

JESSICA YI-YUN CHENG

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RESEARCH INTERESTS

Metadata; Knowledge Organization; Taxonomy; Biodiversity Informatics; Data Curation

TEACHING AREAS

Metadata in Theory & Practice; Information Organization and Access; Data Cleaning in Theory & Practice

EDUCATION

- Expected: **PhD candidate**, Information Sciences
May 2022 University of Illinois at Urbana-Champaign, USA
- **Dissertation:** Agreeing to Disagree: Applying a Logic-based Approach to Reconciling and Merging Multiple Taxonomies
 - **Advisor:** Dr. Bertram Ludäscher
 - **Committee:** Dr. Allen Renear, Dr. Karen Wickett, Dr. Nico Franz
- 2015 **Master of Arts**, Library and Information Science
National Taiwan University, Taiwan
- **Master's thesis:** A Study on the Best Practice for Constructing a Cross-lingual Geospatial Information Ontology
 - **Advisor:** Dr. Sherry (Hsueh-Hua) Chen
 - Graduated with College Honors
- 2013 **Bachelor of Arts**, Library and Information Science
National Taiwan University, Taiwan
- Graduated with College Honors

PUBLICATIONS

Peer-reviewed Journal Articles

- 2017 [j1] Thomer, A., **Cheng, Y.-Y.**, Schneider J., Twidale, M., Ludäscher, B. (2017). Towards Alignment of Natural History Museum Database Schemas Using a Logic-based Reasoning Tool. *Knowledge Organization*, (44) 7, 545-558. doi:<https://doi.org/10.5771/0943-7444-2017-7-545>

Book and Book chapters

- In progress [b1] Bettivia, R., **Cheng, Y.-Y.**, Gryk, M. (forthcoming in 2022). *Navigating through the Panoply of Provenance Metadata Standards useful for Digital Curation*. To appear in Synthesis Lectures on Information Concepts, Retrieval, and Services. Morgan & Claypool.

Peer-reviewed Conference Papers in Proceedings

- 2020 [c10] **Cheng, Y.-Y.**, & Ludäscher, B. (2020). Reconciling Taxonomies of Electoral Constituencies and Recognized Tribes of Indigenous Taiwan. Virtual, Oct 23-27. In *Proceedings of the ASIS&T 2020 Annual Meeting*. doi: <https://doi.org/10.1002/pr2.248>
- 2020 [c9] **Cheng, Y.-Y.**, Hoang, K.-L., & Ludäscher, B. (2020). Cacao, Cocoa, or Cocoa? Reconciliation of Taxonomic Names in Biodiversity Heritage Library. In *Proceedings of the Sixteenth International ISKO Conference*, Aalborg, Denmark. doi: <https://doi.org/10.5771/9783956507762-88>
- 2019 [c8] **Cheng, Y.-Y.**, Parulian, N., Hsiao, T.-K., Dinh, L., Sarol, J., & Schneider, J. (2019). ReTracker: Actively and Automatically Matching Retraction Metadata in Zotero. In *Proceedings of the ASIS&T 2019 Annual Meeting*, Melbourne, Australia, October 19-23. doi:<https://doi.org/10.1002/pr2.32>

