

Commenced Publication in 1973

Founding and Former Series Editors:

Gerhard Goos, Juris Hartmanis, and Jan van Leeuwen

Editorial Board

David Hutchison

Lancaster University, Lancaster, UK

Takeo Kanade

Carnegie Mellon University, Pittsburgh, PA, USA

Josef Kittler

University of Surrey, Guildford, UK

Jon M. Kleinberg

Cornell University, Ithaca, NY, USA

Friedemann Mattern

ETH Zurich, Zürich, Switzerland

John C. Mitchell

Stanford University, Stanford, CA, USA

Moni Naor

Weizmann Institute of Science, Rehovot, Israel

C. Pandu Rangan

Indian Institute of Technology, Madras, India

Bernhard Steffen

TU Dortmund University, Dortmund, Germany

Demetri Terzopoulos

University of California, Los Angeles, CA, USA

Doug Tygar

University of California, Berkeley, CA, USA

Gerhard Weikum

Max Planck Institute for Informatics, Saarbrücken, Germany

More information about this series at <http://www.springer.com/series/7409>

Robert B. Allen · Jane Hunter
Marcia L. Zeng (Eds.)

Digital Libraries: Providing Quality Information

17th International Conference on Asia-Pacific
Digital Libraries, ICADL 2015
Seoul, Korea, December 9–12, 2015
Proceedings

Editors

Robert B. Allen
Yonsei University
Seoul
Korea (Republic of)

Jane Hunter
School of ITEE
University of Queensland
St. Lucia, QLD
Australia

Marcia L. Zeng
School of Library and Information Science
Kent State University
Kent, OH
USA

ISSN 0302-9743 ISSN 1611-3349 (electronic)
Lecture Notes in Computer Science
ISBN 978-3-319-27973-2 ISBN 978-3-319-27974-9 (eBook)
DOI 10.1007/978-3-319-27974-9

Library of Congress Control Number: 2015957784

LNCS Sublibrary: SL3 – Information Systems and Applications, incl. Internet/Web, and HCI

© Springer International Publishing Switzerland 2015

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, express or implied, with respect to the material contained herein or for any errors or omissions that may have been made.

Printed on acid-free paper

This Springer imprint is published by SpringerNature
The registered company is Springer International Publishing AG Switzerland

Preface

This volume contains the papers presented at ICADL 2015, the 2105 Asian Digital Library Conference, held during December 9–12, 2015, in Seoul, Korea. This was the 16th event in the ICADL conference series. Since its beginnings in Hong Kong in 1998, ICADL has become one of the premier international research meetings about digital libraries. The conference series explores digital libraries as a broad foundation for interaction with information and information management in a digital world. The papers for this 2015 conference cover topics such as digital preservation, gamification, text mining, citizen science, data citation, linked data, and cloud computing. Overall, there were 31 full and short papers along with 18 poster papers. In addition, these proceedings include short descriptions of the presentations from the two panel sessions: one about digital humanities and the other about eScience. The proceedings also include brief papers from students participating in the doctoral consortium.

The Conference Committee consisted of Profs. Sung Been Moon, Min Song, and Giyeong Kim in addition to Prof. Robert B. Allen all of Yonsei University. As co-chairs of the Technical Program Committee, we would especially like to thank all of the Program Committee members for their effort. We also thank Prof. Soohyun Joo of the University of Kentucky and the review committee he assembled for their exceptional effort in reviewing the posters.

We are grateful to Prof. Kiduk Yang of Kyungpook National University who organized the doctoral consortium with the support of a strong panel of faculty mentors. We further thank Prof. Kyong Eun Oh of Simmons College for her help with publicity.

Two exceptional workshops were co-located with ICADL 2015. The NKOS (Networked Knowledge Organization Systems) workshop was held on December 9. This was organized by Profs. Xia Lin, Jian Qin, and Marcia Zeng and was the first workshop in that series to be held in Asia. The CiSAP (Consortium of Information Schools Asia-Pacific) was held on December 12 with Profs. Emi Ishita and Chern Li Liew as chairs.

We gratefully acknowledge the Yonsei University Graduate School for its financial support. We would also like to thank the Yonsei Department of Library and Information Science and its students for their assistance.

