslo Metropolitan University, Norway
José Borbinha Universidade de Lisboa, Portugal
Maria Manuel Borges University of Coimbra, Portugal

Vittore Casarosa ISTI-CNR, Italy

Songphan Choemprayong Chulalongkorn University, Thailand

Mickal Coustaty Laboratoire L3i - La Rochelle Université, France

Theodore Dalamagas Athena Research Center, Greece

Tahereh Dehdarirad Chalmers University of Technology, Sweden

Boris Dobrov Moscow State University, Russia Shyamala Doraisamy Universiti Putra Malaysia, Malaysia

Fabien Duchateau Université Claude Bernard Lyon 1 - LIRIS, France

Ralph Ewerth L3S Research Center, Leibniz Universität

Hannover, Germany

Edward Fox Virginia Tech, USA Nuno Freire INESC-ID, Portugal

Maria Gaede Humboldt-Universität zu Berlin, Germany

Manolis Gergatsoulis Ionian University, Greece

C. Lee Giles Pennsylvania State University, USA

Matthias Hagen Martin-Luther-Universität Halle-Wittenberg,

Germany

Mark Hall The Open University, UK
Morgan Harvey University of Sheffield, UK
Andreas Henrich University of Bamberg, Germany
Nikos Housos University of Patras, Greece

Antoine Isaac Europeana and VU Amsterdam, The Netherlands

Robert Jäschke Humboldt-Universität zu Berlin, Germany
Roman Kern Graz University of Technology, Austria
Martin Klein Los Alamos National Laboratory, USA

Petr Knoth The Open University, UK

Stefanos Kollias National Technical University of Athens, Greece

Marijn Koolen Royal Netherlands Academy of Arts and

Sciences, The Netherlands

Laszlo Kovacs Institute for Computer Science and Control

(SZTAKI), Hungary

Suzanne Little Dublin City University, Ireland

Ying-Hsang Liu Oslo Metropolitan University, Norway

Clifford Lynch CNI, USA

Elena Maceviciute University of Boras, Sweden

Yannis Manolopoulos Open University of Cyprus, Cyprus

Bruno Martins INESC-ID and University of Lisbon, Portugal

Philipp Mayr GESIS, Germany

Robert H. McDonald University of Colorado Boulder, USA

Dana Mckay RMIT University, Australia
Tanja Merun University of Ljubljana, Slovenia

Andrs Micsik Institute for Computer Science and Control

(SZTAKI), Hungary

Agnieszka Mykowiecka Institute of Computer Science, Polish Academy of

Sciences, Poland

Michael Nelson Old Dominion University, USA
Erich Neuhold University of Vienna, Austria
David Nichols University of Waikato, New Zealand

Kjetil Nørvåg Norwegian University of Science and Technology,

Norway

Christos Papatheodorou National and Kapodistrian University of Athens,

Greece

Vivien Petras Humboldt-Universität zu Berlin, Germany

Dimitris Plexousakis FORTH-ICS, Greece

Edie Rasmussen University of British Columbia, Canada

Cristina Ribeiro University of Porto, Portugal
Thomas Risse University of Frankfurt, Germany
Irene Rodrigues Universidade de Evora, Portugal
Heiko Schuldt University of Basel, Switzerland

Michalis Sfakakis Ionian University, Greece

Marc Spaniol Université de Caen Normandie, France
Cyrille Suire Université Paris-Saclay and UVSQ, France
Chrisa Tsinaraki European Commission - Joint Research Center,

Italy

Douglas Tudhope University of South Wales, UK

Yannis Tzitzikas University of Crete and FORTH-ICS, Greece

Pertti Vakkari Tampere University, Finland

Stefanos Vrochidis ITI-CERTH, Greece

Michele Weigle Old Dominion University, USA Maja Žumer University of Ljubljana, Slovenia

#### **Additional Reviewers**

Christian Otto Aman Ahuja

David Pride Michalis Mountantonakis Satvik Chekuri Eleftherios Kalogeros Filip Kovacevic Prashant Chandrasekar

