

Duo (Helen) Wei, Ph.D.

PERSONAL INFORMATION

Work Address School of Business
Stockton University
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EDUCATION

Ph.D. 2011 Computer Science, New Jersey Institute of Technology, Newark, NJ
Thesis Title: Extensions of SNOMED Taxonomy Abstraction Networks Supporting
Auditing and Complexity Analysis
Thesis Advisors: Dr. Yehoshua Perl and Dr. Michael Halper
B.S. 2006 Computer Science, Changchun Normal University, Changchun, China

PROFESSIONAL EXPERIENCE

2016 - present Associate Professor, School of Business, Stockton University, Galloway, NJ
2018 - 2019 Visiting Professor, Department of Biomedical Informatics, Columbia University, New
York, NY
2011 - 2016 Assistant Professor, School of Business, Stockton University, Galloway, NJ
Summer 2009 Pre-doctoral visiting fellow, National Library of Medicine, National Institutes of Health,
Bethesda, MD
2006 - 2011 Research Assistant, Structural Analysis of Biomedical Ontologies Center (SABOC), New
Jersey Institute of Technology, Newark, NJ
Summer 2005 Internship, Chinese Academy of Sciences, Beijing, P. R. China

TEACHING

Course Taught

Stockton University

Programming & Problem Solving I & II; Foundations of Computer Science; Data
Structures; Database; Medical Informatics; Knowledge Discovery and Data Mining,
Healthcare Informatics (MBA class)

New Jersey Institute of Technology (Teaching Assistant)

Introduction to Computer Science; Data Structure and Algorithm Design; Java
Programming Language; Advance Data Structure and Algorithm

Undergraduate Student Research Advisor

2019 - 2020 Mykola Hubchak (employer: Lockheed Martin)
2017 - 2018 David Parra Moreno (employer: Google Inc.)
2016 - 2017 Arron Burrows (employer: FAA)
among computer science programming -authored and published on the
Journal of Computing Sciences in Colleges (JCSC) Arron Burrows received IEEE
Student Researcher Award in 2017
2014 - 2015
2013 - 2014 Tiara Campbell (employer: University of Pennsylvania)
Search Efficiency Using Natural Language Processing and Biomedical Ontology
co-authored and published on IEEE International Conference on
Health Informatics (ICHI 2013)

hierarchical abstracti

Wei, D., Yang, S., Zhang, S., Zhao, H., (2015) Evaluation of an auto-generated data structures and algorithms visualization approach at tri-state colleges. *The 2015 International Conference on Collaboration Technologies and Systems (CTS)*, pp.183-189; Atlanta, GA.

Wei, D., Campbell, T. (2014) A similarity measurement of clinical trials using SNOMED - A preliminary study. *The 2014 International Conference on Collaboration Technologies and Systems (CTS)*, pp.457-460; Minneapolis, MN.

Wei, D. (2013). An evaluation of a cooperative learning method in programming and problem solving I. *CCSC Eastern (The Consortium for Computing Sciences in College)*, 28 (3), 69-77.

Wei D, Halper M, Elhanan G (2012). Using SNOMED semantic concept groupings to enhance semantic-type assignment consistency in the UMLS. *Proceedings of the 2nd ACM SIGHIT International Health Informatics Symposium*; Miami, Florida, USA. 2110465: ACM; 2012. p. 825-30.

Wei, D. & Bodenreider, O. (2010). Using the abstraction network in complement to description logics for quality assurance in biomedical terminologies - a case study in SNOMED CT. *13th International Congress on Medical Informatics*, 1070-1074.

Wei, D., Halper, M., Elhanan, G., Chen, Y., Perl, Y., J. Geller, K.A. Spackman, (2009). Auditing SNOMED relationships using a converse abstraction network. *American Medical Informatics Association Annual Symposium*, 685-689.

Wei, D., Wang, Y., Perl, Y., Xu, J., Halper, M., K.A. Spackman, (2008). Complexity measures to track the evolution of a SNOMED hierarchy. *American Medical Informatics Association Annual Symposium*, 778-782.

Wang, Y., **Wei, D.,** Xu, J., Elhanan, G., Perl, Y., M. Halper, Y. Chen, K.A. Spcakman, G.Hripsak, (2008). Auditing complex concepts in overlapping subsets of SNOMED. *American Medical Informatics Association Annual Symposium*, 273-277.

Presentations of Refereed Papers

Wei, D, Concept Relatedness Analysis by Combining Clinical Data and Domain Knowledge. Accepted to IEEE International Conference in Healthcare Informatics.

Wei, D. (2016) Using semantic groupings to support clinical trial medical condition search: a case study on diabetic complications. Submitted to *American Medical Informatics Association Annual Symposium*.

Wei, D. (2016) An integration of cooperative learning into undergraduate medical informatics class with service learning components. Submitted to American Medical Informatics Association Annual Symposium.

Wei, D., (2015) Using ABET performance indicator to develop assessment instrument for measuring foundational conceptual knowledge in programming classes. *Assessment for learning in higher education*, Hong Kong, China.

Wei, D., (2015) Evaluation of an auto-generated data structures and algorithms visualization approach at tri-state colleges. *The 2015 International Conference on Collaboration Technologies and Systems (CTS)*, Atlanta, GA.

Wei, D. (2014) *A similarity measurement of clinical trials using SNOMED – A preliminary study*, IEEE, ACM, IFIP, Minneapolis, MN.

Wei, D. (2014) *Using auto-generated materials to facilitate instructors' offline preparation time and improve students' learning outcomes*, CCSC North Eastern (The Consortium for Computing Sciences in College), Providence, Rhode Island.

