Kun Lu

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School of Library and Information Studies
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EDUCATION

Ph.D. in Information Studies	2008-2012
University of Wisconsin-Milwaukee, Milwaukee, USA	
M.S. in Information Science	2006-2008
Wuhan University, Wuhan, China	
B.S. in Information Management and Information System	2002-2006
Wuhan University, Wuhan, China	

PROFESSIONAL APPOINTMENTS

Associate professor at University of Oklahoma, USA	2019 - now
Assistant professor at University of Oklahoma, USA	2013 - 2019
Faculty member at Wuhan University, China	2012 - 2013

RESEARCH INERESTS

Applied natural language processing
Information retrieval
Text mining
Science informatics

FUNDED PROJECTS

- *Leveraging Big Data to Improve Quality in Infants' and Toddlers' Language Learning Environments*, funded by OU ICAST/DISC seed funding competition, co-PI, $30,000 (2023 – 2024)
- *A Proof-of-Concept Study Aimed at Leveraging Cognitive Computing to Optimize Patient Selection, Speed of Accrual and On-Treatment Data Capture for Phase 1 Oncology Clinical Trials at the Stephenson Cancer Center*, funded by OU DISC/SCC seed funding competition, co-PI, $30,000 (2022 – 2023)
- *Mining the Native American Authored Works in HathiTrust for Insights*, funded through the Scholar-Curated Worksets for Analysis, Reuse & Dissemination (SCWAReD) project by Andrew W. Mellon Foundation, PI, $30,000 (2021 – 2022)
- *Extracting Band Gap Information from Materials Science Literature to Assist Photovoltaic Materials Design and Discovery*, funded by OU CAS Data Scholarship Initiative Grant, PI, $11,298 (June 2022)
- *Mining Materials Science Literature for Accelerated Photovoltaic Materials Design and Discovery*, funded by OU CAS Data Scholarship Initiative Grant, PI, $11,822 (July 2021)
- *Accelerated Optoelectronic Materials Design and Discovery Guided by Machine Learning and Advanced Computation*, funded by OU Data Institute for Societal Challenges Seed Grant, Co-PI, $3,000 (Jan – Sep 2021)
- *Mining Scientific Literature for Bacterial Living Environment Information*, funded by OU CAS Data Scholarship Initiative Grant, PI, $8,000 (July 2019)
- *Research on Intelligence Consulting Services Based on the Semantic Analysis of*

PUBLICATIONS

Referred Journal Articles (* corresponding author):

Ghosh, S., & **Lu, K.**[*] (2022). Band gap information extraction from materials science literature – a pilot study, *Aslib Journal of Information Management*, Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/AJIM-03-2022-0141

Lu, K., Yang, G., & Wang, X. (2022). Topics Emerged in the Biomedical Field and Their Characteristics. *Technological Forecasting and Social Change, 174,* 121218.

Liang, Z., Mao, J., **Lu, K.**, & Li, G. (2021). Finding citations for PubMed: A large-scale comparison between five freely available bibliographic data sources. *Scientometrics, 126,* 9519 - 9542.

Wang, S., Mao, J., **Lu, K.**, Cao, Y., & Li, G. (2021). Understanding interdisciplinary knowledge integration through citance analysis: A case study on eHealth. *Journal of Informetrics, 15*(4), 101214.

Joo, S., Cahill, M., Ingram, E., Hoffman, H., Olson, Am., & **Lu, K.** (2021). An analysis of the literacy-enhancing potential of singing versus spoken language in public library storytimes: A text analytics approach. *Journal of Early Childhood Literacy*.

Liang, Z., Mao, J., **Lu, K.**, Ba, Z., & Li, G. (2021). Combining deep neural network and bibliometric indicator for emerging research topic prediction. *Information Processing and Management, 58*(5), 102611.

Xu, S., Hao, L., Yang, G., **Lu, K.**, & An, X. (2021). A Topic Models-based Framework for Detecting and Forecasting Emerging Technologies. *Technological Forecasting and Social Change, 162,* 120366.

Yi, M., Lu, Y., Deng, W., **Lu, K.**, & Zhang, Z. (2020). Understanding Verified Users' Posting Behavior from the Perspective of Human Dynamics: A Case Study of Sina Micro-blog. *Aslib Journal of Information Management, 73*(2), 221 - 239.