- 2019 [c7] Dinh, L., Sarol, J., **Cheng, Y.-Y.**, Hsiao, T.-K., Parulian, N., , & Schneider, J. (2019). Systematic Examination of Pre- and Post-Retracted Citations. In *Proceedings of the ASIS&T 2019 Annual Meeting, Melbourne, Australia*, October 19-23. doi:<https://doi.org/10.1002/pr2.35>
- 2019 [c6] **Cheng, Y.-Y.** & Ludäscher, B. (2019). Exploring Geopolitical Realities through Taxonomies: The Case of Taiwan. In *Proceedings of North American Symposium on Knowledge Organization (NASKO 2019)*, Vol. 7. Drexel University, Philadelphia, June 13-14. doi: <http://dx.doi.org/10.7152/nasko.v7i1.15625>
- 2019 [c5] Gupta, S., & **Cheng, Y.-Y.**, & Ludäscher, B. (2019). Possible Worlds Explorer: Datalog & Answer Set Programming for the Rest of Us. *Datalog 2.0*. Philadelphia, June 3-5.
- 2018 [c4] **Cheng, Y.-Y.** & Ludäscher, B. (2018). Full of beans: a study on the alignment of two flowering plants classification systems. In *Proceedings of the 18th European Networked Knowledge Organization Systems Workshop (NKOS 2018)*. CEUR-WS.org, Porto, Portugal, September 13, 2018.
- 2017 [c3] **Cheng, Y.-Y.**, Franz, N., Schneider, J., Yu, S., Rodenhasen, T., Ludäscher, B. (2017). Agreeing to Disagree: Reconciling Conflicting Taxonomic Views Using a Logic-based Approach. In *Proceedings of the ASIS&T 2017 Annual Meeting*, Washington, D.C., USA, October 27-November. doi: <https://doi.org/10.1002/pr2.2017.14505401006>
- 2016 [c2] **Cheng, Y.-Y.**, Chen, H.-H. (2016). A Study on Constructing a Cross-lingual Ontology. In *International Conference on Dublin Core and Metadata Applications (DCMI 2016)*, Copenhagen, Denmark, Oct 13-16.
- 2014 [c1] Sun, C.-H., **Cheng, Y.-Y.**, Tsai, B, Y., Chen, H, -H. (2014). Ontology Development in Geographic Information Systems: A Case Study of Multi-Agent Knowledge-Oriented Cyberinfrastructure Project (MAKOCI). (in Traditional Chinese). *12th Conference of Taiwan-China Cross Strait Chinese Association of Library and Information Science Education*. Tianjin, China. July 6-8.

Peer-reviewed Poster Extended Abstracts in Proceedings

- 2021 [p7] **Cheng, Y.-Y.** (2021). Systematic Comparison of Data Models Used in Mapping Knowledge Organization Systems. To be presented at *the ASIS&T 2021 Annual Meeting*.
- 2020 [p6] **Cheng, Y.-Y.**, & Ludäscher, B. (2020). Through the Magnifying Glass: Exploring Aggregations of COVID-19 Datasets by County, State, Region, and Taxonomies. In *Proceedings of the ASIS&T 2020 Annual Meeting*. Virtual, October 23-27. doi: <https://doi.org/10.1002/pr2.355>
- 2020 [p5] **Cheng, Y.-Y.**, Dilliplane, S., & Ludäscher, B. (2020). Snailed it! Merging Taxonomically Organized Biodiversity Datasets with Shifting Geopolitical Realities. *International Digital Curation Conference (IDCC 2020)*. Dublin, Ireland, February 17-20 doi: 10.5281/zenodo.3666830
- 2019 [p4] Dinh L., & **Cheng, Y.-Y.**, & Parulian, N. (2019). ReTracker: an Open-source Plugin for Automated and Standardized Tracking of Retracted Scholarly Publications. In *Proceedings of ACM/IEEE Joint Conference on Digital Libraries (JCDL 2019)*. University of Illinois at Urbana-Champaign, June 2-5. doi: 10.1109/JCDL.2019.00092
- 2018 [p3] Dinh, L., & **Cheng, Y.-Y.** (2018). Middle of the (by)line: Examining Hyperauthorship Networks in the Human Genome Project. In *Proceedings of the 81th Annual ASIS&T Meeting*. Vancouver, Canada, November 11-14. doi: <https://doi.org/10.1002/pr2.2018.14505501118>
- 2018 [p2] **Cheng, Y.-Y.**, Weigl, D. M., Downie., J. S., Page, K. R. (2018). Towards Incorporating the Notion of Feature Shapes in Music and Text Retrieval. In *Proceedings of iConference 2018 Annual Meeting*, Sheffield, U.K., Mar 25-28.
- 2016 [p1] **Cheng, Y.-Y.**, Chen, H.-H. (2016). Towards a Seamless Multilingual Semantic Web: a Study on Constructing a Cross-Lingual Ontology. In *Proceedings of the 79th Annual ASIS&T Meeting*. Copenhagen, Denmark, October 14-16. doi: <https://doi.org/10.1002/pr2.2016.14505301142>

Doctoral Colloquium

- 2021 Cheng, Y.-Y. (Oct, 2021). Agreeing to Disagree: Applying a Logic-based Approach to Reconciling and Merging Multiple Taxonomies. Doctoral colloquium, 2021 Annual Meeting of the Association for Information Science and Technology (ASIS&T). Salt Lake City, UT, October 30 - November 2.
- 2021 Cheng, Y.-Y. (Sept, 2021). Agreeing to Disagree: Applying a Logic-based Approach to Reconciling and Merging Multiple Taxonomies. Doctoral colloquium, 2021 Annual Conference of the Association for Library and Information Science Education (ALISE). Virtual, September 20-24.
- 2021 Cheng, Y.-Y. (July, 2021). Agreeing to Disagree: Applying a Logic-based Approach to Reconciling and Merging Multiple Taxonomies. Doctoral colloquium, 2021 North American Symposium on Knowledge Organization (NASKO). Virtual, July 9-11.

