

ZHE HE, Ph.D. *(Last Update: August 2018)*

Assistant Professor
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OVERVIEW

- Over 9 year of research experience in Biomedical and Health Informatics
- Substantial experience in research techniques in auditing biomedical terminologies/ontologies, clinical research informatics, and visual data analytics
- Published over 50 papers in mainstream journals and conferences in Biomedical Informatics
- First-author papers received **two Distinguished Paper Awards** from American Medical Informatics Association 2017 and 2015 Annual Symposiums (AMIA 2017 & AMIA 2015)
- Recipient of **2016-2017 Outstanding Faculty Research Award** of College of Communication & Information, Florida State University
- One paper selected into “**2013 Informatics Year in Review**” in AMIA 2014 Annual Symposium
- One paper selected as a **finalist in the Student Paper Competition** of AMIA 2015 Summit on Clinical Research Informatics
- Over eight years of teaching experience in various computer science and IT courses
- Recipient of the NJIT **Outstanding Student Leadership Award** (2013-2014)

ACADEMIC APPOINTMENTS

08/2015 – Present **Florida State University**, Tallahassee, FL, USA
School of Information
College of Communication & Information
Assistant Professor (Tenure-Track)
Director, FSU eHealth Lab

02/2014 – 07/2015 **Columbia University**, New York, NY, USA
Department of Biomedical Informatics
College of Physicians and Surgeons
Postdoctoral Research Scientist
Research topic: “*Assessing the Collective Population Representativeness of Related Clinical Trials*”
Mentor: Dr. Chunhua Weng

EDUCATION

01/2009 – 01/2014 **New Jersey Institute of Technology (NJIT)**, Newark, NJ, USA
Ph.D., Computer Science
Dissertation title: “*Using Structural and Semantic Methodologies to Enhance Biomedical Terminologies*”
Co-advisors: Drs. James Geller and Yehoshua Perl

08/2007 – 05/2009 **Columbia University**, New York, NY, USA
M.Sc., Computer Science

09/2003 – 07/2007 **Beijing University of Posts and Telecommunications (BUPT)**, Beijing, China
B.S., Computer Science (with honor)
Thesis title: “*Design and Performance Analysis of Web Service-Based Interoperable Interfaces between Heterogeneous Network Management Systems*”
Advisors: Drs. Luoming Meng and Xuesong Qiu

RESEARCH INTERESTS

I have broad interests in biomedical and health informatics, clinical research informatics, knowledge discovery, knowledge representation, and ontology-enhanced data analytics. The overarching goal of my research is to improve the population health and advance biomedical research through the collection, analysis, and application of electronic health data from heterogeneous sources. On the foundational track, I am developing semantic and structural methods to enhance controlled terminologies/ontologies and improve their utility in natural language processing, clinical decision support, data analytics, and electronic health records. On the application track, I am developing novel data-driven methods and tools to assess the generalizability of clinical studies using the electronic data in clinical trial registries, public patient databases, and clinical data warehouses. My research aims to improve the representation of underserved population subgroups in clinical studies such as older adults with multiple chronic conditions. Another line of my research is to bridge the terminology gap between health information consumers and health professionals through the analysis of the textual content in the online social media.

I have published in the following topics:

- Clinical Trial Generalizability Assessment and Improvements
- Biomedical Natural Language Processing
- Quality Assurance of SNOMED CT, UMLS, and Biomedical Ontologies in BioPortal
- Data-driven Concept Enrichment for Biomedical Terminologies
- Bridging the Terminology Gap between Health Information Consumers and Health Professionals
- Consumer Information Seeking Behavior

RESEARCH EXPERIENCE

8/2015 - Present **School of Information, Florida State University, Tallahassee, FL**

Assistant Professor

- Mentored four doctoral students, one master student, and two undergraduate students
- Developed a similarity-based term recommendation tool *simiTerm* for Open Access and Collaborative Consumer Health Vocabulary (JBI 2017)
- Data-driven understanding of consumers' behavior and language with the content of social media (BIBM 2017, PLOS One 2016, iConference 2016, JMIR Med Inform 2016, ASIS&T 2017, JMIR 2017)
- Developed a parsing tool *ULTRA* to structure clinical trial eligibility criteria with temporal constraints (BIBM 2016)
- Developed a topological-pattern-based methods that leverages the imbalanced granularity across ontologies for conceptual enrichment (MEDINFO 2017, AMIA 2016, MIE 2016, AIIM 2015)
- Developed structural and semantic methods for quality assurance of medical terminologies (JBI 2018, MIIM 2018, BIBM 2017, MIIM 2016)
- Assessed the population representativeness of clinical trials (JMIR 2018, AMIA 2017, EMBC 2016, BHI 2016)
- Assessed the racial disparities in clinical trials (SLEEP 2017, SBM 2017)
- Chaired the International Workshop on Semantic-Powered Data Analytics twice in Shenzhen, China, and Kansas City, MO, USA.
- Edited two special issues in SCIE journals (BMC Medical Informatics and Decision Making, Journal of Healthcare Engineering)

02/2014 – 07/2015 **Department of Biomedical Informatics, Columbia University, New York, NY**

Postdoctoral Research Scientist

- Developed a computable database for 160,000+ clinical trial summaries (AMIA 2014)
- Developed a visual analysis tool for clinical trial target populations (<http://is.gd/VITTA>) (JBI 2015)
- Developed a method for analyzing drug retest patterns in longitudinal clinical trials (AMIA CRI 2015)

- Developed a method for assessing the population representativeness of clinical trials using National Health and Nutrition Examination Survey data (MEDINFO 2015)
- Developing a method for assessing the population representativeness of clinical trials using multiple eligibility variables (JBI 2016)

01/2009 – 12/2013 **Structural Analysis of Biomedical Ontologies Center, NJIT, Newark, NJ**

Research Assistant

- Structural auditing technique for the UMLS (supported by NIH grant R01-LM008445): designed and built a Web-based system to support multiple UMLS semantic type assignments (<http://nat.njit.edu/NATServlet>); designed a pipeline for sculpting the refined semantic network of the UMLS (OHPHI 2014, JBI 2013)
- SNOMED CT (supported by NIH grant R01-LM008912): analyzed the readiness of SNOMED CT concept descriptors for primary care; analyzed the CORE & VA/KP problem list concepts of SNOMED CT (AIIM 2013, MIXHS 2012)
- Designed a framework for supporting quality assurance of ontologies in NCBO BioPortal (AMIA 2013)
- Developed a structural algorithmic method for harmonizing codes between UMLS source terminologies (AMIA TBI 2014)
- Led the development team for the Neighborhood Auditing Tool (<http://nat.njit.edu>)

TEACHING EXPERIENCE

Florida State University

- Instructor, LIS 5631 Health Information Sources (Graduate online synchronized course). Summer 2018.
- Instructor, LIS 5782 Database Management Systems (Graduate online synchronized course). Fall 2015 (SPCI Course Evaluation: 4.64/5.00), Fall 2016 (SPCI Course Evaluation: 4.54/5.00), Fall 2017.
- Instructor, LIS 5788 Management of Health Information Technology (Graduate online synchronized course). Fall 2016 (SPCI Course Evaluation: 5.00/5.00)
- Instructor, LIS 4930 Special Topics in Information Studies: Data Analytics (Face-to-Face). Spring 2016 (SPCI Course Evaluation: 4.71/5.00), Spring 2017 (SPCI Course Evaluation: 4.33/5.00), Spring 2018 (SPCI Course Evaluation: 4.58/5.00)
- Instructor, LIS 5916 Special Issues in Information Studies: Data Mining Methods and Applications. Spring 2017 (SPCI Course Evaluation: 4.77/5.00), Spring 2018 (SPCI Course Evaluation: 4.56/5.00)

Columbia University, New York, NY

- *Teaching Assistant*, Computer Science W 4111 Introduction to Databases (Graduate course), instructor: L. Gravano. Fall 2008