Joo, S., **Lu, K.**, & Lee, T. (2020). Analysis of Content Topics, User Engagement, and Library Factors in Public Library Social Media based on Text Mining. *Online Information Review, 44*(1), 258 - 277.

Koh, K., Snead, J., & **Lu, K.** (2019). The Process of Maker Learning and Information Behavior in a Technology-Rich High School Class. *Journal of the Association for Information Science and Technology, 70*(12), 1395 - 1412.

Zhao, W., Mao, J., & **Lu, K.**[*] (2018). Ranking Themes on Co-word Networks: Exploring the Relationships among Different Metrics. *Information Processing and Management, 54*(2), 203 - 218.

Lu, K., Mao, J., & Li, G. (2018). Toward Effective Automated Weighted Subject Indexing: A Comparison of Different Approaches in Different Environments. *Journal of the Association for Information Science and Technology, 69*(1), 121 - 133.

Mao, J., Cao, Y., **Lu, K.,** & Li, G. (2017). Topic Scientific Community in Science: a Combined Perspective of Scientific Collaboration and Topics. *Scientometrics, 112*(2), 851-875.

Lu, K., Joo, S., Lee, T., & Hu, R. (2017). Factors that Influence Query Reformulations and Search Performance in Health Information Retrieval – A Multi-level Modeling Approach. *Journal of the Association for Information Science and Technology, 68*(8), 1886-1898.

Lu, K., Cai, X., Ajiferuke, I., & Wolfram, D. (2017). Vocabulary Size and its Effect on Topic Representation. *Information Processing and Management, 53*(3), 653-665.

Mao, J., **Lu, K.,** Li, G., & Yi, M. (2016). Profiling Users with Tag Networks in Diffusion-based Personalized Recommendation. *Journal of Information Science, 42*(5), 711-722.

Mao, J., **Lu, K.**[*], Mu, X., & Li, G. (2015). Mining Document, Concept and Term Associations for Effective Biomedical Retrieval - Introducing MeSH-enhanced Retrieval Models. *Information Retrieval Journal, 18*(5), 413-444.

Lu, K. & Mao, J. (2015). An Automatic Approach to Weighted Subject Indexing – An Empirical Study in the Biomedical Domain. *Journal of the Association for Information Science and Technology, 66*(9), 1776-1784.

Lu, K., Ajiferuke, I., & Wolfram, D. (2014). Extending Citer Analysis to Journal Impact Evaluation. *Scientometrics, 100*(1), 245-260.

Lu, K. & Kipp, M.E.I. (2014). Understanding the Retrieval Effectiveness of Collaborative Tags and Author Keywords in Different Retrieval Environments – An Experimental Study on Medical Collections. *Journal of the Association for Information Science and Technology, 65*(3), 483-500.

Mu,X., **Lu, K.,** & Ryu, H. (2014). Explicitly Integrating MeSH Thesaurus Help into Health Information Retrieval Systems: An Empirical User Study. *Information Processing and Management, 50*(1), 24-40.

Lu, K. & Wolfram, D. (2012). Measuring Author Research Relatedness: A Comparison of Word-based, Topic-based and Author Co-citation Approaches. *Journal of the American Society for Information Science and Technology, 63*(10), 1973-1986.

Joo, S., Lin, S. & **Lu, K.** (2011). A Usability Evaluation Model for Academic Library Websites: Efficiency, Effectiveness and Learnability. *Journal of Library and Information Studies, 9*(2), 11-26.

Mu, X., Ryu, H. & **Lu, K.** (2011). Supporting Effective Health and Biomedical Information Retrieval and Navigation: A Novel Facet View Interface Evaluation. *Journal of Biomedical Informatics, 44*(4), 576-586.

Lu, K., Joo, S. & Wolfram, D. (2011). An Investigation of Web Resource Distribution in the Field of Information Science. *Cybermetrics, 15(1)*.

Ajiferuke, I., **Lu, K.** & Wolfram, D. (2011). Who Are the Research Disciples of an Author? Examining Publication Recitation and Oeuvre Citation Exhausitivity. *Journal of Informetrics, 5*(2), 292-302.