Alexandros Vassiliades Junaid Ghauri

#### Organization

David Pride Graziella De Martino Vivek Mohato

vivek Monato

xii

Suchetha Nambanoor Kunnath

Ivan Heibi Maria Rousi Paris Koloveas

Theoni Spathi Patricia Martín-Chozas

Beatriz Esteves

Alexandros Kokkalas

Athanasios Mavropoulos Cristian Camilo Berro Aroca

Ornella Irrera Hussam Hallak Elias Entrup Tom Alby

Eleftherios Kalogeros

Silvia Piccini Federica Vezzani Pavlos Fafalios

Angelo Antonio Salatino

# Democratizing Data Access: What if We Could Just Talk to Our Data?

#### Georgia Koutrika Athena Research Center, Greece

georgia@athenarc.gr

Abstract. Data is considered the 21st century's most valuable commodity. Analysts exploring data sets for insight, scientists looking for patterns, and consumers looking for information are just a few examples of user groups that need to access and dig into data. However, existing data access and exploration systems are still following two classical paradigms: they are either form-based interfaces that allow users to easily query the data but with limited query capabilities, or they are low-level programmatic tools that allow the users to write their own queries using programming or query languages such as Python or SQL, but they are intended for CS experts.

On the other hand, enabling users to query data in a database using natural language has been considered the holy grail of the database community. In 1974, E. F. Codd was underlining this need: "If we are to satisfy the needs of casual users of databases, we must break the barriers that presently prevent these users from freely employing their native language" [2]. Several natural language interfaces for databases emerged since then; recent approaches are using deep learning techniques with promising results but also important limitations [1, 3].

While these systems are taking us closer to the holy grail of "talking to data", to bridge the gap between data and humans, we envision a system that allows users to dig into data and find answers by conversing and collaborating with the system, as if it were a human. This system would enable interaction using natural language, would understand the data as well as the user intent, would guide the user, and make suggestions, and help the user find answers to questions over data in a more natural way.

These *intelligent data assistants* are much more complex than any "digital assistant" we know of today, which are based on pre-specified dialogues and can answer simple questions. They require the synergy of several technologies and innovation in all these fronts, including natural language interfaces, data exploration, conversational AI, and data management.

The intention of this talk is to give a flavor of an exciting research territory, discuss where we stand today, opportunities and challenges.

#### **Short Bio**

Georgia Koutrika is a Research Director at Athena Research Center in Greece. She has more than 15 years of experience in multiple roles at HP Labs, IBM Almaden, and Stanford. Her work emerges at the intersection of data management, natural language processing and deep learning, and focuses on intelligent and interactive data exploration, conversational data systems, and user-driven data management.

Her work has been incorporated in commercial products, described in 14 granted patents and 26 patent applications in the US and worldwide, and published in more than 100 papers in top-tier conferences and journals. Georgia is an ACM Senior Member and IEEE Senior Member.

She is a member of the VLDB Endowment Board of Trustees, member of the PVLDB Advisory Board, member of the ACM-RAISE Working Group, co-Editor-in-chief for VLDB Journal, PC co-chair for VLDB 2023, co-EiC of Proceedings of VLDB (PVLDB). She has been associate editor in top-tier conferences (such as ACM SIGMOD, VLDB) and journals (VLDB Journal, IEEE TKDE), and she has been in the organizing committee of several conferences including SIGMOD, ICDE, EDBT, among others. She has received a PhD and a diploma in Computer Science from the Department of Informatics and Telecommunications, University of Athens, Greece.

#### References

- Affolter, K., Stockinger, K., Bernstein, A.: A comparative survey of recent natural language interfaces for databases. VLDB J. 28(5), 793–819 (2019). https://doi.org/10.1007/s00778-019-00567-8
- Codd, E.F.: Seven steps to rendezvous with the casual user. In: Klimbie, J.W., Koffeman, K.L. (eds.) Data Base Management, Proceeding of the IFIP Working Conference Data Base Management, Cargèse, Corsica, France, April 1–5, 1974, pp. 179–200. North-Holland, Jan. (1974)
- Katsogiannis-Meimarakis, G., Koutrika, G.: A deep dive into deep learning approaches for Text-to-SQL systems. In: Proceedings of the 2021 International Conference on Management of Data, SIGMOD 2021, pp. 2846–2851. Association for Computing Machinery, New York (2021)