November 2015

Robert B. Allen
Jane Hunter
Marcia L. Zeng

Organization

Technical Program Committee

| | |
|-------------------------|-------------------------------------------------|
| Palakorn Achananuparp | Singapore Management University, Singapore |
| Robert Allen | Yonsei University, South Korea |
| Mauricio Almeida | Universidade Federal de Minas Gerais, Brazil |
| Kanwal Ameen | University of the Punjab, Pakistan |
| Lu An | Wuhan University, China |
| Tobias Blanke | University of Glasgow, UK |
| Shu-Jiun Chen | Academia Sinica, Taiwan |
| Youngok Choi | Catholic University of America, USA |
| Sayed Choudhury | Johns Hopkins University, USA |
| Gobinda Chowdhury | Northumbria University, UK |
| Sally Jo Cunningham | Waikato University, New Zealand |
| Giorgio Maria Di Nunzio | University of Padua, Italy |
| Ismail Fahmi | University of Groningen, The Netherlands |
| Myung-Ja Han | University of Illinois at Urbana-Champaign, USA |
| Bernhard Haslhofer | Austrian Institute of Technology, Austria |
| Jieh Hsiang | National Taiwan University, Taiwan |
| Xiao Hu | University of Hong Kong, SAR China |
| Jane Hunter | University of Queensland, Australia |
| Emi Ishita | Kyushu University, Japan |
| Adam Jatowt | Kyoto University, Japan |
| Kiran K. | University of Malaya, Malaysia |
| Min-Yen Kan | National University of Singapore, Singapore |
| Emad Khazraee | University of Pennsylvania, USA |
| Christopher Khoo | Nanyang Technological University, Singapore |
| Kyung-Sun Kim | University of Wisconsin-Madison, USA |
| Claus-Peter Klas | Leibniz Institute for Social Sciences, Germany |
| Chernli Liew | Victoria University of Wellington, New Zealand |
| Xia Lin | Drexel University, USA |
| Keven Liu | Shanghai Library, China |
| Devika Madalli | Indian Statistical Institute, India |
| Elli Mylonas | Brown University, USA |
| Michael Nelson | Old Dominion University, USA |
| Jungran Park | Drexel University, USA |
| Helen Partridge | Queensland University of Technology, Australia |
| Hsiao-Tieh Pu | National Taiwan Normal University, Taiwan |
| Jian Qin | Syracuse University, USA |
| Edie Rasmussen | University of British Columbia, Canada |

| | |
|------------------|----------------------------------------|
| Soo Young Rieh | University of Michigan, USA |
| Laurent Romary | Inria and HUB-ISDL, France |
| Seamus Ross | University of Toronto, Canada |
| Shigeo Sugimoto | University of Tsukuba, Japan |
| Tamara Sumner | University of Colorado at Boulder, USA |
| Kulthida Tuamsuk | Khon Kaen University, Thailand |
| Pertti Vakkari | University of Tampere, Finland |
| Karin Verspoor | University of Melbourne, Australia |
| Yejun Wu | Louisiana State University, USA |
| Long Xiao | Beijing University Library, China |
| Marcia Zeng | Kent State University, USA |

Posters Committee

| | |
|---------------------|--------------------------------------------------|
| Namjoo Choi | University of Kentucky, USA |
| Soohyung Joo, Chair | University of Kentucky, USA |
| Youngseek Kim | University of Kentucky, USA |
| Kun Lu | University of Oklahoma, USA |
| Jin Mao | University of Arizona, USA |
| Adam Worrall | University of Alberta, Canada |
| Shuheng Wu | Queens College, City University of New York, USA |
| Seungwon Yang | Louisiana State University, USA |
| Yan Zhang | University of Texas at Austin, USA |

Contents

Full and Short Papers

| | |
|-------------------------------------------------------------------------------------------------------------------------|-----|
| Visual Topical Analysis of Museum Collections | 1 |
| <i>Lu An, Liqin Zhou, Xia Lin, and Chuanming Yu</i> | |
| Experiments on Russian-English Identity Resolution | 12 |
| <i>Zinaida Apanovich and Alexander Marchuk</i> | |
| Exploring the Kyoto Digital Archives Project: Challenging the Funding Model of Digital Archive Development | 22 |
| <i>Noriko Asato and Andrew Wertheimer</i> | |
| Analyzing Users' Trust for Online Health Rumors | 33 |
| <i>Alton Y.K. Chua and Snehasish Banerjee</i> | |
| Adaptive Web Crawling Through Structure-Based Link Classification | 39 |
| <i>Muhammad Faheem and Pierre Senellart</i> | |
| Investigating the Antecedents of Playing Games for Crowdsourcing Location-Based Content | 52 |
| <i>Dion Hoe-Lian Goh, Ei Pa Pa Pe-Than, and Chei Sian Lee</i> | |
| Formal Acknowledgement of Citizen Scientists' Contributions via Dynamic Data Citations. | 64 |
| <i>Jane Hunter and Chih-Hsiang Hsu</i> | |
| Searching for Health Information Online for My Child: A Perspective from South East Asia | 76 |
| <i>Anushia Inthiran and Ireneous Soyiri</i> | |
| Evaluation of a General-Purpose Sentiment Lexicon on a Product Review Corpus. | 82 |
| <i>Christopher S.G. Khoo, Sathik Basha Johnkhan, and Jin-Cheon Na</i> | |
| Exploring Context-Sensitive Query Reformulation in a Biomedical Digital Library | 94 |
| <i>Erin Hea-Jin Kim, Jung Sun Oh, and Min Song</i> | |
| An Approach to Document Fingerprinting | 107 |
| <i>Yunhyong Kim and Seamus Ross</i> | |