Lu, K. & Wolfram, D. (2010). Geographic Characteristics of the Growth of Informetrics Literature 1987-2008. *Journal of Informetrics, 4*(1), 591-601.

Ajiferuke, I., **Lu, K.** & Wolfram, D. (2010). A Comparison of Citer and Citation-Based Measure Outcomes for Multiple Disciplines. *Journal of the American Society for Information Science and Technology, 61*(10), 2086-2096.

Mu, X., **Lu, K.** & Ryu, H. (2010). Search Strategies on a New Health Information Retrieval System. *Online Information Review, 34*(3), 440-456. **(Emerald Literati Network Highly Commented Paper Award)**

Mu, X. & **Lu, K.** (2010). Towards Effective Genomic Information Retrieval: The Impact of Query Complexity and Expansion Strategies. *Journal of Information Science. 36*(2), 194-208.

Lu, K. (2008). Tacit Knowledge Externalization Based on Web2.0. *Chinese Journal of Information Science, 2*, 247-251.

Cai, Q., **Lu, K.** & Wang, JY. (2008). Research on Evaluation Indices System of the Network Database Service Benefit .*Chinese Journal of Intelligence, 27*(2), 40-42.

Referred Conference Proceedings:

Lu, K., Heaton, R., Orr, R., Vetter, A., Dubnicek, R., & Magni, I. (2022). Mining the Native American Authored Works in HathiTrust for Insights. In *Proceedings of DH 2022*. Tokyo, Japan. (Long presentation)

Liang, Z., Liu, F., Mao, J., & **Lu, K.** (2021). A Knowledge Representation Model for Studying Knowledge Creation, Usage, and Evolution. In *Proceedings of iConference 2021*. Beijing, China. (Full paper, **Best Pest Runner-ups**)

Lu, K. (2020). What Kind of Research Topics Emerged in the Biomedical Domain? - A Perspective from Newly Added Subject Terms in a Thesaurus. In *Proceedings of iConference 2020.* Borås, Sweden. (Poster)

Mao, J., Zhang, J., **Lu, K.**, & Li, G. (2019). Understanding the Relevance between Text and Images in Disaster-related Social Media Posts. In *Proceedings of ASIST 2019*. Melbourne, Australia. (Poster)

Mao, J., **Lu, K.**, Zhao, W., & Cao, Y. (2018). How Many Keywords Do Authors Assign to Research Articles – A Multi-disciplinary Analysis. In *Proceedings of iConference 2018*. Sheffield, UK. (Poster)

Joo, S., & **Lu, K.** (2017). Content Analysis of Facebook Posts in Public Libraries based on Textual Analysis. In *Proceedings of ASIST 2017*. Arlington, Virginia, USA. (Poster)

Valencia, K.R., & **Lu, K.** (2017). Mining Scholarly Articles for Citation Contexts – A Pilot Study in Information Science Domain. In *Proceedings of iConference 2017*. Wuhan, Hubei, China. (Poster)

Lu, K., Mao, J., Li, G., & Xu, J. (2016). Recognizing Reference Spans and Classifying their Discourse Facets. In *BIRNDL@JCDL* (pp.139-145). Newark, New York, USA. (Poster)

Lu, K., Joo, S., Lee, T., & Hu, R. (2016). Analyzing Query Reformulation Data using Multi-level Modeling. In *Proceedings of iConference 2016*. Philadelphia, Pennsylvania, USA. (Poster)

Lu, K., Mao, J., Li, G. (2015). Enhancing Subject Metadata with Automated Weighting: A Comparison of Different Measures. In *Proceedings of International Conference on Asian Digital Libraries 2015 (ICADL'2015)*, Seoul, Korea. **(Best Paper Award)**

Chiu, W., & **Lu, K.** (2015). Random Walk on Co-word Network: Ranking Terms Using Structural Features. In *Proceedings of the 2015 Annual Meeting of the Association for Information Science and Technology (ASIST'2015)*, St. Louis, Missouri, USA. (Paper)