New Jersey Institute of Technology, Newark, NJ

- *Instructor*, CS 103 Computer Science - Business Problems (Undergraduate course using Python programming, MySQL, and Excel), Fall 2012, Spring 2013, Fall 2013
- *Instructor*, CS 104 Computer Programming and Graph Problems (Undergraduate course using Java programming, and MySQL), Fall 2010, Fall 2011
- *Lab Instructor*, CS114A Computer Science II (Java Programming), Fall 2009, Spring 2010
- *Teaching Assistant*, CS 332 Principle of Operating System (Undergraduate course), CS 610 Data Structure (Graduate course), Spring 2011
- *Mentor*, Development team of the Neighborhood Auditing Tool, 2009

Emagination Computer Camps, Waltham, MA

- *Technology Counselor*, Linux, Programming, and Web Design, Summer 2008
- *Mentor*, Leadership program, Summer 2008

REFEREED PUBLICATIONS

Note: In my field, full papers published in the proceedings of the top-ranked, highly selective conferences such as AMIA Annual Symposium are viewed as equally (if not more) important than journal articles. These are highly peer reviewed (with typical acceptance rates ranging from 15% to 30%) and are considered archival publications. Acceptance rates are indicated when they were made publicly available. It is the convention in my field to order author names by contribution, and put the primary author's name first. For publications funded by my NIH grant, my standard practice when working with students is to list the student's name(s) first, and the faculty advisor(s) last. An underscore indicates a student author. An asterisk () indicates corresponding author; † indicates equal-contribution co-first authors.*

Edited Book

1. Bian J, **He Z**, Guo Y, Hu X. Social Web and Health Research - Benefits, Limitations and Best Practice. Springer International Publishing AG. (Contracted, to be published in December 2018)

Journal Articles (N = 20)

2. **He Z***, Tao C, Bian J, Zhang R, and Huang J. Introduction: selected extended articles from the 2nd International Workshop on Semantics-Powered Data Analytics (SEPDA 2017). *BMC Medical Informatics and Decision Making*. 2018. 18 (Suppl 2):56. DOI: 10.1186/s12911-018-0624-8. (SCIE, Impact Factor: 2.13)
3. Lossio-Ventura JA, Hogan W, Modave F, Guo Y, **He Z**, Yang X, Zhang H, and Bian J*. OC-2-KB: Integration crowdsourcing into an obesity and cancer knowledge base curation system. *BMC Medical Informatics and Decision Making*. 2018. 18 (Suppl 2) :55. DOI: [10.1186/s12911-018-0635-5](https://doi.org/10.1186/s12911-018-0635-5) (SCIE, Impact Factor: 2.13)
4. Chen Z[†], **He Z**^{†*}, Liu X, and Bian J. Evaluating semantic relations in neural word embeddings using biomedical and general domain knowledge bases. *BMC Medical Informatics and Decision Making*. 18 (Suppl 2) :65. DOI: [10.1186/s12911-018-0630-x](https://doi.org/10.1186/s12911-018-0630-x) (SCIE, Impact Factor: 2.13)
5. **He Z***, Bian J, Carretta HJ, Lee J, Hogan WR, Shenkman E, and Charness N. Prevalence of Multiple Chronic Conditions Among Older Adults in Florida and the United States: Comparative Analysis of the OneFlorida Data Trust and National Inpatient Sample. *Journal of Medical Internet Research*. 2018; 20(4):e137. (SCIE, Impact Factor: 4.67)
6. Amith MF[†], **He Z**[†], Bian J, Lossio-Ventura JA, and Tao C*. Assessing the Practice of Ontology Evaluation for Biomedical Ontologies in BioPortal: Gaps and Opportunities. *Journal of Biomedical Informatics*. 2018. In press. DOI: 10.1016/j.jbi.2018.02.010. PMID: 29462669. (SCI, Impact Factor: 2.88, 5-Year Impact Factor: 3.12)
7. Gu H*, **He Z**, Duo W, Elhanan G, and Chen Y. Validating UMLS Semantic Type Assignments Using SNOMED CT Semantic Tags. *Methods of Information in Medicine*. 2018; 57(1): 43-53. DOI: 10.3414/ME17-01-0120. (SCI, Impact Factor: 1.53)
8. Bian J, Zhao Y, Salloum RG, Guo Y, Wang M, Prosperi M, Zhang H, Du X, Ramirez-Diaz LJ, **He Z**, Sun Y*. Using social media data to understand the impact of promotional information on laypeople's discussions: the case of Lynch syndrome. *Journal of Medical Internet Research*. 2017;19(12):e414. DOI: 10.2196/jmir.9266. PMID: 29237586. (SCIE, Impact Factor: 4.67)
9. **He Z***, Tao C, Bian J, Dumontier M, and Hogan W. Semantics-Powered Healthcare Engineering and Data Analytics. *Journal of Healthcare Engineering*. 2017;2017. PMID: 29214005. (Editorial, SCIE, Impact Factor: 1.26)
10. **He Z***, Chen Z, Oh S, Hou J, and Bian J. Enriching consumer health vocabulary through mining a social Q&A site: a similarity-based approach. *Journal of Biomedical Informatics*. 2017;69:75-85. PMID: 28359728 (SCI, Impact Factor: 2.88, 5-Year Impact Factor: 3.12)

11. Park MS[†], He Z^{†*}, Chen Z, Oh S, and Bian J. Consumer's Use of UMLS Concepts on Social Media: Diabetes-Related Textual Data Analysis in Blog and Social Q&A Sites. *JMIR Medical Informatics*. 2016; 4(4):e41. PMID: 27884812 (ESCI)
12. Bian J*, Yoshigoe K, Hicks A, Yuan J, He Z, Xie M, Guo Y, Prosperi M, and Modave F. Mining Twitter to assess the public perception of the "Internet of things". *PLoS ONE*. 2016;11(7): e0158450. PMID: 27391760 (SCI, Impact Factor: 2.77)
13. Ochs C*, He Z, Geller J, and Perl Y. A Structural Meta-ontology for Family-Based Quality Assurance of BioPortal Ontologies. *Journal of Biomedical Informatics*. 2016;61:63-76. PMID: 26988001 (SCI, Impact Factor: 2.88, 5-Year Impact Factor: 3.12)
14. He Z*, Ryan P, Hoxha J, Wang S, Carini S, Sim I, and Weng C. Multivariate analysis of the population representativeness of related clinical studies. *Journal of Biomedical Informatics*. 2016;60:66-76. PMID: 26820188. (SCI, Impact Factor: 2.88, 5-Year Impact Factor: 3.12) ([Clinical Research Informatics 2016 Year in Review](#))
15. Hoxha J, Chandar P, He Z, and Weng C*. DREAM: Classification Scheme for Dialog Acts in Clinical Research Data Query Mediation. *Journal of Biomedical Informatics*. 2016;59:89-101. PMID: 26657707. (SCI, Impact Factor: 2.88, 5-Year Impact Factor: 3.12)
16. Gu H*, Chen Y, He Z, Halper M, and Chen L. Quality Assurance of UMLS Semantic Type Assignments Using SNOMED CT Hierarchies. *Methods of Information in Medicine*. 2016; 55(2):158-165. PMID: 25925776. (SCI, Impact Factor: 1.53)
17. He Z*, Geller J, and Chen Y. A comparative analysis of the density of the SNOMED CT conceptual content for semantic harmonization. *Artificial Intelligence in Medicine*. 2015;64(1):29-40. PMID: 25890688. (SCI, Impact Factor: 2.88, 5-Year Impact Factor: 2.86)
18. He Z, Carini S, Sim I, and Weng C*. Visual aggregate analysis of eligibility features of clinical trials. *Journal of Biomedical Informatics*. 2015. 54:241-255 PMID: 25615940. (SCI, Impact Factor: 2.88, 5-Year Impact Factor: 3.12)
19. He Z*, Morrey CP, Perl Y, Elhanan G, Chen L, Chen Y, and Geller J. Sculpting the UMLS Refined Semantic Network. *Online Journal of Public Health Inform*, 2014. 6(2):e181. PMID: 25422719.
20. Agrawal A*, He Z, Wei D, Halper M, Perl Y, and Elhanan G. The readiness of SNOMED problem list Concepts for meaningful use of EHRs. *Artificial Intelligence in Medicine* (IF: 2.88, 5-year IF: 2.86), 2013. 58(2):73-80. PMID: 23602702.
21. Geller J, He Z*, Perl Y, Morrey CP, and Xu J. Rule-based support system for multiple UMLS semantic type assignments. *Journal of Biomedical Informatics*. 2013. 46(1):97-110. PMID: 23041716. (SCI, Impact Factor: 2.88, 5-Year Impact Factor: 3.12)

