Curriculum Vitae

You Chen, Ph.D.

Office Address:
Vanderbilt University Medical Center
Department of Biomedical Informatics
2525 West End Avenue, #1416
Nashville, TN 37203

Office Phone Number: (615) 343-1939
Office Fax Number: (615) 322-0502
Email: you.chen@vanderbilt.edu

Education

2004 – 2010 **Ph.D. in Computer Science**
Institute of Computing Technology, Chinese Academy of Sciences, Beijing, China.

2010 – 2014 **Research Fellow in Biomedical Informatics**
Biomedical Informatics, Vanderbilt University Medical Center, Nashville, TN, USA.

Academic Appointments

2014-2016	Research Assistant Professor in Biomedical Informatics, Primary Appointment, Department of Biomedical Informatics, School of Medicine, Vanderbilt University Medical Center
2016 – present	Assistant Professor in Biomedical Informatics, Primary Appointment, Department of Biomedical Informatics, School of Medicine, Vanderbilt University Medical Center
2018 – present	Assistant Professor in Data Science, Affiliated Appointment, Data Science Institute, Vanderbilt University
2019 – present	Assistant Professor in Computer Science, Affiliated Appointment, Vanderbilt University

Professional Organizations

2010 – present	American Medical Informatics Association, Member
2016 – present	Healthcare Information and Management Systems Society
2015 – 2017	The American Society of Human Genetics
2015 – 2017	Health:Further
2016 – 2018	Distributed Health
2003 – 2010	Association for Computing Machinery
2003 – 2010	Institute of Electrical and Electronics Engineers
2019 – 2020	Institute of Electrical and Electronics Engineers

Professional Activities

Editorial Board Members

2015 – present	Informatics	(ISSN 2227-9709)
2019 – present	Smart Health	(ISSN: 2352-6483)
2020 – present	BioMedInformatics	(ISSN 2673-7426)

Guest Editing

2018 – 2019 editing a special issue – data-driven healthcare research in ***Informatics***.

Thesis Defense Committee members

2018 Master student: Bryan Steitz in Biomedical Informatics
Thesis title: A Social Network Analysis of Cancer Provider Collaboration
2019 Ph.D. student: Cheng Ye in Computer Science
Thesis title: Information Retrieval in Clinical Chart Reviews

National Research Group Leader

2018– 2020 National Research Network - task workflow learning from EHR audit logs

Session Chair

2011 IEEE International Conference on Intelligence and Security Informatics
2018 AMIA Informatics Summit
2018 AMIA Annual Symposium
2019 AMIA Annual Symposium
2019 IEEE International Conference on Collaboration and Internet Computing

Conference Program Committees

2010 – 2015	International Symposium on Mining and Web
2010 – 2018	IEEE International Conference on Intelligence and Security Informatics
2010 – 2018	International Symposium on Foundation of Open Source Intelligence and Security Informatics
2010 – 2017	International Workshop on Trust, Security, and Privacy for Big Data
2015 – 2017	International Conference on Big Data
2017 – 2018	American Medical Informatics Association (AMIA) Scientific Program Committee
2018 – 2019	American Medical Informatics Association (AMIA) Scientific Program Committee
2019 – present	First International Symposium on Mathematical and Computational Oncology

Manuscript Peer Review

2019 – present	Journal of Perinatology
2017 – present	Nature Medicine
2011 – present	Journal of the American Medical Informatics Association (JAMIA)
2010 – present	Proceedings of the American Medical Informatics Association (AMIA)
2011 – present	Journal of Biomedical Informatics (JBI)
2010 – present	International Journal of Medical Informatics (IJMI)
2012 – present	International Journal of Artificial Intelligence in Medicine (JAIM)
2011 – present	IEEE Transaction on Dependable and Secure Computing (TDSC)
2012 – present	Physics Letters A
2012 – present	IEEE Journal on Biomedical and Health Informatics
2013 – present	Computer Methods and Programs in Biomedicine
2008 – present	Computer and Security
2013 – present	Information Sciences
2013 – present	BMC Medical Informatics & Decision Making