| | |
|-------------------------------------------------------------------------------------------------------------------------------|-----|
| A Linked Data Model to Aggregate Serialized Manga from Multiple Data Providers | 120 |
| <i>Senan Kiryakos and Shigeo Sugimoto</i> | |
| Instagram This! Sharing Photos on Instagram | 132 |
| <i>Chei Sian Lee, Nur Alifah Binte Abu Bakar, Raudhah Binti Muhammad Dahri, and Sei-Ching Joanna Sin</i> | |
| Comparing Network Structures of Different Versions of a Book: A Case Study of the Bible. | 142 |
| <i>Keeheon Lee</i> | |
| Data Transfer Between Discovery Services and Library Catalogs: A Case Study at the University of the Fraser Valley | 153 |
| <i>Hongfei Li and Diane Cruickshank</i> | |
| Enhancing Subject Metadata with Automated Weighting in the Medical Domain: A Comparison of Different Measures | 158 |
| <i>Kun Lu, Jin Mao, and Gang Li</i> | |
| Enhancing Digital Heritage Archives Using Gamified Annotations | 169 |
| <i>Job King'ori Maina and Hussein Suleman</i> | |
| AfriWeb: A Web Search Engine for a Marginalized Language | 180 |
| <i>Nkosana Malumba, Katlego Moukangwe, and Hussein Suleman</i> | |
| Participatory Journalism, Blurred Boundaries: Introducing Theoretical IS Frameworks to Re-Orient Research Practices | 190 |
| <i>Nora Martin</i> | |
| User Motivations for Tweeting Research Articles: A Content Analysis Approach | 197 |
| <i>Jin-Cheon Na</i> | |
| Xamobile: Usability Evaluation of Text Input Methods on Mobile Devices for Historical African Languages. | 209 |
| <i>Sunkanmi Olaleye and Hussein Suleman</i> | |
| Investigating Image Processing Algorithms for Navigating Cultural Heritage Spaces Using Mobile Devices | 215 |
| <i>Ayodeji Olojede and Hussein Suleman</i> | |
| Crowdsourcing a Text Corpus is not a Game | 225 |
| <i>Sean Packham and Hussein Suleman</i> | |
| Semi-automatic Metadata Generation Workflow for Developing a Continuing Education Resource Repository | 235 |
| <i>Jung-ran Park and Andrew Brenza</i> | |

The Effects of Collaboration and Competition on Players’ Perceptions
in Human Computation Games 246
Ei Pa Pa Pe-Than, Dion Hoe-Lian Goh, and Chei Sian Lee

More Than Just Black and White: A Case for Grey Literature References
in Scientific Paper Information Retrieval Systems 252
Aravind Sesagiri Raamkumar, Schubert Foo, and Natalie Pang

A Comparison of User Engagement with the CDC Facebook Page During
Health Crisis and Ordinary Periods 258
Sue Yeon Syn

Aesthetic Experience and Acceptance of Human Computation Games 264
*Xiaohui Wang, Dion Hoe-Lian Goh, Ee-Peng Lim,
and Adrian Wei Liang Vu*

On-Demand Big Data Analysis in Digital Repositories: A Lightweight
Approach 274
*Zhiwu Xie, Yinlin Chen, Tingting Jiang, Julie Speer, Tyler Walters,
Pablo A. Tarazaga, and Mary Kasarda*

Identification of Tweets that Mention Books: An Experimental Comparison
of Machine Learning Methods 278
Shuntaro Yada and Kyo Kageura

Posters

Mining Variations in Hangul Orthography 289
Juyoung An and Robert B. Allen

Development of an Imaginary Beings Knowledge Structure 291
Wirapong Chansanam and Kulthida Tuamsuk

Semantic Knowledge Retrieval for Belief Culture 294
*Wirapong Chansanam, Kulthida Tuamsuk, Kanyarat Kwiecien,
Taneth Ruangrajitpakorn, and Thepchai Supnithi*

Digital Reading Behavior of LIS Graduate Students: A Case Study
at National Taiwan Normal University 296
Chia-Hsiang Chen and Hao-Ren Ke