RESEARCH EXPERIENCE

- 2016- **Center for Informatics Research in Science and Scholarship (CIRSS), School of Information Sciences, University of Illinois at Urbana-Champaign**
Graduate Research Assistant
- Project: Exploring Taxon Concepts and Taxonomy Alignments
 - Supervisor: Dr. Bertram Ludäscher
- 2019, 2020 **LEADS-4-NDP Program, Academy of Natural Sciences, Drexel University**
Fellow
- Project: From Natural History Literature to Linked Data Biodiversity Knowledge Graph
 - Supervisors: Steven Dilliplane, Dr. Jane Greenberg
- 2018 Summer **WholeTale, University of Illinois at Urbana-Champaign**
Research Intern
- Project: Reproducibility Study in Biodiversity Informatics
 - Supervisor: Dr. Bertram Ludäscher, Dr. Nico M. Franz
- 2017 Summer **Oxford e-Research Centre, University of Oxford, United Kingdom**
Research Intern
- Project: Oxford-Illinois Digital Library Placement Program, Linked Data Digital Musicology Project
 - Supervisors: Dr. Kevin Page, Dr. David Weigl, Dr. J. Stephen Downie
- 2015-2016 **Department of Library and Information Science, National Taiwan University**
Graduate Research Assistant
- Project: Framework of a Spatially-enabled Intelligent City towards Semantic Web
 - Supervisors: Dr. Sherry Hsueh-Hua Chen & Dr. Chih-Hong Sun
- 2013-2014 **Taiwan Geographic Information System Center, Taipei, Taiwan**
Graduate Research Assistant
- Project: Multi-Agent Knowledge-Oriented Cyberinfrastructure Project (MAKOI)
 - Supervisor: Dr. Chih-Hong Sun

TEACHING EXPERIENCE

Instructor of Record

- Summer 2021 **Metadata in Theory and Practice**
School of Information Sciences, University of Illinois at Urbana-Champaign
- Sole instructor teaching 12-weeks of lectures
 - Lecture topics include different types of metadata (descriptive, administrative, provenance, etc), metadata interoperability, metadata harvesting, XML, oXygen, etc

Co-instructor

- SP20-FA20 **Theory and Practice Data Cleaning**
School of Information Sciences, University of Illinois at Urbana-Champaign
- Co-taught with Dr. Bertram Ludäscher
 - Hybrid course (Online & face-to-face instruction)
 - Lecture topics include developing use cases for cleaning, different types of datasets, Regular Expressions, OpenRefine, provenance and reproducibility
- Fall 2015 **Special Topics on Knowledge Organization**
Department of Library & Information Science, National Taiwan University
- Co-taught with Dr. Hsueh-Hua Chen
 - Face-to-face instructions
 - Lecture topics include introduction to KO and KOS, Semantic Web Technologies, Developing ontologies, Protégé

Teaching Assistant

- Spring 2021 **Information Organization and Access**
School of Information Sciences, University of Illinois at Urbana-Champaign
- Summer 2020 **Coursera, Theory and Practice Data Cleaning**
Master of Computer Science-Data Science (MCS-DS), University of Illinois at Urbana-Champaign
- Fully Online course, No. of students: 400+
- FA17-FA19 **Theory and Practice Data Cleaning**
School of Information Sciences, UIUC
- Hybrid course (Online & face-to-face instruction)
- Fall 15 **Introduction to Library Science**
Department of Library & Information Science, National Taiwan University
- Spring 15 **Special Topics on Data Curation**
Department of Library & Information Science, National Taiwan University

WORKSHOP ORGANIZED

Full-Day Workshop and Tutorials

- 2021 Navigating through the Panoply of Provenance Metadata Standards useful for Digital Curation. Workshop at iConference 2021. (online) (co-taught with Rhiannon Bettivia, Michael Gryk).
- 2020 Navigating through the Panoply of Provenance Metadata Standards useful for Digital Curation. Workshop presented at the International Digital Curation Conference (IDCC 2020). Dublin, Ireland, 17 February- 20 February. (co-taught with Rhiannon Bettivia, Michael Gryk).