Conference Proceeding Papers (N=30)

22. Keloth VK, He Z, and Geller J. Leveraging Horizontal Density Differences Between Ontologies to Identify Missing Child Concepts: A Proof of Concept. *AMIA 2018 Annual Symposium Proceedings*. In press.
23. Zhang H, He Z, He X, Guo Y, Nelson DR, Modave F, Wu Y, Hogan W, and Bian J. Computable Eligibility Criteria through Ontology-Driven Data Access: A Case Study of Hepatitis C Virus Trials. *AMIA 2018 Annual Symposium Proceedings*. In press.
24. Lossio-Ventura JA, Hogan W, Modave F, Guo Y, He Z, Hicks A, and Bian J, OC-2-KB: A software pipeline to build an evidence-based obesity and cancer knowledge base. *Proceedings of the 2017 IEEE International Conference on Bioinformatics and Biomedicine*. November 13-16, 2017. Kansas City, MO. pp. 1284-1287. DOI: 10.1109/BIBM.2017.8217845
25. Yu B, and He Z. Exploratory Textual Analysis of Consumer Health Languages for People Who are D/deaf and Hard of Hearing. *Proceedings of the 2017 IEEE International Conference on Bioinformatics and Biomedicine*. November 13-16, 2017. Kansas City, MO. pp. 1288-1291. DOI: 10.1109/BIBM.2017.8217846

26. [Chen Z](#), **He Z**, Liu X, and Bian J. An Exploration of Semantic Relations in Neural Word Embeddings Using Extrinsic Knowledge. *Proceedings of the 2017 IEEE International Conference on Bioinformatics and Biomedicine*. November 13-16, 2017. Kansas City, MO. pp.1246-1251. DOI: 10.1109/BIBM.2017.8217836
27. **He Z**, Perl Y, Elhanan G, Geller J, and Bian J. Auditing the extents of top semantic types of the UMLS Semantic Network. *Proceedings of 2017 IEEE International Conference on Bioinformatics and Biomedicine*. November 13-16, 2017. Kansas City, MO. pp. 1262-1269. PMID: 29375930. DOI: [10.1109/BIBM.2017.8217840](https://doi.org/10.1109/BIBM.2017.8217840)
28. Qu J, Steppi A, Hao J, Wang J, Lung PY, Zhao T, **He Z**, and Zhang J. Mining protein interactions affected by mutations using a NLP based machine learning approach. *BioCreative VI Challenge and Workshop*. October 18-20, 2017. Bethesda, MD. pp. 132-135. (Invited to give an oral presentation at [BioCreative VI](#) Track 4: Mining protein interactions and mutations for precision medicine)
29. Lung PY, Zhao T, **He Z**, and Zhang J. Extracting chemical-protein interactions from literature. *BioCreative VI Challenge and Workshop*. October 18-20, 2017. Bethesda, MD. pp. 160-163. (Invited to give an oral presentation at [BioCreative VI](#) Track 5: Text mining chemical protein interactions)
30. **He Z**, Gonzalez-Izquierdo A, Denaxas S, Sura A, Guo Y, Hogan WR, Shenkman E, and Bian J. Comparing and Contrasting A Priori and A Posteriori Generalizability Assessment of Clinical Trials on Type 2 Diabetes Mellitus. *AMIA 2017 Annual Symposium Proceedings*. November 4-8, 2017. Washington DC. pp.849-858. (*Distinguished Paper Award, three awards were selected from 105 accepted papers and 266 regular paper submissions*)
31. **He Z**, Chen Y, and Geller J. Perceiving the Usefulness of National Cancer Institute Metathesaurus for Enriching NCI with Topological Patterns. *The 16th World Congress on Medical and Health Informatics (MEDINFO 2017)*. August 21-25, 2017. Hangzhou, China. *Studies in Health Technology and Informatics*. 2017;245: 863-867. PMID: 29295222. DOI:10.3233/978-1-61499-830-3-863
32. Lossio-Ventura JA, Hogan WR, Modave F, Hicks A, Guo Y, **He Z**, and Bian J. Towards an Obesity-Cancer Knowledge Base: Biomedical Entity Identification and Relation Detection. *Proceedings of the 2016 IEEE International Conference on Bioinformatics and Biomedicine (BIBM 2016)*. December 15-18, 2016. Shenzhen, China. pp. 1081-1088. DOI: 10.1109/BIBM.2016.7822672. PMID: 28503356
33. **He Z**, [Chen Z](#), and Bian J. Analysis of Temporal Constraints in Qualitative Eligibility Criteria of Cancer Clinical Studies. *Proceedings of the 2016 IEEE International Conference on Bioinformatics and Biomedicine (BIBM 2016)*. December 15-18, 2016. Shenzhen, China. pp. 717-722. PMID: 29263940. PMCID: PMC5733789. DOI: 10.1109/BIBM.2016.7822607. (Acceptance rate: 19%)
34. **He Z**, Chen Y, de Coronado S, Piskorski K, and Geller J. Topological-Pattern-based Recommendation of UMLS Concepts for National Cancer Institute Thesaurus. *Proceedings of AMIA 2016 Annual Symposium*. November 12-16, 2016. Chicago, IL. pp. 618-627. PMID: 28269858
35. **He Z**, [Chen Z](#), George TJ, Lipori G, and Bian J. Assessing the Population Representativeness of Colorectal Cancer Treatment Clinical Trials. *Proceedings of the 38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC 2016)*. August 16-20, 2016. Orlando, FL. pp.2970-2973. PMID: 28268936. PMCID: PMC5727892 (Acceptance rate for oral presentations: 20%)
36. **He Z**, and Geller J. Preliminary Analysis of Difficulty of Importing Pattern-Based Concepts into the National Cancer Institute Thesaurus. *Studies in Health Technology and Informatics*. 2016. Volume 288: Exploring the Complexity in Health: An Interdisciplinary Systems Approach: 389-393. Medical Informatics Europe 2016 (MIE 2016). August 28 - September 2, 2016. Munich, Germany. PMID: 27577410. PMCID: PMC5785234
37. **He Z***, Park MS*, and [Chen Z](#). UMLS-Based Analysis of Medical Terminology Coverage for Tags in Diabetes-Related Blogs (*: equal contribution). *Proceedings of iConference 2016*. March 20-23, 2016. Philadelphia, PA. (Acceptance rate: 30%) ([Runner up of the Most Interesting Preliminary Results Paper Award, Top 5](#))