Performance of a Cloud-Based Digital Library 298
Yinlin Chen, Edward A. Fox, and Tingting Jiang

Assisting Retrieval of Academic Papers for User’s Information Needs 300
Kosuke Furusawa, Hongjun Fan, Yoichi Tomiura, and Emi Ishita

| | |
|--------------------------------------------------------------------------------------------------------------------|-----|
| Evaluating Library Escape: A Prototype Information Literacy Game | 302 |
| <i>Yan Ru Guo and Dion Hoe-Lian Goh</i> | |
| Ontology-Based Digital Humanities System for the Development of Librarianship in Taiwan | 304 |
| <i>Hao-Ren Ke, Xing-Zhi Fu, and Shun-Hong Sie</i> | |
| Designing Interface for Elderly Adults: Access from the Smartphone to the World. | 306 |
| <i>Ling-Ling Lai and Chia-Rou Lai</i> | |
| Investigating the Use of YouTube as a Self-Directed Learning Platform. | 308 |
| <i>Chei Sian Lee, Hamzah Osop, Gani Kelni, and Dion Hoe-Lian Goh</i> | |
| Linked Data for Professional Education (LD4PE) Project | 311 |
| <i>Sam Oh, Marcia L. Zeng, Michael Crandall, Stuart A. Sutton, and Thomas Baker</i> | |
| Recommender Knowledge-Based System for Research on the Development of Northeastern Thailand | 314 |
| <i>Jirapong Panawong and Kulthida Tuamsuk</i> | |
| Schema.org for Wikipedia’s Articles on Architecture | 316 |
| <i>Jay Park</i> | |
| Mining Latent Research Groups within Institutions Using an Author-Topic Model | 318 |
| <i>Takeshi Shirai, Yoichi Tomiura, Shosaku Tanaka, and Ryutaro Ono</i> | |
| E-Government in Kazakhstan as a Segment of a Semantic Digital Library | 320 |
| <i>Gulmira S. Sultanbaeva, Nurgul P. Saparkhojayeva, and Elmira S. Sultanbayeva</i> | |
| Study of Color Universal Design in Digital Games | 322 |
| <i>Kazuya Takemata, Tsubasa Takeda, Misa Tanaka, and Akiyuki Minamide</i> | |
| Staff Development of Academic Librarians to Improve Information Literacy Education in the Digital Age | 324 |
| <i>Yukiko Watanabe and Kenshi Hyodo</i> | |
| A Window of Opportunity to Create a Portal to Digital Libraries and Digital Archives in Hawai’i | 326 |
| <i>Andrew B. Wertheimer</i> | |
| Extracting Structure from Scientific Abstracts Using Neural Networks | 329 |
| <i>Paul Willot, Kazuhiro Hattori, and Akiko Aizawa</i> | |

A Survey and a Comparative Study of Natural Disaster Taxonomies
of Current Practice 331
Li Yang and Yejun Wu

Digital Humanities and eScience Panels

eScience and Living Analytics 334
Palakorn Achananuparp

Linking Digital Art History Content to the Web of Data: From Online
Exhibitions to Linked Taiwan Artists. 336
Shu-Jiun Chen

Modeling Digital Literary Texts “Literally” 338
Wayne de Fremery

Digital Archives and Digital Methods: A Indonesian Case Study 340
Miguel Escobar Varela

Sharing Scientific Literature, Ontologies, Databases and Annotations
for Open Science 342
Jin-Dong Kim

Digital Humanities Research at Khon Kaen University, Thailand 344
Kulthida Tuamsuk

Exploring Smart Data Approaches to the History of Innovation
and Invention at Liquid Crystal Institute at Kent State University 346
Marcia L. Zeng, Yin Zhang, Hongshan Li, and Serhiy Polyakov

Doctoral Consortium

Development of a Semantic Digital Library of Knowledge on Ethnic
Groups in Thailand 348
Juthatip Chaikhambung and Kulthida Tuamsuk

Digital News Story Preservation Framework. 350
Muzammil Khan and Arif Ur Rahman

Information Exchanged in Mentoring Between Faculty Advisors and Their
Doctoral Students 352
Jongwook Lee

Business Ontology Model for Community Enterprise of Thai Local
Wisdom. 354
Chitlada Prommakorn, Kulthida Tuamsuk, and Kanyarat Kwiecien

Development of 3D Virtual Museum for Ban Chiang Masterpiece
of Potteries. 356
Teerapol Suebchompu, Kulthida Tuamsuk, and Kanyarat Kwiecien

Knowledge Representation of Social Science Research Data for Data
Curation and Reuse. 358
Guangyuan Sun and Christopher S.G. Khoo

Author Index 361