# **Contents**

Keynote Talks	
Should We Preserve the World's Software History, And Can We?	3
Full Papers	
Analyzing the Web: Are Top Websites Lists a Good Choice for Research?  Tom Alby and Robert Jäschke	11
RDFtex: Knowledge Exchange Between LaTeX-Based Research Publications and Scientific Knowledge Graphs  Leon Martin and Andreas Henrich	26
Enriching the Greek National Cultural Aggregator with Key Figures in Greek History and Culture: Challenges, Methodology, Tools and Outputs Haris Georgiadis, Agathi Papanoti, Elena Lagoudi, Georgia Angelaki, Nikos Vasilogamvrakis, Alexia Panagopoulou, and Evi Sachini	39
Figure and Figure Caption Extraction for Mixed Raster and Vector PDFs: Digitization of Astronomical Literature with OCR Features  J. P. Naiman, Peter K. G. Williams, and Alyssa Goodman	52
FAIROs: Towards FAIR Assessment in Research Objects  Esteban González, Alejandro Benítez, and Daniel Garijo	68
Searching Wartime Photograph Archive for Serious Leisure Purposes  Sanna Kumpulainen and Hille Ruotsalainen	81
Implementation and Evaluation of a Multilingual Search Pilot in the Europeana Digital Library	93
DETEXA: Declarative Extensible Text Exploration and Analysis	107
The Way We Cite: Common Metadata Used Across Disciplines for Defining Bibliographic References	120

Event Notifications in Value-Adding Networks	133
Ruben Dedecker, and Ruben Verborgh	
A Chromium-Based Memento-Aware Web Browser  Abby Mabe, Michael L. Nelson, and Michele C. Weigle	147
Analysis of the Deletions of DOIs: What Factors Undermine Their Persistence and to What Extent?  Jiro Kikkawa, Masao Takaku, and Fuyuki Yoshikane	161
Analysing User Involvement in Open Government Data Initiatives	175
The Rise of GitHub in Scholarly Publications	187
Whois? Deep Author Name Disambiguation Using Bibliographic Data	201
Investigations on Meta Review Generation from Peer Review Texts  Leveraging Relevant Sub-tasks in the Peer Review Pipeline	216
Improving Accessibility to Arabic ETDs Using Automatic Classification  Eman Abdelrahman and Edward Fox	230
Short Papers	
Robots Still Outnumber Humans in Web Archives, But Less Than Before  Himarsha R. Jayanetti, Kritika Garg, Sawood Alam, Michael L. Nelson, and Michele C. Weigle	245
Cui Bono? Cumulative Advantage in Open Access Publishing  David Pride, Matteo Cancellieri, and Petr Knoth	260
Overview Visualizations for Large Digitized Correspondence Collections:  A Design Study  Laura Swietlicki and Pierre Cubaud	266

Contents	XV11
Developing the EOSC-Pillar RDM Training and Support Catalogue	274
Automatic Generation of Coherent Image Galleries in Virtual Reality	282
Extracting Funder Information from Scientific Papers - Experiences with Question Answering	289
CDX Summary: Web Archival Collection Insights Sawood Alam and Mark Graham	297
"Knock Knock! Who's There?" A Study on Scholarly Repositories' Availability  Andrea Mannocci, Miriam Baglioni, and Paolo Manghi	306
Exploring Research Fields Through Institutional Contributions to Academic Journals	313
Implementation Issues for a Highly Structured Research Report	320
MINE – Workspace as a Service for Text Analysis	328
Conducting the Opera: The Evolution of the RDA Work to the Share-VDE Opus and BIBFRAME Hub	335
PH-Remix Prototype: A Non Relational Approach for Exploring AI-Generated Content in Audiovisual Archives  Chiara Mannari, Davide Italo Serramazza, and Enrica Salvatori	344
The SSH Data Citation Service, A Tool to Explore and Collect Citation  Metadata	351
B!SON: A Tool for Open Access Journal Recommendation	357