38. **He Z**, Charness N, Bian J, and Hogan WR. Assessing the Comorbidity Gap between Clinical Studies and Prevalence in Elderly Patient Populations. *Proceedings of 2016 IEEE International Conference on Biomedical and Health Informatics (BHI 2016)*. February 24-27, 2016. Las Vegas, NV. pp.136-139. PMID: 27738664. PMCID: PMC5058342
39. Zayas C, **He Z**, Yuan J, Maldonado-Molina M, Hogan WR, Modave F, and Bian J. Examining Healthcare Utilization Patterns of Elderly and Mid-Aged Adults in the United States. *Proceedings of the 29th International FLAIRS Conference (FLAIRS-29)*. May 16-18, 2016. Key Largo, FL. pp.361-366. PMID: 27430035.
40. **He Z**, Chandar P, Ryan P, and Weng C. Simulation-based Evaluation of the Generalizability Index for Study Traits. *AMIA Annual Symposium Proceedings*. 2015;594-603. PMID: 26958194. (*Distinguished Paper Award of AMIA 2015*)
41. Chandar P, Yaman A, Hoxha J, **He Z**, and Weng C. Similarity-based Recommendation of New Concepts to a Terminology. *AMIA Annual Symposium Proceedings*. 2015;386-395. PMID: 26958170
42. **He Z**, Wang S, Borhanian E, and Weng C. Assessing the Population Representativeness of Type 2 Diabetes Trials by Combining Public Data from ClinicalTrials.gov and NHANES. The 15th World Congress on Health and Biomedical Informatics (MEDINFO 2015). August 19-23, 2015. Sao Paulo, Brazil. *Studies in Health Technology and Informatics*, 2015;216:569-73. PMID: 26262115
43. **He Z** and Weng C. Predicting New Target Conditions for Drug Retesting Using Temporal Patterns in Clinical Trials: A Proof of Concept. *AMIA Joint Summits on Translational Science Proceedings*. 2015;445-9. PMID: 26306283. (*Student Paper Competition Finalist*)
44. **He Z**, Carini S, Hao T, Sim I, and Weng C. A Method for Analyzing Commonalities in Clinical Trial Target Populations. *AMIA Annual Symposium Proceedings*, 2014:1777-1786.
45. Weng C, Yaman A, Lin K, and **He Z**. Trend and Network Analysis of Common Eligibility Features for Cancer Trials in ClinicalTrials.gov. *2014 International Conference for Smart Health*, July 10th – 11th 2014, Beijing, China. *Lecture Notes in Computer Science*. Vol. 8549:130-141.
46. **He Z**, Geller J, and Elhanan G. Categorizing the Relationships between Structurally Congruent Concepts from Pairs of Terminologies for Semantic Harmonization. *AMIA Joint Summits on Translational Science Proceedings*, 2014: 48-53.
47. **He Z**, Ochs C, Agrawal A, Perl Y, Zeginis D, Tarabanis K, Elhanan G, Halper M, Noy N and Geller J. A Family-Based Framework for Supporting Quality Assurance of Biomedical Ontologies in BioPortal. *AMIA Annual Symposium Proceedings*. 2013: 581-90. PMID: 24551360. (Selected as an important paper in “*Informatics Year in Review*” at AMIA 2014 Annual Symposium)
48. **He Z**, Ochs C, Solatova L, Perl Y, Arabandi S, and Geller J. Auditing Redundant Import in Reuse of a Top Level Ontology for the Drug Discovery Investigations Ontology. *ICBO 2013 Workshop on Vaccine and Drug Ontology Studies*, July 7th 2013. Montreal, QC, Canada. *CEUR Workshop Proceedings*. Vol. 1061.
49. Ochs C, **He Z**, Perl Y, Arabandi S, Geller J, and Halper M. Choosing the Granularity of Abstraction Networks for Orientation and Quality Assurance of the Sleep Domain Ontology. *The 4th International Conference on Biomedical Ontology*, July 8th -9th 2013. Montreal, QC, Canada. *CEUR Workshop Proceedings*. Vol. 1060: 84-9.
50. **He Z**, Halper M, Perl Y, and Elhanan G. Clinical Clarity Versus Terminological Order - the Readiness of SNOMED CT Concept Descriptors for Primary Care. *Proceedings of CIKM 2012 Workshop on Managing Interoperability and Complexity in Health Systems*, Maui, HI. October 29th 2012. pp. 1-6.
51. Gu H, Elhanan G, Halper M, and **He Z**. Questionable Relationship Triples in the UMLS. *Proceedings of 2012 IEEE-EMBS International Conference on Biomedical and Health Informatics*, Shenzhen, China, January 2nd – 7th, 2012. pp. 713–716.

Peer Reviewed Panels

52. **He Z**, Wei D, Bian J, Liu J, and Gong Y. Advancing Health Informatics Education and Health IT Workforce Development through Interdisciplinary Collaboration. *The 16th World Congress on Medical and Health Informatics (MEDINFO 2017)*. August 21-25, 2017. Hangzhou, China.
53. Chunhua Weng, **Zhe He**, Mollie McKillop, and Joseph Romano. Data Driven Clinical Research Generalizability Assessment and Improvement. *The 8th Annual Mid-Atlantic Healthcare Informatics Symposium*, October 23, 2015, Philadelphia, PA.

Peer Reviewed Conference Abstracts

54. Gerido L and **He Z**. Opportunities to Improve Methods for Increasing Participation in Cancer Clinical Trials. *AMIA 2018 Annual Symposium*. November 3-8, 2018. San Francisco, CA (Poster)
55. Gerido L and **He Z**. Patient-Centered Strategies to Increase Participation in Cancer Clinical Trials. *The Sixth IEEE International Conference on Healthcare Informatics (ICHI 2018)*, June 4-7, 2018. New York, NY. (Poster)
56. Yu B, Gerido L, and **He Z**. Exploring Text Classification of Social Support in Online Health Communities for People Who are D/deaf and Hard of Hearing. *Proceedings of the 80th Annual Meeting of the Association for Information Science and Technology (ASIS&T 2017)*, Washington DC. October 27 - November 1, 2017 (Visual Presentation Abstract)
57. Gerido L, Kazmer M, and **He Z**. Mardis M. Emergent Trends in Research to Increase Participation in Cancer Clinical Trials by Underrepresented Population: A Qualitative Analysis of the HSRProj Database. *Proceedings of the 80th Annual Meeting of the Association for Information Science and Technology (ASIS&T 2017)*, Washington DC. October 27 - November 1, 2017 (Visual Presentation Abstract)
58. Bian J, Sura A, Guo Y, Modave F, and **He Z**, Shenkman E, Hogan W. Implementing a Hash-based Privacy-Preserving Entity Resolution Tool in the OneFlorida Clinical Data Research Network. *AMIA 2017 Annual Symposium*. November 4-8, 2017. Washington DC. In press. (Poster)
59. **He Z**, Chen Z, Mixon S, and Bian J. A Visual Analysis Tool for Qualitative Eligibility Criteria of Clinical Studies. *AMIA 2017 Annual Symposium*. November 4-8, 2017. Washington DC. In press. (Poster)
60. Lossio-Ventura JA, Hogan WR, Modave F, Hicks A, Guo Y, **He Z**, Vasconcelos M, and Bian J. Building an Obesity and Cancer Semantic Web Knowledge Base. *AMIA 2017 Annual Symposium*. November 4-8, 2017. Washington DC. In press. (Poster)
61. **He Z** and Langford A. Comparative Analysis of Geriatric and Adult Drug Clinical Trials on ClinicalTrials.gov. *The 16th World Congress on Medical and Health Informatics (MEDINFO 2017)*. August 21-25, 2017. Hangzhou, China. (Poster)
62. Huo T, George TJ, Guo Y, **He Z**, Prosperi M, Modave F, and Bian J. Explore Care Pathways of Colorectal Cancer Patients with Social Network Analysis. *The 16th World Congress on Medical and Health Informatics (MEDINFO 2017)*. August 21-25, 2017. Hangzhou, China. (Poster)
63. Williams N, **He Z**, Barnes A, Langford A, and Jean-Louis G. Minority participation in clinical trials for obstructive sleep apnea and insomnia. *SLEEP 2017*, June 3-7, 2017. Boston, MA. (Poster).
64. Langford A and **He Z**, Eligibility Criteria for Hypertension-Related Interventions: Are Blacks Included?" *The 38th Annual Meeting and Scientific Sessions of the Society of Behavioral Medicine (SBM 2017)*. March 29 - April 1, 2017. San Diego, CA. ([Poster](#))
65. **He Z**, Chen Z, Mixon S, Loss-Ventua JA, and Bian J. Developing a Parser to Structure Free-Text Qualitative Eligibility Criteria in Clinical Trials. *2017 Florida Undergraduate Research Conference*. February 24-25, 2017. Miami, FL. (Poster)
66. Hicks A, Hogan WR, He Z, Hanna J, Shenkman B, Yuan J, and Bian J. Using Semantic Queries for Cohort Discovery Across Research Networks. *OHDSI Symposium 2015*. October 20, 2015, Washington DC. (Poster)