Wei, D. (2014). *Integrating computer science components into undergraduate level medical informatics curriculum*. CCSC North Eastern (The Consortium for Computing Sciences in College), Providence, Rhode Island.

Wei, D. & Campbell, T. (2013, September). *Improving clinical trial online search efficiency using natural language processing and biomedical ontology mapping approach*. 2013 IEEE International Conference on Healthcare Informatics (ICHI), Philadelphia, Pennsylvania.

Wei, D. (2013). *Using cooperative learning method to teach programming and problem solving 1 - A case study*. CCSC Eastern (The Consortium for Computing Sciences in College), Ewing, New Jersey.

Wei, D. (2012). *Designing a college level medical informatics course*. The third international conference on global trends in biomedical informatics research, education and globalization. Newark, NJ, November, 2012.

Wei, D. (2012).

k000912-2490

Wei, D. (2013). *An Evaluation of a cooperative learning method in programming and problem solving I*. Stockton University Day of Scholarship, Galloway Township, New Jersey.

Wei, D. (2009). *Using a converse abstraction network to auditing SNOMED lateral relationships*. New Jersey Institute of Technology Graduate Student Research Day, Newark, New Jersey.

Wei, D. (2009). *Using abstraction network in complement to description logic for quality assurance purposes in SNOMED CT*. National Institutes of Health pre-doctoral visiting fellow report presentation, Rockville, Maryland.

Wei, D. (2008). *Complexity measures to track the evolution of the Specimen hierarchy in SNOMED CT*. New Jersey Institute of Technology Graduate Student Research Day, Newark, New Jersey.

Working Papers

Gu H., **Wei D.**, He Z., Chen Y., Elhanan G., "Cross-validation of semantic tags of SNOMED CT and semantic types of the UMLS (working title)." *In preparation*.

Wei D., Halper M., He Z., Auditing UMLS semantic type assignment using SNOMED semantic concepts grouping *In preparation*.

Wei D. Evaluation of an auto-generated Data Structure and Algorithms (DSA) visualization approach at tri-state c *In preparation*.

Grants

Research

2023: (Core member) Federal Administration for Community Living(ACL)
Program Initiative (HHS-2023-ACL-AOA-ADPI)

2013: Wei, D. SUNY IIT Evaluation Participant, State University of New York College at Oneonta.

SERVICE

Service to the Institution

University level

2019 - now: chair of Faculty Senate Information Technology and Media Services (ITMS) subcommittee
2016 2017: Vice chair of the Research and Professional Development Committee Faculty Senate Liaison
2013 2017: Faculty advisor of the Stockton Computer Society
2017-2019: School of Business representative at Advising Council
2014-2016: At Large member of the Faculty Senate of Stockton University
2014-2015: member of the Essential Learning Outcomes Study Group
2014-2015: member of the Working Group for Data Science
2012-2014: member of the Senate Task Force on University Status

Department level

2019 now: Founder and advisor of the Health Analytics Research Team (HEART)
2019 now: member of the computer science master program subcommittee and leader of current student and alumni survey for the master program
2016 now : member of the computer science program ABET accreditation committee
2018: Business analytics search committee, tenure-track line
2014: Health science faculty search consultant, tenure-track line
2013-2016: CSIS Faculty Search Committee, tenure-track line and 13D line
2013-2015: Programming and Data Structure Courses Evaluation for ABET accreditation

Service to the Profession

Chair: Conference / Track / Program

2020 now: chair of the Women in AMIA Networking, Mentoring, and LifeCycle subcommittee
2019 2020: AMIA podcast liaison to interview professors and principal investigators in the field of biomedical informatics
2017-2019: co-chair of the Women in American Medical Informatics Association Lifecycle subcommittee
2016: International Conference on Collaboration Technologies and Systems (CTS 2016), Orlando, Florida.
2015: International Conference on Collaboration Technologies and Systems (CTS 2015), Atlanta, Georgia.
2014: International Conference on Collaboration Technologies and Systems (CTS 2014), Minneapolis, Minnesota.
2014: The 30th Consortium for Computing Sciences in Colleges, Eastern Region, York, Pennsylvania

Reviewer: Grant Proposal Related to Expertise

2017: NSF grant review panel member. Reviewed more than ten NSF grant proposals.
2014: University of Wisconsin - Milwaukee the ninth round of Research Growth Initiative (RGI), Milwaukee, Wisconsin. This program provides seed funding for new research and creative projects across the university.

2014: The Stimulus for Enhancing Extramural Development (SEED), Milwaukee, Wisconsin. In pursuit of its mission to enrich the health and well-being of people in Wisconsin and the world through innovative research.

Reviewer: Journal Paper

2022-2023: Journal of Biomedical Informatics
2018-2023: Journal of Medical Internet Research
2016-2023: BMC Supplement and BMC Health Informatics
2018: Transactions on Education. Area of Scholarship: Application TE-2018-000275
2012, 2009: Knowledge and Information Systems. Reviewer of manuscript KAIS-1969

Reviewer: Conference Paper

2016-2023: American Medical Informatics Association Symposium
2014-2016: SIGCSE (Special Interest Group in Computer Science Education).
2012-2016: Consortium for Computing Sciences in Colleges.
2012, 2014, 2015: MEDINFO

Advisor:

2013: 2013 IEEE International Conference on Healthcare Informatics (ICHI), Philadelphia, Pennsylvania. Mentor a PhD student, Murugavell Pandiyan, from Dubai Health Authority, India, on a research paper "Semantic Interoperability with Decision Support for Infectious Disease" and the poster was presented at the 2013 IEEE International Conference on Healthcare Informatics (ICHI).

Judge:

10/2020: Congressional App Challenge Evaluating more than ten computer applications develop by NJ high school students. My evaluation results have been recorded by the