INVITED TALKS

- 2021 **IS505, Information Organization and Access. School of Information Sciences, UIUC.** Title: Metadata, Authority Control and Data Quality Issues.
- 2020 **Center for Informatics Research in Science and Scholarship (CIRSS) Seminar, UIUC.** Title: Agreeing to Disagree: Applying a Logic Based Approach to Reconciling and Merging Multiple Taxonomies
- 2020 **LEADS-4-NDP Forum. Metadata Research Center, Drexel University, College of Computing and Informatics.** Title: LEADS fellow Examples of Impact Project – Academy of Natural Sciences and the Biodiversity Knowledge Graphs project.
- 2019 **Center for Informatics Research in Science and Scholarship (CIRSS) Seminar, UIUC.** Title: ReTracker: Actively and Automatically Matching Retraction Metadata in Zotero
- 2017 **The Future of Systematics in Data-Centric Biology Workshop, Marine Biological Laboratory (MBL).** Title: Possible World Explorer and Taxonomy Alignment Research

2016 **Knowledge Organization and Cultural Heritage: Perspectives of the Semantic Web Conference. Academic Sinica, Taiwan.** Title: An Exploration of Cross-Lingual Ontology Development in Geographic Information Systems. (presented in Mandarin).

CERTIFICATE

2020 **Graduate Teacher Certificate**
Center for Innovation in Teaching & Learning, University of Illinois at Urbana Champaign
Taught more than two semesters of courses, participated in a series of teaching development program and evaluations, and fulfilled additional teaching requirements.

FELLOWSHIPS AND AWARDS

2021 **Beta Phi Mu Eugene Garfield Doctoral Dissertation Fellowship**
\$3000 Dissertation fellowship awarded by the Beta Phi Mu Honor Society

2021 Fall **Anita and Marie Hostetter Scholarship**
iSchool fellowship support for doctoral candidates who wants to teach library science in an accredited library schools

2020 **LEADS Fellow**
LIS Education and Data Science for the National Digital Platform (LEADS-4-NDP) *extended* fellowship, \$5000

2020 Spring **Teacher Ranked as Excellent**
Co-instructor of Theory & Practice Data Cleaning

2019 **LEADS Fellow**
LIS Education and Data Science for the National Digital Platform (LEADS-4-NDP) fellowship, \$5000 with travel funding

2018 **ASIS&T Student Design Competition winner**
Winning project: ReTrackers: an automated and standardized solution to tracking retracted

2018 **NSF Student Travel Grant**
Travel grant awarded to attend the U.S. Semantic Technologies Symposium Series (US2TS)

2013, 2015 **Phi Tau Phi Scholastic Honor Society Honorary Member**
Graduated with college honors, Phi Tau Phi Scholastic honor Society of Taiwan

2015 **Best Paper Award**
Master's thesis, awarded by the Library Association of the Republic of China (Taiwan)

2014 **Outstanding Graduate Student Award**
Awarded by the Chinese Association of Library & Information Science Education

2010, 2011,
2012, 2013 **Presidential Award**
Top 1% of the class, National Taiwan University

SERVICES

Founder and Co-chair

2019-2020 UIUC ACM Women Student Chapter

Organizing Committee

- 2020-2021 Diversity and Inclusivity Task Force, LIS Education And Data Science Integrated Network Group (LEADING)
- 2020 Student Poster session
Women in Data Science Urbana Champaign (WiDS)
- 2017-2020 Organizer, Conceptual Foundations Group
Interest-based research group in School of Information Sciences, UIUC

Conference Reviewer

- 2019, 2020 Annual Conference of the Association for Information Science and Technology (ASIS&T)
- 2018, 2019, 2020 iConference
- 2018, 2019 Dublin Core Metadata Initiative (DCMI)

Conference Session Chair

- 2021 Annual Conference of the Association for Information Science and Technology (ASIS&T),
Research Data Management session
- 2020 International Digital Curation Conference (IDCC), Metadata and Reusability session

Member

- 2016- Association for Information Science and Technology (ASIS&T)
- 2019- International Society of Knowledge Organization (ISKO)
- 2019- Association for Computing Machinery (ACM)
- 2020- Association for Library and Information Science Education (ALISE)