67. **He Z**, Ryan P, Wang S, and Weng C. A Method for Assessing the Collective Population Representativeness of Multiple Related Clinical Trials Using Public Data. *AMIA 2015 Summit on Clinical Research Informatics*. March 2015. San Francisco, CA (Oral presentation).
68. Geller J, Ochs C, **He Z**, and Perl Y. A Structural Meta-ontology for the BioPortal ontologies. Proceedings of Bio-ontologies 2013 (co-located with ISMB/ECCB 2013), July 20, Berlin, Germany. (Poster)

Manuscripts Under Review

69. Gerido LH and **He Z**. Trends in research to improve patient participation in cancer clinical trials: A content analysis of HSRProj & NIH RePORTER abstracts. In preparation.
70. Yu B and **He Z**. Developing a Text Complexity Measurement Framework to Assess the Language Use of Health Consumers: Implications for e-Health Literacy Divide. *Journal of the Association for Information Science and Technology*. Under review.
71. Biś D, Zhang C, Liu X, and **He Z**. Using LSTM to Generate Dense Context Representation for Biomedical Word Sense Disambiguation. *2018 IEEE International Conference on Bioinformatics and Biomedicine*. Under review.
72. **He Z**, Rizvi RF, Yang F, Adam TJ, and Zhang R. Comparing the Study Populations in Dietary Supplement and Drug Clinical Trials for Metabolic Syndrome Related Disorders. *AMIA 2019 Informatics Summit*. Under review.
73. Qu J, Steppi A, Hao J, Wang J, Lung PY, Zhao T, **He Z**, and Zhang, J. Triage of documents containing protein interactions affected by mutations using a NLP based machine learning approach. *Database: The Journal of Biological Databases and Curation*. Under review.
74. Lung PY, Zhao T, **He Z**, and Zhang J. Natural language processing based feature engineering for extracting chemical-protein interactions from literature. *Database: The Journal of Biological Databases and Curation*. Under review.
75. Lossio-Ventura JA, Hogan WR, Modave F, Guo Y, **He Z**, Yang X, Zhang H, and Bian J. OC-2-KB: Integration crowdsourcing into an obesity and cancer knowledge base curation system. *BMC Medical Informatics and Decision Making*. Under review.
76. Hou J, Hendrickse J, **He Z**, Meng J, Zhang H, Oh S, and Bian J. Health Information Seeking Over Time: A Qualitative Analysis of Information Needs of Patients with Chronic Diseases on a Social Q&A Site. In preparation.
77. Lossio-Ventura JA, Hogan W, Modave F, Hicks A, Guo Y, **He Z**, Vasconcelos M, and Jiang Bian. Automatic construction of an obesity and cancer knowledge base from biomedical literature. *BMC Medical Informatics and Decision Making*. Under review.
78. Schelgel DR, Schneider J, Booth D, Cornet R, Haider SW, Hassanzadeh O, **He Z**, Jing X, Koutkias V, Sarmiento RF, Shin D, Visweswaran S, Wangie-Anderson V, Dumontier M, and members of the AMIA KRS Working Group. Knowledge Representation in Biomedicine. In preparation.
79. **He Z**, Chen Y, and Geller J. Extended Analysis of Topological-Pattern-Based Ontology Enrichment. In preparation.
80. **He Z**. Understanding and Bridging the Language and Terminology Gap between Health Information Consumers and Health Professionals. (Book Chapter). Under review.

COLLOQUIA, SEMINARS & TALKS

Invited Talks

1. “Semantic-Powered Health Data Mining and Analytics.” FSU Machine Learning Conference (MLx18). Tallahassee, FL. April 2018.
2. “Optimizing Clinical Study Eligibility Criteria Design with Informatics”. Invited Research Colloquium Talk at *College of Medicine, University of Florida*. Gainesville, FL. October 2017.

3. "Optimizing Clinical Trial Eligibility Criteria Design with Informatics". Invited Webinar Research Talk at *Eli Lilly and Company*. October 2017.
4. "Ontology-Based Analysis of Clinical Research Eligibility Criteria". Research Colloquium at *School of Information, Florida State University*. Tallahassee, FL. December 2016.
5. "Optimizing Clinical Research Participant Selection Design with Informatics." Invited Research Colloquium Talk at *Department of Scientific Computing, Florida State University*. Tallahassee, FL. October 2016
6. "Where are the older volunteers?" *Institute for Successful Longevity, Florida State University*, April 2016
7. "Leverage Social Media to Enrich Consumer Health Vocabulary," *School of Information, Florida State University*, Tallahassee, FL. April 2016 [Video]
8. "Case Studies in Clinical Research Informatics," Guest lecture (50 min) at HINF 5431 "Health Informatics II" (Instructor: Dr. Rui Zhang), *Institute for Health Informatics, University of Minnesota*, February 2016
9. "Ontology-enhanced Data Analytics," Research colloquium (60 min) at *School of Information Research Retreat, Florida State University*, Tallahassee, FL. November 2015. [Video]
10. "Health Data Analytics." Guest lecture (70 min) at "LIS 4785 Introduction to Health Informatics" (Instructor: Dr. Sanghee Oh), *School of Information, Florida State University*, Tallahassee, FL. October 2015.
11. "A Comparative Analysis of the Density of SNOMED CT Conceptual Content for Semantic Harmonization". Invited webinar talk at the *IHTSDO Implementation SIG Meeting*. September 2015
12. "Assessing the Collective Population Representativeness of Related Clinical Trials". Research talk, Department of Computer Science", *Rowan University*, Glassboro, NJ. February 2015.
13. "Assessing the Collective Population Representativeness of Related Clinical Trials". Research talk, School of Information, *Florida State University*, Tallahassee, FL. February 2015
14. "A Family-based Quality Assurance Framework for Biomedical Ontologies in BioPortal". Guest lecturer in the course Symbolic Methods in Biomedical Informatics (G4003), instructor: C. Weng. Department of Biomedical Informatics, *Columbia University*, New York, NY. October 2013
15. "Introduction to the UMLS and Auditing the UMLS Refined Semantic Network". Guest lecturer at the course Medical Informatics (GNM 3126), instructor: D. Wei. Department of Computer Science & Information. *Stockton University*, November 2013.

Conference Talks

16. "Comparing and Contrasting A Priori and A Posteriori Generalizability Assessment of Clinical Trials on Type 2 Diabetes Mellitus. *AMIA 2017 Annual Symposium Proceedings*. November 4-8, Washington DC. In press.
17. "Textual Analysis of Consumer Health Languages for People with Disabilities: Implications for e-Health Literacy Divide". *The 2nd International Workshop on Semantics-Powered Data Analytics (in conjunction with 2017 IEEE International Conference on Bioinformatics and Biomedicine)*. November 13, 2017. Kansas City, MO.
18. "An Exploration of Semantic Relations in Neural Word Embeddings Using Extrinsic Knowledge". *The 2nd International Workshop on Semantics-Powered Data Analytics (in conjunction with 2017 IEEE International Conference on Bioinformatics and Biomedicine)*. November 13, 2017. Kansas City, MO.
19. "Auditing the extents of top semantic types of the UMLS Semantic Network". *The 2nd International Workshop on Semantics-Powered Data Analytics (in conjunction with 2017 IEEE International Conference on Bioinformatics and Biomedicine)*. November 13, 2017. Kansas City, MO.