Visual Web Archive Quality Assessment  Theresa Elstner, Johannes Kiesel, Lars Meyer, Max Martius, Sebastian Schmidt, Benno Stein, and Martin Potthast	365
The Knowledge Trust: A Proposal for a Blockchain Consortium for Digital Archives  Harry Halpin	372
Enabling Portability and Reusability of Open Science Infrastructures  Giuseppe Grieco, Ivan Heibi, Arcangelo Massari, Arianna Moretti, and Silvio Peroni	379
Simulating User Querying Behavior Using Embedding Space Alignment  Saber Zerhoudi and Michael Granitzer	386
A Closer Look into Collaborative Publishing at Software-Engineering Conferences  Rand Alchokr, Jacob Krüger, Yusra Shakeel, Gunter Saake, and Thomas Leich	395
Design and Evaluation of a Mobile Application for an Italian UNESCO Site: Padova Urbs Picta  Daniel Zilio and Nicola Orio	403
Ontology-Based Metadata Integration for Oral History Interviews	410
Making FAIR Practices Accessible and Attractive	417
Structured References from PDF Articles: Assessing the Tools for Bibliographic Reference Extraction and Parsing	425
On Dimensions of Plausibility for Narrative Information Access to Digital Libraries  Hermann Kroll, Niklas Mainzer, and Wolf-Tilo Balke	433
Early Experiments on Automatic Annotation of Portuguese Medieval Texts Maria Inës Bico, Jorge Baptista, Fernando Batista, and Esperança Cardeira	442

Creating Structure in Web Archives with Collections: Different Concepts from Web Archivists  Himarsha R. Jayanetti, Shawn M. Jones, Martin Klein, Alex Osbourne, Paul Koerbin, Michael L. Nelson, and Michele C. Weigle	450
Weighted Altmetric Scores to Facilitate Literature Analyses	459
Accelerating Innovation Papers	
Exploring LSTMs for Simulating Search Sessions in Digital Libraries	469
Got 404s? Crawling and Analyzing an Institution's Web Domain	474
Automatic Knowledge Extraction from a Digital Library and Collaborative Validation  Eleonora Bernasconi, Miguel Ceriani, Massimo Mecella, and Alberto Morvillo	480
Holistic Graph-Based Representation and AI for Digital Library  Management	485
Optimizing the Digitization Workflow of Heritage Institutions to Increase Quality of Digitized Texts  Mirjam Cuper and Sarah D'Huys	490
Mapping STI Ecosystems via Open Data: Overcoming the Limitations of Conflicting Taxonomies. A Case Study for Climate Change Research in Denmark  Nicandro Bovenzi, Nicolau Duran-Silva,  Francesco Alessandro Massucci, Francesco Multari, and Josep Pujol-Llatse	495
BetterPR: A Dataset for Estimating the Constructiveness of Peer Review Comments Prabhat Kumar Bharti, Tirthankar Ghosal, Mayank Agarwal, and Asif Ekbal	500
BookSampo Fiction Literature Knowledge Graph Revisited: Building a Faceted Search Interface with Seamlessly Integrated Data-Analytic Tools Eero Hyvönen, Annastiina Ahola, and Esko Ikkala	506

#### xx Contents

Solutions for Data Sharing and Storage: A Comparative Analysis of Data	
Repositories  Joana Rodrigues and Carla Teixeira Lopes	512
LOD that Picture: Leveraging Linked Open Data to Enhance Navigation of the Photographic Archive of the Teatro Comunale of Bologna	518
MedSeer: A Medical Controversial Information Retrieval System Based on Credible Sources  Dina Sayed, Mohamed Noureldin, and Heiko Schuldt	523
Referency: Harmonizing Citations in Transdisciplinary Scholarly Literature  Elisa Bastianello, Alessandro Adamou, and Nikos Minadakis	528
A Study of the Grammacographical Textual Genre Across Time	533
A Methodology for the Management of Contact Languages Data. The Case Study of the Jews of Corfu  Georgios Vardakis and Giorgio Maria Di Nunzio	538
SurvAnnT: Facilitating Community-Led Scientific Surveys and Annotations  Anargiros Tzerefos, Ilias Kanellos, Serafeim Chatzopoulos, Theodore Dalamagas, and Thanasis Vergoulis	543
Author Index	549