Chiu, W., & **Lu, K.** (2015). Paradigmatic Relations and Syntagmatic Relations: How Are They Related? In *Proceedings of the 2015 Annual Meeting of the Association for Information Science and Technology (ASIST'2015)*, St. Louis, Missouri, USA. (Poster)

Lu, K., Zhao, Y., Ajiferuke, I., & Wolfram, D. (2015). How related is author topical similarity to other author relatedness measures. In *Proceedings of the International Society of Scientometrics and Informetrics Conference 2015 (ISSI'2015)*, Istanbul, Turkey. (Paper)

Mao, J., & **Lu, K.** (2014). Leverage the associations between documents, subject headings and terms to enhance retrieval. In *Proceedings of the 7th International workshop on Exploiting Semantic Annotations in Information Retrieval (ESAIR'14)*, pp. 33-35, Shanghai, China. (Poster)

Wang, Y., Joo, S., & **Lu, K.** (2014). Exploring topics in the field of data science by analyzing Wikipedia documents: A preliminary result. In *Proceedings of the 2014 Annual Meeting of the Association for Information Science and Technology (ASIST'2014)*, Seattle, USA. (Poster)

Lu, K., & Mao, J. (2013). Automatically infer subject terms and documents associations through text mining. In *Proceedings of the 2013 Annual Meeting of the American Society for Information Science and Technology (ASIST'2013)*, Montreal, Canada. (Poster)

Hu, R., **Lu, K.,** & Joo, S. (2013). Effects of Topic Familiarity and Search Skills on Query Reformulation Behavior. In *Proceedings of the 2013 Annual Meeting of the American Society for Information Science and Technology (ASIST'2013)*, Montreal, Canada. (Paper)

Lu, K., Lu, W., Cheng, Q., Lei, S., & He, J. (2013). A Visualization Tool for Topic Evolution among Research Fields. In *Proceedings of the International Society of Scientometrics and Informetrics Conference 2013 (ISSI'2013)*. Vienna, Austria. (Poster)

Lu, K., Ajiferuke, I., & Wolfram, D. (2013). Extending Citer-based Analysis to Journal Impact Evaluation. In *Proceedings of the International Society of Scientometrics and Informetrics Conference 2013 (ISSI'2013)*. Vienna, Austria. (Paper)

Lu, K. (2013). An Insight into Vector Space Modeling and Language Modeling. In *Proceedings of the iConference 2013*. Fort Worth, Texas, USA. (Poster)

Joo, S. & **Lu, K.** (2012). Structural Analysis of Author Vector Space in the Field of Information Science. In *Proceedings of 2012 Annual Meeting of the American Society for Information Science and Technology (ASIST'2012)*, Baltimore, Maryland. (Poster)

Lu, K. & Wolfram, D. (2011). Assessing Author Research Focus Using Vector Space Modeling. In *Proceedings of 2011 Annual Meeting of the American Society for Information Science and Technology (ASIST'2011)*, New Orleans, Louisiana. (Poster)

Tirilly, P., **Lu, K.,** & Mu, X. (2011). Predicting Modality from Text Queries for Medical Image Retrieval. In *Proceedings of the 2011 international ACM workshop on Medical Multimedia analysis and retrieval* (pp.7-12). Scottsdale, Arizona, USA. (Paper)

Tirilly, P., **Lu, K.,** Mu, X., & Zhao, T. (2011). On Modality Classification and Its Use in Text-based Image Retrieval in Medical Databases. In *Proceedings of the 9th International Workshop on Content-based Multimedia Indexing (CBMI)*, Madrid, Spain. (Paper)

Lu, K. & Kipp, M.E.I. (2010)**.** An Experimental Study on the Retrieval Effectiveness of Collaborative Tags. In *Proceedings of 2010 Annual Meeting of the American Society for Information Science and Technology (ASIST'2010)*, Pittsburgh, Pennsylvania. (Poster)

Lu, K. & Wolfram, D. (2010). Delineating Citation Concepts. In *Proceedings of 2010 Annual Meeting of the American Society for Information Science and Technology (ASIST'2010)*, Pittsburgh, Pennsylvania. (Poster)

Lu, K. & Mu, X. (2009). Query Expansion Using UMLS Tools for Health Information Retrieval. In *Proceedings of the 2009 Annual Meeting of the American Society for Information Science and Technology (ASIST'2009)*, Vancouver, British Columbia. (Paper)