20. "Perceiving the Usefulness of National Cancer Institute Metathesaurus for Enriching NCIt with Topological Patterns." *The 16th World Congress on Medical and Health Informatics (MEDINFO 2017)*. August 2017. Hangzhou, China.
21. "Analysis of Temporal Constraints in Qualitative Eligibility Criteria of Cancer Clinical Studies". *2016 IEEE International Conference on Bioinformatics and Biomedicine (BIBM 2016)*. December 2016.
22. "Topological-Pattern-based Recommendation of UMLS Concepts for National Cancer Institute Thesaurus". *AMIA 2016 Annual Symposium*. November 2016. Chicago, IL. ([Slides](#))
23. "Assessing the population representativeness of clinical trials with combined use of multiple data sources. *2016 NIH Future Research Leaders Conference. National Institutes of Health*, September 2016. Bethesda, MD.
24. "Assessing the Population Representativeness of Colorectal Cancer Treatment Clinical Trials". *The 38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC 2016)*. August 18, 2016. Orlando, FL. [[Picture](#)]
25. "UMLS-Based Analysis of Medical Terminology Coverage for Tags in Diabetes-Related Blogs". *iConference 2016*. March 22, 2016. Philadelphia, PA. ([Runner up of the Most Interesting Preliminary Results Paper Award](#)) ([Slides](#))
26. "Simulation-based Evaluation of the Generalizability Index for Study Traits". *AMIA 2015 Annual Symposium*. November 16, 2015. San Francisco, CA. ([Distinguished Paper Award](#) of AMIA 2015 Annual Symposium) ([Slides](#))
27. "Assessing the Population Representativeness of Type 2 Diabetes Trials by Combining Multiple Public Data Resources". *The 15th World Congress on Health and Biomedical Informatics (MEDINFO 2015)*. Sao Paulo, Brazil. August 2015.
28. "Developing Insights for Drug Repurposing from Temporal Patterns in Medication Intervention Trials in ClinicalTrials.gov". *AMIA 2015 Summit on Clinical Research Informatics (AMIA CRI 2015)*. San Francisco, CA. March 25th 2015.
29. "A Method for Assessing the Collective Generalizability of Multiple Related Clinical Trials Using Public Data". *AMIA 2015 Summit on Clinical Research Informatics (AMIA CRI 2015)*. San Francisco, CA. March 26th 2015.
30. "A Method for Analyzing Commonalities in Clinical Trial Target Populations". *AMIA 2014 Annual Symposium (AMIA 2014)*. Washington D.C. November 18th 2014.
31. "Categorizing the Relationships between Structurally Congruent Concepts from Pairs of Terminologies for Semantic Harmonization". *AMIA 2014 Summit on Translational Bioinformatics (AMIA TBI 2014)*. San Francisco, CA. April 8th 2014.
32. "A Family-Based Framework for Supporting Quality Assurance of Biomedical Ontologies in BioPortal". *AMIA 2013 Annual Symposium (AMIA 2013)*. Washington, D.C. November 17th 2013.
33. "Auditing Redundant Import in Reuse of a Top Level Ontology for the Drug Discovery Investigations Ontology". *The 4th International Conference on Biomedical Ontology (ICBO 2013)*. Montreal, QC, Canada. July 7th 2013.
34. "Clinical Clarity versus Terminological Order – the Readiness of SNOMED CT Concept Descriptors for Primary Care". *The 21st International Conference on Information and Knowledge Management (CIKM 2012)*, Maui, HI. October 29th 2012.
35. "Questionable Relationship Triples in the UMLS". *2012 IEEE-EMBS International Conference on Biomedical and Health Informatics (BHI 2012)*, Shenzhen, China. January 6th 2012.

RESEARCH SUPPORT

Research Grants Funded

Developing an Informatics Tool to Assess the Generalizability of Clinical Trials on Type 2 Diabetes

- Sponsor: Eli Lilly and Company
- Date: 07/2018 - 02/2019
- Total Amount: \$38,015
- Role: Principle Investigator

Measuring Prevalence of Autism Spectrum Disorder and Benchmarking Utilization Using the OneFlorida Consortium Data

- Program: Planning Grant
- Sponsor: Institute for Successful Longevity, Florida State University
- Date: 05/2018 - 05/2019
- Total Amount: \$15,500
- Role: Co-Principle Investigator (PI: Henry Carretta)

Testing a New Approach for Academic Work Evaluations, 08/2017-08/2018

- Program: Phase I of Small Business Innovation Research (NIH SBIR)
- Sponsor: National Institute of Health (SBIR to Pevals; FSU subaward)
- Budget: \$20,000
- Role: Co-Principle Investigator of FSU subaward (PI: Minjing Tao)

Assessing the Representation of Older Adults with Multiple Chronic Conditions in Cancer Clinical Trials. 05/2016 - 05/2018

- Program: Planning Grant
- Sponsor: Institute for Successful Longevity, Florida State University
- Budget: \$15,500
- Role: Principle Investigator

VATEC: A Visual Analysis Tool of Qualitative Eligibility Criteria of Clinical Studies. 12/2016 - 12/2017

- Program: [AWS Cloud Credits for Research](#)
- Sponsor Amazon Inc.
- Budget: \$1,200
- Role: Principle Investigator

Towards Data-Driven Assessment of the Population Representativeness of Clinical Trials

- Program: First Year Assistant Professor Award (FYAP)
- Sponsor: Council on Research and Creativity, Florida State University
- Date: 05/2016 - 08/2016
- Budget: \$20,000
- Role: Principle Investigator

Developing Data-Driven Tools for Assessing the Population Representativeness of Clinical Trials.

- Program: [Amazon Web Services Research Grant](#)
- Sponsor: Amazon Inc.
- Dates: 12/2015 - 12/2016
- Budget: \$2,000
- Role: Principle Investigator

Columbia University Clinical and Translational Science Award (UL1TR000040)

- PI: Henry N. Ginsberg
- Agency: National Center for Advancing Translational Sciences (National Institutes of Health)
- Role: Postdoc Investigator
- Date: 02/12/2014 – 07/31/2015
- Developed data-driven methods to analyze the generalizability of clinical trials

Bridging the Semantic Gap between Research Eligibility Criteria and Clinical Data (R01LM009886)

- PI: Chunhua Weng
- Agency: National Library of Medicine (National Institutes of Health)
- Role: Postdoc Investigator

- Date: 02/12/2014 – 07/31/2015
- Developed data-driven methods to analyze the generalizability of clinical trials

Partition to Support Auditing and Extending the UMLS (R01LM008445)

- PI: Yehoshua Perl
- Agency: National Library of Medicine (National Institutes of Health)
- Role: Ph.D. Investigator / Research Assistant
- Date: 01/2009 – 08/2010
- Developed structural and semantic methods to audit the UMLS

Taxonomies Supporting Orientation, Navigation and Auditing of Terminologies (R01LM008912)

- PI: Yehoshua Perl
- Agency: National Library of Medicine (National Institutes of Health)
- Role: Ph.D. Investigator / Research Assistant
- Date: 01/2009 – 08/2011
- Developed structural and semantic methods to enrich SNOMED CT

Resource Grant Funded

- Open Access Fund. FSU Libraries. Amount: \$1,500, 04/2018
- Accelerating Data-Driven Biomedical and Health Informatics Research with GPU. NVIDIA GPU Grant. NVIDIA Corporation. Amount: \$1,200, 02/2018
- Undergraduate Research Opportunity Program Materials Grant, Center for Undergraduate Research and Academic Engagement, Florida State University, 11/2016

Pending Research Support

RTG: The Datasmith Workshop

- Program: Research Training Groups in Mathematical Sciences (NSF 14-585)
- Sponsor: National Science Foundation
- Budget: \$2,253,575
- Role: Co-PI (PI: Russell Almond)
- Date: 4/2019-3/2024

Transforming and Translating Discovery to Improve Health

- Program: Clinical and Translational Science Award
- Sponsor: National Institutes of Health
- Budget: \$21,253,776
- Role: Informatics Lead (PI: Jeffrey Joyce)
- Date: 8/2019-7/2024

Systematic Analysis of Clinical Study Generalizability Assessment Methods with Informatics

- Program: NIH Exploratory/Developmental Research Grant Program
- Sponsor: National Institute on Aging of National Institutes of Health
- Budget: \$422,382
- Role: Principle Investigator
- Date: 09/2018-08/2020

Grant Proposals Not Funded

A Data-Driven Framework for Improving the Population Representativeness of Prostate and Colorectal Cancer Clinical Trials

- Program: Bankhead-Coley Cancer Research Program
- Sponsor: Florida Department of Health
- Budget: \$1,497,898
- Role: Principle Investigator
- Date: 03/2018 - 02/2021