2015 – present Health Information Science and System
2015 – present American Journal of Managed Care
2013 – present Plos One
2013 – present Applied Clinical Informatics

Grant Peer Review

2016 – 2019 Medical Research Council, Swindon, United Kingdom.
2017 – 2018 The Netherlands Organization for Scientific Research, The Netherlands.
2018 – 2019 The University of Applied Sciences and Arts of Southern Switzerland.
2018 – present Orthopaedic Research and Education Foundation (OREF). Rosemont, IL
2019 – present National Institute on Drug Abuse, NIH
2020 – present Juvenile Diabetes Research Foundation (JDRF), New York, NY
2019 – present Edge Reviews, Vanderbilt University, Nashville, TN
2019 – present Summer Research Project Program, Vanderbilt University, Nashville, TN
2019 – present National CTSA Network. CTSA External Reviewers.

Honors

2021 Inducted into the Fellows of AMIA (FAMIA).
2020 an Editorial award for demonstrating editorial excellence as an Associate Editor for Smart Health.
2019 System "Deep Imputation of Temporal Data" won second place in the ICHI Data Analytics Challenge on Missing Data Imputation.
2019 System "XGBoost Imputation for Time Series Data" won third place in the ICHI Data Analytics Challenge on Missing Data Imputation.
2019 Undergraduate student's project to help health care organizations design management strategies to improve efficiencies of electronic health record systems received Vanderbilt University Data Science Institute summer research program award.
2019 Graduate student's project on Investigating the workflow from electronic health records to verify if medical trainees exhibit clinical reasoning received Globalink Research Award.
2018 Paper "DMMS: a decentralized blockchain ledger for the management of medication histories" received high school student scholarship from AMIA annual symposium.
2018 Paper "Interaction patterns of trauma providers are associated with length of stay. Journal of the American Medical Informatics Association" published in the Journal of American Medical Informatics Associations was selected as the Editors' Choice paper.
2018 Paper " Predicting Neonatal Encephalopathy From Maternal Data in Electronic Medical Records" won second place in the student paper competition in AMIA Informatics Summit.
2015 Paper "Building bridges Across Electronic Health Record Systems through Inferred Phenotypic Topics" published in Journal of Biomedical Informatics has been selected as the Editors' Choice paper for Volume 55
2013 Recipient of a training grant from the National Library of Medicine (NLM/NIH).
2012 Paper "Detecting Anomalous Insiders in Collaborative Information Systems" was named one of the top 100 articles of 2012 in computer science by the journal ACM Computing Reviews.
2011 Paper "Leveraging Social Networks to Detect Anomalous Insider Actions in Collaborative Environments" was honored as the best paper of the IEEE Intelligence and Security Informatics Conference.
2009 Outstanding student of the Chinese Academy of Sciences.
2009 Bewinner Communications Award for outstanding Ph.D. candidate students.
2008 Outstanding student of the Chinese Academy of Sciences.

2003 First Place of National Mathematical Contest in Modeling.

Media News

2016 Study tracks the makeup of VUMC collaborative care teams. VUMC Reporter. http://news.vumc.org/2016/10/27/study-tracks-makeup-of-vumc-collaborative-care-teams/

2018 Centered on the patient: Using medical records to improve care. Research Features. https://researchfeatures.com/2018/05/30/using-medical-records-improve-care/

2019 Study to explore care coordination's impact on patient outcomes. VUMC Reporter. http://news.vumc.org/2019/09/25/study-to-explore-care-coordinations-impact-on-patient-outcomes/

2019 VUMC awarded $1.5M to analyze EHR data for care coordination patterns. Becker's Health IT and CIO Report. https://www.beckershospitalreview.com/ehrs/vumc-awarded-1-5m-to-analyze-ehr-data-for-care-coordination-patterns.html