Ajiferuke, I., Wolfram, D. & **Lu, K.** (2009). A Comparison of Citer and Citation-based Measure Outcomes in the Social Sciences. In *Proceedings of 2009 Annual Meeting of the American Society for Information Science and Technology (ASIST'2009),* Vancouver, British Columbia.. (Poster)

PEER REVIEW EXPERIENCE

Aslib Journal of Information Management

The Electronic Library

Frontiers Research Metrics & Analytics

IMLS grant reviewer

International Journal of Human-Computer Interaction

iConference paper reviewer

ASIST paper reviewer

Journal of the Association for Information Science and Technology

Journal of Informetrics

Journal of Information Science

Journal of Information Science Theory and Practice

Journal of Data and Information Management

TEACHING EXPERIENCE

Doctoral Research Methods at University of Oklahoma (2021)

Database Design at University of Oklahoma (2021 – present)

Information Retrieval and Text Mining at University of Oklahoma (2019 - present)

Fundamentals of IT at University of Oklahoma (2013 - present)

Dynamic Web Development at University of Oklahoma (2015 - present)

Information Studies Capstone at University of Oklahoma (2015 - present)

Information Technology Management at University of Oklahoma (2014 – 2015)

Data Mining (Co-teach in English) at Wuhan University (2013 Spring)

Information Resource Management at Wuhan University (2013 Spring)

Web Application Development at University of Wisconsin-Milwaukee (2012 Spring)

Database Information Retrieval Systems at University of Wisconsin-Milwaukee (2011 Fall)

SERVICE EXPERIENCE

Service to the Academic Community
- Scilit Advisory Board (2021 -)
- IMLS Field Reviewer
- Editorial Board member of Aslib Journal of Information Management (2021 -)
- JCDL 2018 Program Committee
- ICADL 2015 - 2016 Program Committee
- ASIST 2015 - 2017 SIG/MET Program Committee
- ASCW'15 (Quantifying and Analyzing Scholarly Communication on the Web) Program Committee
- ASIST SIG/MET Membership Chair (2015 - 2017)

University of Oklahoma
- SLIS Undergraduate Studies Committee Chair
- SLIS Doctoral Program Committee Chair
- SLIS Technology Advisory Board Chair
- SLIS Curriculum Committee Member
- SLIS Communication Committee Member
- SLIS Assessment Committee Member
- CAS IT Committee (2017 - present)
- CAS Data Scholarship Committee (2016 – 2017)
- CAS Support of Teaching and Research Committee (2022 – present)
- OU Faculty Compensation and Benefits Committee Member (2022 - present)

University of Wisconsin-Milwaukee
- Student representative in Faculty Search & Screen Committee (2011)
- Ph.D representative in SOIS Research Committee (2009 - 2010)
- Student representative in Doctoral Committee (2008 - 2009)

AWARDS

Presidential International Travel Fellowship	2017
ICADL 2015 Best Paper Award	2015
University of Oklahoma College of Arts and Sciences Junior Faculty Summer Fellowship	2015
University of Oklahoma College of Arts and Sciences Travel Assistance Program	2014
University of Oklahoma College of Arts and Sciences Travel Assistance Program	2013
SOIS Doctoral Research Award Grant	2012
ASIST Travel Award	2011
Emerald Literati Network Highly Commented Paper Award	2011
Dissertation Fellowship University of Wisconsin Milwaukee	2011
University of Wisconsin-Milwaukee SOIS Dean's Fellowship	2010
Chancellor's Fellowship University of Wisconsin Milwaukee	2010
Chancellor's Fellowship University of Wisconsin Milwaukee	2008
Second prize national scholarship Wuhan University	2004
Second prize national scholarship Wuhan University	2003

First prize of excellent student leader in Wuhan University   2003

TECHNICAL SKILLS

Programming skills
- Proficiency in Python, Java, Java based database application (MySQL & MS Access database), Javascript, JSP, ASP, PHP Web application
- Experienced in C/C++

Statistical analysis
Familiar with statistical packages including SPSS, SAS and R

Operating systems
Familiar with Windows and Linux