A Scalable Framework for Enriching Biomedical Ontologies. 03/2018 – 02/2021

- Program: Computer and Information Science and Engineering (CISE) Research Initiation Initiative (CRII)
- Sponsor: National Science Foundation
- Budget: \$172,440
- Role: Principle Investigator

An Evidence-Based Eligibility Criteria Design Tool for Cancer Clinical Studies, 04/2018 - 03/2021

- Program: Early-Stage Development of Informatics Technologies for Cancer Research and Management (U01)
- Sponsor: National Cancer Institute / National Institutes of Health
- Budget: \$1,353,326
- Role: Principle Investigator

A Data-Driven Framework for Improving the Population Representativeness in Cancer Clinical Studies. 04/2017 – 03/2020

- Program: Early-Stage Development of Informatics Technologies for Cancer Research and Management (U01)
- Sponsor: National Cancer Institute / National Institutes of Health
- Budget: \$1,301,769
- Role: Principle Investigator

Leveraging Health-Related Social Media to Enrich the Conceptual Content of Open Access and Collaborative Consumer Health Vocabulary. 05/2017 – 08/2017

- Program: Committee on Faculty Research Support Summer Award
- Sponsor: Council on Research and Creativity, FSU Office of Research
- Budget: \$15,000
- Role: Principle Investigator

RESEARCH ADVISING

PhD Students

PhD Dissertation Advisor (Major Professor)

- **Syedeh Neelufar Payrovnaziri**, <https://sites.google.com/view/neelufar>
Dates: Spring 2018 – present
Tentative Graduation: 2022
Topic: Prediction Models for Chronic Conditions

PhD Dissertation Committee Member

- **Lynette Gerido**, <https://directory.cci.fsu.edu/lynette-gerido/>
Dates: Fall 2017 – present
Tentative Graduation: 2022
Topic: Clinical Trial Information Seeking, Participation, and Enrollment
- **Biyang Yu**, <https://directory.cci.fsu.edu/biyang-yu/>
Dates: Fall 2017 – present
Tentative Graduation: 2019
Topic: Text Mining of Discussion Board Postings of D/deaf Online Communities
- **Lynette Gerido**, <https://directory.cci.fsu.edu/lynette-gerido/>
Dates: Fall 2017 – present
Tentative Graduation: 2022
Topic: Clinical Trial Information Seeking, Participation, and Enrollment
- **Timothy Kanke**, <https://directory.cci.fsu.edu/timothy-kanke/>
Dates: Fall 2016 – present
Tentative Graduation: 2021
Topic: Collaborative Work Organization, Knowledge Organization, and Data Curation

PhD Research Unrelated to Dissertation

- **Dr. Jiwon Lee**
PhD Graduate, Department of Statistics, Florida State University
Dates: 08/2016 – 05/2017
Role: Graduate Assistant
Topic: Prevalence of Multiple Chronic Conditions in the National Inpatient Sample
- **Dr. Min Sook Park**
PhD Graduate, School of Information, Florida State University
Dates: 08/2015 - 12/2015
Role: Graduate Research Assistant
Topic: Analysis of Medical Vocabulary Coverage on Health-Related Social Media

MS Students*MS Thesis Committee Member*

- **Zhiwei Chen**, <https://www.linkedin.com/in/zwchan/>
Department: Computer Science
Dates: Fall 2015 – Summer 2017
Tentative Graduation: Summer 2017
Topic: Natural Language Processing on Biomedical and Social Media Text
First Employment: Software Engineer in Machine Learning at Evie Labs, Palo Alto, CA

MS Research Unrelated to Thesis

- **Kelsa Bartley**, School of Information, Florida State University, 2017 Fall
- **Jessica Salinas**, School of Information, Florida State University, 2017 Fall

Undergraduate Students*Undergraduate Research or Independent Research*

- **Sarah Mixon**, Department of Chemistry, Florida State University, 2017 Fall

PROFESSIONAL SERVICES**Journal Editor**

- Associate Editor, *BMC Medical Informatics & Decision Making* (IF: 2.13)

Guest Editing

- Lead Guest Editor, Supplement “selected extended articles from the 2nd International Workshop on Semantics-Powered Data Analytics (SEPDA 2017)”. *BMC Medical Informatics & Decision Making* (IF: 2.13) (Guest editing with Drs. Jiang Bian, Cui Tao, Rui Zhang, and Jingshan Huang)
- Lead Guest Editor, Special Issue “Semantic-Powered Healthcare Engineering and Data Analytics”. *Journal of Healthcare Engineering* (IF: 1.26) (Guest editing with Drs. Cui Tao, Michel Dumontier, Jiang Bian, and William Hogan)

Peer ReviewingJournal Reviewer

2018 - present Health Communication
 2018 - present Health Informatics Journal
 2018 - present Journal of Healthcare Informatics Research
 2017 - present JAMIA Open
 2017 - present IEEE ACCESS
 2017 - present Data and Knowledge Engineering
 2017 - present Journal of the American Medical Informatics Association
 2017 - present BMJ Open

2017 - present International Journal of Data Mining and Bioinformatics
 2017 - present Cogent Business and Management
 2017 – present International Journal on Semantic Web and Information Systems
 2017 – present Health Information Science and Information
 2017 – present Cogent Medicine
 2017 – present JMIR Medical Informatics
 2017 - present JMIR Public Health and Surveillance
 2017 – present Informatics
 2016 – present Journal of Medical Internet Research
 2016 – present Applied Clinical Informatics
 2016 – present PLOS One
 2016 – present BioData Mining
 2016 – present Journal of the Association for Information Science and Technology
 2016 – present BMC Research Notes
 2015 – present Semantic Web Journal
 2015 – present BMC Medical Informatics & Decision Making
 2015 – present Intelligent Automation & Soft Computing
 2014 – present Journal of Biomedical Semantics
 2014 – present Journal of Biomedical Informatics
 2013 - present Methods of Information in Medicine

Conference/Workshop Reviewer

- The 9th ACM Conference on Bioinformatics, Computational Biology, and Health Informatics (BCB 2018)
- AMIA 2017 Joint Summits on Translational Science
- 2017 IEEE International Conference on Bioinformatics and Biomedicine (BIBM 2017)
- 2017 Symposium on Information Management and Big Data (SIMBig 2017)
- The 6th International Conference on Health Information Science (HIS 2017)
- The 16th World Congress on Medical and Health Informatics (MEDINFO 2017)
- AMIA 2017 Joint Summits on Translational Science
- International Conference on Intelligent Biology and Medicine (ICIBM 2016)
- The 5th International Conference on Health Information Science (HIS 2016)
- AMIA 2016 Annual Symposium (AMIA 2016)
- IEA/AIE 2017 Special Track on Intelligent Systems in Healthcare and mHealth for Health Outcomes
- The Second International Workshop on Data Management and Analytics for Medicine and Healthcare (DMAH 2016).
- The First International Workshop on Biomedical Data Integration and Discovery (BMDID 2016)
- 2016 International Workshop on Vaccine and Drug Ontology Studies (VDOS 2016)
- 2015 International Workshop on Biomedical Data Mining, Modeling, and Semantic Integration
- AMIA 2016 Joint Summits on Translational Science
- The 4th International Workshop on Vaccine and Drug Ontology Studies (VDOS 2015) (Four papers)
- AMIA 2015 Annual Symposium (AMIA 2015) (Three papers)
- The 6th International Conference on Biomedical Ontologies (ICBO 2015) (One paper)
- The 15th World Congress on Health and Biomedical Informatics (MEDINFO 2015) (Three papers)
- AMIA 2015 Joints Summits on Translational Science (AMIA CRI 2015) (Five abstracts)
- The 3rd International Workshop on Vaccine and Drug Ontology Studies (VDOS 2014) (Three papers)
- The 5th International Conference on Biomedical Ontologies (ICBO 2014) (One paper)
- The 25th International Conference on Database and Expert System Applications (DEXA 2014) (Two papers)
- AMIA 2014 Joints Summits on Translational Science (Three papers; one abstract)
- AMIA 2014 Annual Symposium (AMIA 2014) (Three abstracts)
- AMIA 2013 Annual Symposium (AMIA 2013) (One paper)