2019 Data Science Institute welcomes the first cohort of undergraduate summer research fellows. https://engineering.vanderbilt.edu/news/2019/data-science-institute-welcomes-first-cohort-of-undergraduate-summer-research-fellows/

2021 COVID-19 met with intensive teamwork. VUMC Reporter. https://news.vumc.org/2021/04/01/covid-intensive-teamwork/

Teaching Activities:

Graduate School Courses

2011 Guest Lecture on Anomaly Detection, course (BMIF-380 / CS-396), Vanderbilt University,
2013 Guest Lecture on Medical Information Management, course (BMIF-380/ CS-396)
2013 Guest Lecture on EMR System Usage Auditing, course (BMIF-380/ CS-396)
2015 Guest Lecture on Insider Threats Detection, course (BMIF-380/ CS-396)
2015 Guest Lecture on Collaborative Patterns Learning, course (BMIF-380/ CS-396)
2016 Guest Lecture on Learning of Healthcare Systems I, course (BMIF-380/ CS-396)
2016 Guest Lecture on Learning of Healthcare Systems II, course (BMIF-380/ CS-396)
2018 Guest Lecture on Insider Threat Detection, course (BMIF-380/ CS-396)
2018 Guest Lecture on Blockchain Technology, course (BMIF-380/ CS-396)
2018 Guest Lecture on Temporal Patterns Learning, course (BMIF-380/ CS-396)
2019 Guest Lecture on Temporal Patterns Learning, course (BMIF-380/ CS-396)
2019 Developed Data Science Case Study for Graduate Students major in Biomedical Informatics
2021 CS5891/CS3891 Network Analysis in Healthcare

Scientific Presentations

2021 Leveraging Audit Log Data to Discover Effective Interactions of Healthcare Workers with Electronic Health Record Systems. Harvard University Biomedical Informatics Journal Club. Hosted by Dr. Isaac Kohane, February 16 2021

2021 The Collaboration Structures of Critical Care Teams and Patient Outcomes: a Retrospective Network Analysis. The University of Alabama at Birmingham, Powertalk, hosted by March 26, 2021. Hosted by Dr. James J. Cimino, February 16 2021

2019 Provider Networks in the Neonatal Intensive Care Unit Affect Length of Stay. IEEE CIC 2019. December 12-14, 2019. Los Angeles, USA

2019 Learning tasks from EHR audit logs, AMIA 2019. Panel presentation. November 16-18, Washington DC, USA

2019 Learning EHR interaction workflows from audit logs. Invited talk. September 17, 2019. Ohio State University. Columbus, Ohio, USA.
2019 Learning to identify severe maternal morbidity from electronic health records, MedInfo 2019. August 23-30, 2019, Lyon, France
2019 Leveraging electronic health records to learn the progression path for severe maternal morbidity, MedInfo 2019. August 23-30, 2019, Lyon, France
2019 A Deep Learning Approach to Predict Neonatal Encephalopathy from Electronic Health Records, International Conference on Healthcare Informatics. June 10-13, 2019. Xi'an, China.
2019 Obstetric Patients with Repetitious Hospital Location Transfers Have Prolonged Stays, International Conference on Healthcare Informatics. June 10-13, 2019. Xi'an, China
2019 Leveraging EHR Audit Logs to Discover Effective Care Coordination Practice Patterns. National Research Network. Hosted by Dr. Julia Adler-Milstein. May 10, 2019.
2019 Leveraging Electronic Health Records to Discover Effective Care Coordination Practice Patterns, 60 minutes of oral presentation. HIMSS 2019, March 10, 2019, Orlando, FL.
2017 Discovering Care Coordination Practice Patterns in the EHR: Interpretation and Impact on Patient Outcomes. International Symposium on Data-Driven Healthcare. Plenary talk. August 29-30, 2017, Singapore
2015 Inferring Clinical Workflow Efficiency via Electronic Medical Record Utilization. American Medical Informatics Association (AMIA) 2015 Annual Symposium, November 16, 2015, SF, CA
2014 Creating Interpretable Collaborative Patterns to Detect Insider Threats, ICERM, Brown University. Invited talk. October 22-24, 2014, Providence, Rhode Island
2012 Auditing Medical Records Accesses via Healthcare Interaction Networks, American Medical Informatics Association (AMIA) 2012 Annual Symposium, November 06, 2012, Chicago, IL
2012 Protecting Patients through Dynamic Network Analysis of Hospital Department Relationships, Team for Research in Ubiquitous Secure Technology, November 15, 2012, Washington DC, U.S.
2011 Leveraging Social networks to Detect Anomalous insider actions in Collaborative Environments, IEEE International Conference on Intelligence and Security Informatics, July 11, 2011, Beijing, China
2011 Uncovering Anomalous Usage of Medical Records via Social Network Analysis, Team for Research in Ubiquitous Secure Technology, November, 2nd, 2011, Washington DC, U.S.

Students

2010 – 2015 Wen Zhang – Electric Engineering and Computer Science, Vanderbilt University, Graduate Student, mentoring committee member
2015 – 2017 Zejian Zhan – Electric Engineering and Computer Science, Vanderbilt University, Student Assistant, mentor
2016 summer Matthew Draper – School of Engineering, Stony Brook University, undergraduate student, mentor
2016-2017 Sixie Yu - Electric Engineering and Computer Science, Vanderbilt University, Student Assistant, mentor
2017 summer Annie Yin – Computer Science, Duke University, undergraduate student, mentor, Annie's work was presented in AMIA Informatics Summit 2018.
2017 summer Arthur Xin – Mathematics and Computer Science, Case Western Reserve University, undergraduate student, mentor
2017 summer Thomas Li – Computer Science, Duke University, undergraduate student, mentor. Thomas's work was presented in AMIA Informatics Summit 2018.

2018 summer Charlotte Zuber - Computer Science, Rutgers University, undergraduate student, mentor, Charlotte's work was presented as a podium in MedInfo 2019.
2018 summer Cindy Kim – Mathematics, Vanderbilt University, undergraduate student, mentor, Cindy's work was presented in AMIA Clinical Informatics, 2019.
2018 summer Patrick Li – Computer Science, University of Pennsylvania, mentor, Patrick's work received AMIA scholarship in AMIA 2018.
2019 summer Xinmeng Zhang – Computer Science, Vanderbilt University, mentor. Xinmeng received an award from the data science institute summer research program, Vanderbilt University, in 2019. She was selected for Honorable Mention in Outstanding Undergraduate Researcher Awards for 2020 by Computing Research Association.
2020 summer Peter Ju – Computer Science, UIUC, mentor
2019-2020 Barret Jones – Biomedical Informatics, Vanderbilt University Medical Center, Ph.D. student, research rotation mentor
2015-present Chao Yan – Electric Engineering and Computer Science, Vanderbilt University, Graduate Student, mentoring committee member
2016-present Cheng Gao – Biomedical Informatics, Vanderbilt University, post-doctor, mentor
2019-present Eugene Jeong – Biomedical Informatics, Vanderbilt University Medical Center, Ph.D. student, mentor
2020-present Yubo Feng – Computer Science, Vanderbilt University, Ph.D. student, mentor

Extramural and Intramural Research Support (Ongoing):

1R01LM012854-01A1 (PI: Chen) 08/1/2019 – 7/31/2023 5.40 calendar months
National Library of Medicine, National Institutes of Health **Total Award: $1,479,000**
Discovering Care Coordination Practice Patterns in the EMR: Interpretation and Impact on Patient Outcomes.
The overarching goal of this project is to learn care coordination patterns through the data stored in electronic medical record systems, assess their influence on care effectiveness (in the form of LOS and readmission), and evaluate the extent to which they are ready for adoption by healthcare organizations through comprehensive surveys and interviews with knowledgeable healthcare experts.
Role: PI