Conference Organizing

Workshop Co-Chair

- Lead Co-Chair, The 3rd International Workshop on Semantics-Powered Data Analytics (SEPDA 2018), in conjunction with 2018 IEEE International Conference on Bioinformatics and Biomedicine, Madrid, Spain, December 2018
- Lead Co-Chair, The 2nd International Workshop on Semantics-Powered Data Analytics (SEPDA 2017), in conjunction with 2017 IEEE International Conference on Bioinformatics and Biomedicine, Kansas City, MO, USA, November 2017
- Lead Co-Chair, The 1st International Workshop on Semantics-Powered Data Analytics (SEPDA 2016), in conjunction with 2016 IEEE International Conference on Bioinformatics and Biomedicine, Shenzhen, China, December 2016

Program Committee Member

- AMIA 2018 Knowledge Representation and Semantics Working Group Pre-Symposium
- The Fourth International Workshop on Data Management and Analytics for Medicine and Healthcare (DMAH 2018), in conjunction with VLDB 2018
- 2018 Symposium on Information Management and Big Data (SIMBig 2018)
- Pervasive Health and Personalised Medicine Crossroads: Challenges and Opportunities (Pervasive PerMed)
- 2018 IEEE International Conference on Bioinformatics and Biomedicine (BIBM 2018)
- AMIA 2018 Annual Symposium (AMIA 2018)
- 2017 IEEE International Conference on Bioinformatics and Biomedicine (BIBM 2017)
- 2017 Symposium on Information Management and Big Data (SIMBig 2017)
- The 6th International Conference on Health Information Science (HIS 2017)
- The Third International Workshop on Data Management and Analytics for Medicine and Healthcare
- Artificial Intelligence in Medicine 2017
- AMIA 2017 Annual Symposium (AMIA 2017)
- IEA/AIE 2017 Special Track on Intelligent Systems in Healthcare and mHealth for Health Outcomes
- 2016 International Workshop on Vaccine and Drug Ontology Studies (VDOS 2016), in conjunction with ICBO 2016
- The Second International Workshop on Data Management and Analytics for Medicine and Healthcare (DMAH 2016), in conjunction with VLDB 2016
- The 5th International Conference on Health Information Science (HIS 2016)
- The 4th International Workshop on Vaccine and Drug Ontology Studies (VDOS 2015)
- The 6th International Workshop on Semantic Web Informatics Management (SWIM 2014)
- The 3rd International Workshop on Vaccine and Drug Ontology Studies (VDOS 2014)

Proceedings Editorial Committee Member

- Proceedings of the 16th World Congress on Health and Biomedical Informatics (MEDINFO 2017)
- Proceedings of the 15th World Congress on Health and Biomedical Informatics (MEDINFO 2015)

Session Chair

- AMIA 2017 Annual Symposium (S60: Oral Presentations - Terminology Quality Evaluation)
- The 38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC 2016) (IGNITE Sessions of Biomedical and Health Informatics: WeCT16, FrCT19)
- AMIA 2015 Summit on Clinical Research Informatics (CRI-30: Ontology-based Semantic Methods)

Conference Volunteer

- The 34th ACM International Conference on Management of Data (SIGMOD 2013)
- AMIA 2010 Annual Symposium (AMIA 2010)

Service in College-Level Committees at Florida State University

- Member, Academic Affairs Committee, College of Communication & Information, 2017 - Present

Service in School-Level Committees at Florida State University

- Member, Operation Committee, School of Information, 2018 - present
- Member, Outreach Committee, School of Information, 2016 - 2017
- Member, Faculty Search Committee, School of Information, 2016, 2017, 2018
- Member, Research Committee, School of Information, 2015, 2016, 2017

Prior Service in University Committees at New Jersey Institute of Technology

2013	Administrative Affairs Council, New Jersey Institute of Technology
2013	Committee on Academic Affairs, New Jersey Institute of Technology
2013	Committee on University Awards, Lectures, and Commencement, New Jersey Institute of Technology
2012-2013	Shared Governance Steering Committee, New Jersey Institute of Technology

Selected Leadership Activities

2013 – 2014	Sigma Chapter of Alpha Epsilon Lambda National Honor Society <i>President</i> Reviewed candidates for the honor society. Planned the induction ceremony. Acted as liaison between society members and graduate administrators
2012 – 2013	Graduate Student Association, NJIT, Newark NJ <i>President / Vice President-Administration</i> Acted as liaison between graduate students and university administration. Chaired the Ninth Annual Graduate Student Research Day (80+ posters, 200+ attendees). Organized various university-wide events such as thesis and dissertation workshop, trips, etc. Supervised 17 GSA affiliated academic and social clubs.
2011 – 2012	NJIT Chinese Students and Scholars Association <i>President</i> Managed annual budget of CSSA and coordinated varieties of events: career development seminars, entrepreneurship workshops, orientation programs, festivity gala, new member elections, basketball tournaments, etc.

SELECTED HONORS & AWARDS

- 2018 FSU University-Wide Research Recognition Dinner Invitee, *Office of Research, Florida State University*, April 2018
- **Distinguished Paper Award, AMIA 2017 Annual Symposium. November 2017**
- **Outstanding Faculty Research Award, College of Communication & Information, Florida State University, April 2017**
- Provost's Travel Grant, *Florida State University*, November 2016
- Travel Grant, *NSF South Big Data Hub*, September 2016
- Travel Grant, *NIH Future Research Leaders Conference*, Bethesda, MD, September 2016
- Planning Grant, *Institute for Successful Longevity, Florida State University*, May 2016
- **Runner Up, Most Interesting Preliminary Results Paper Award, iConference 2016, March 2016**
- Travel Grant, *Transatlantic Data Science Workshop*, Bethesda, MD March 1-2, 2016
- First Year Assistant Professor Grant, *Council for Research and Creativity, Florida State University*, May – August 2016
- **Distinguished Paper Award, AMIA 2015 Annual Symposium. November 2015**
- Amazon Web Services Education Research Grant Award, *Amazon Inc.* December 2015 - November 2016
- Provost's Travel Grant, *Florida State University*, September 2015
- Student Paper Award Nominee, *MEDINFO 2015*, August 2015
- **Finalist of Student Paper Competition, AMIA 2015 Summit on Clinical Research Informatics, 2015**
- 3rd Place Poster Award of Columbia University Postdoc Research and Career Symposium, *Office of Postdoctoral Affairs, Columbia University*, 2014

- Outstanding Student Leader Award 2013-14 (Graduate), *NJIT*, 2014
- Student Achievement Award, *NJIT GSA*, 2012
- Distinguished Graduate of Beijing, *Beijing Municipality Education Commission*, 2007
- Delegate of China, *the 7th China Synergy Program for Outstanding Youth*, 2006
- Student Fellowship, *BUPT*, 2004, 2006, 2007
- Excellent Student Leader, *BUPT*, 2004, 2005, 2006

PROFESSIONAL MEMBERSHIP

Alpha Epsilon Lambda, National Graduate and Professional Honor Society, 2012 – present
IEEE, 2015 – present
American Medical Informatics Association (AMIA), 2010 – present

INDUSTRY EXPERIENCE

BearingPoint, Inc. Beijing, China, 01/2003 – 03/2003

- *Management Analyst Intern*, implement Oracle ERP system for China Netcom Corp.

TECHNICAL SPECIALTIES

- **Biomedical Terminologies:** UMLS, SNOMED CT, ICD 9, OWL-based ontologies in BioPortal
- **Operation System:** Unix, Linux, MacOS, Solaris, Windows
- **Programming/scripting languages:** Python, Java, C/C++, PL/SQL, MatLab, R
- **Web:** Amazon EC2/Elastic Beanstalk, Flask, MVC, Ruby on Rails, PHP, JSP, HTML/CSS
- **Database:** MySQL, PostgreSQL, Oracle, SQL Server
- **APIs:** Google Chart, NLTK, Weka, Protégé
- **IDE/Editors/Tools:** Xcode, Netbeans, Eclipse, Visual Studio, VI, Nano

REFERENCES

Additional references available upon request