5R01 GM120484-03 (PI: Mayur) 01/01/2017 – 12/31/2021 0.60 calendar months
National Institute of General Medical Sciences **Total Award: $2,960,280**
The INSIGHT-ICU Study: Illuminating Neuropsychological dysfunction and Systemic Inflammatory mechanisms Gleaned after Hospitalization in Trauma-ICU Study
Goal: Following a multi-hundred-subject prospective Trauma ICU cohort for up to 12 months, to define the cognitive effects of injury and ICU survivorship that affects a large segment of the working population, while revealing pathophysiologic mechanisms underlying long-term cognitive impairment.
Role: Co-investigator

5 R01 HG006844-08 (PI: Malin) 09/21/2012 – 07/31/2020 2.40 calendar months
National Library of Medicine, National Institutes of Health **Total Award: $999,570**
A Risk Management Framework for Identifiability in Genomics Research
Goal: Developing game-theoretic models to reason about the extent to which genomic and clinical data should be designated as readily identifiable.

Role: Co-investigator

W81XWH-16-R-0033, DOD (PI: Mayur) 10/01/2016 – 09/22/2021 0.60 calendar months
Department of Defense (DOD) **Total Award: $582,754**
Linking Investigations in Trauma and Emergency Services (LITES) Network
Role: Co-investigator

Extramural and Intramural Research Support (Submitted):
1 R01 HS07189-01 (PI: Chen) 12/01/2020 – 11/30/2025 3.60 calendar months
NIH/AHRQ **Total Award: $2,000,000**
Discovering Effective Care Teams to Satisfy Patient Medical Needs Across Healthcare Organizations
This research will lead to an electronic health record (EHR) data mining and machine learning method to identify effective care teams to satisfy a patient's medical needs.
Role: PI

1 R01 HD100437-04 (PI: Chen) 12/01/2020 – 11/30/2024 3.60 calendar months
NIH/NICHHD **Total Award: $2,661,369.22**
Learning from Electronic Health Records to Prevent Severe Maternal Morbidity
While guidelines for managing risk of severe maternal morbidity (SMM) exist, it remains challenging to predict and prevent SMM. The project will develop an informatics framework to predict and prevent SMM, beyond current guidelines. This project will enable healthcare organizations and maternal quality improvement collaborative to enhance their processes for controlling, predicting and ultimately preventing, SMM.
Role: PI

1 R01 HD101637-01A1 (PI: Chen) 12/01/2020 – 11/30/2024 3.60 calendar months
NIH/NICHHD **Total Award: $2,060,731**
Discovering Effective Coordination from Electronic Health Records to Improve Patient Safety in the Neonatal Intensive Care Unit
The overarching goal of this project is to learn care coordination activities, provider networks and information flows from EHRs, and to better understand relationships of the activities, networks, and information flows with patient safety.
Role: PI

Extramural and Intramural Research Support (Completed):
NLM K99/R00LM011933 (PI: Chen)
05/01/2015 – 04/30/2019
National Library of Medicine, National Institutes of Health **Total Award: $ 823,926**
Learning Patterns of Collaboration to Optimize the Management of Care Providers
The research goal of this R00 is to design social network analysis models to learn community, dependency and workflow patterns for care providers in the healthcare systems.
Role: PI

IIS-1418504 (PI: Denny, Malin) 09/01/2014 – 08/31/2019 (NCE) 6.60 calendar months

National Science Foundation **Total Award: $692,972**
SCH:INT: Collaborative Research: High-throughput Phenotyping on Electronic Health Records using Multi-Tensor Factorization
This project will propose a general computational framework based on multi-tensor factorization for transforming electronic health records data into meaningful phenotypes with expert guidance.
Role: Co-investigator

2 R01 LM010207-05A1 (PI: Malin) 09/01/2014 – 08/31/2019 1.20 calendar months
National Library of Medicine, National Institutes of Health **Total Award: $1,396,355**
Automated Detection of Anomalous Access to Electronic Health Records
Goal: Engineer data mining methods to extract workflows and organizational models associated with the utilization of patients' medical records to discover anomalies concerning expected use.
Role: Co-investigator

R01 LM010207-0110 (PI: Malin) 09/01/2009 – 08/31/2014 12.0 calendar months
National Library of Medicine, National Institutes of Health **Total Award: $953,226**
Automated Detection of Anomalous Access to Electronic Health Records
Goal: Engineer data mining methods to extract patterns of use of patients' medical records and to discover anomalous activities.
Role: Key personal

PUBLICATIONS

Google Scholar H-index**: 19;** Total citations: **over 1,545**
https://scholar.google.com/citations?user=c-pOkPEAAAAJ&hl=en

1. Chen B, Alrifai W, Gao C, Jones B, Novak L, Lorenzi N, France D, Malin B, **Chen Y**. Mining tasks and task characteristics from electronic health record audit logs with unsupervised machine learning. Journal of the American Medical Informatics Association. 2021 Feb 12. https://doi.org/10.1093/jamia/ocaa338

2. Yan C, Zhang X, Gao C, Wilfong E, Casey J, France D, Gong Y, Patel M, Malin B, **Chen Y**. Collaboration Structures in COVID-19 Critical Care: Retrospective Network Analysis Study. JMIR human factors. 2021 Mar 8;8(1):e25724.

3. **Chen Y**, Yan C, Patel MB. Network Analysis Subtleties in ICU Structures and Outcomes. Am J Respir Crit Care Med. 2020 Dec 1;202(11):1606-1607. doi: 10.1164/rccm.202008-3114LE. PMID: 32931298; PMCID: PMC7706157.

4. Jones B, Zhang XM, Malin B, **Chen Y**. Learning Tasks of Pediatric Providers from Electronic Health Record Audit Logs. AMIA Annu Symp Proc. 2020. Accepted.

5. Ju P, Gao C, Patel M, **Chen Y**. Predicting Trauma Inpatient Disposition through Graph Convolutional Networks. AMIA Informatics Summit. 2020. In press.

6. Zhang X, Yan C, Gao C, Malin B, **Chen Y**. Predicting Missing Values in Medical Data via XGBoost Regression. Journal of Healthcare Informatics Research. 2020 Aug 3:1-2.

7. **Chen Y**, Lehmann C, Hatch D, Schremp E, Malin B, France D. Modeling Care Team Structures in the Neonatal Intensive Care Unit through Network Analysis of EHR Audit Logs. Methods of Information in Medicine. 2019;58(4-05):109-123. doi:10.1055/s-0040-1702237

8. Sinsky A, Rule A, Cohen G, Arndt B, Shanafelt T, Sharp C, Baxter S, Seale M, Yan S, **Chen Y**, Adler J, Hribar M. Metrics for Assessing Physician Activity Using EHR Log Data. Journal of the American Medical Informatics Association. J Am Med Inform Assoc. 2020;27(4):639-643. doi:10.1093/jamia/ocz223

9. Gao C, Osmundson S, Edwards DR, Jackson GP, Malin BA, **Chen Y**. Deep Learning Predicts Extreme Preterm Birth from Electronic Health Records. Journal of biomedical informatics. 2019;100:103334. doi:10.1016/j.jbi.2019.103334

10. Gao C, Yan C, Malin BA, **Chen Y.** Corpus Size Influences Clinical Concept Embeddings. AMIA Annual Symposium. 2019. 1583.

11. Yan C, Gao C, Zhang X, **Chen Y**, Malin B. Deep Imputation of Temporal Data. The 7th IEEE International Conference on Healthcare Informatics. 2019; Second place in data challenge on missing data Imputation. DOI: 10.1109/ICHI.2019.8904776

12. Zhang X, Yan C, Gao C, Malin B, **Chen Y**. XGBoost Imputation for Time Series Data. The 7th IEEE International Conference on Healthcare Informatics. 2019; Third place in data challenge on missing data Imputation. DOI: 10.1109/ICHI.2019.8904666

13. Yan C, Yin Z, Xiang S, **Chen Y**, Vorobeychik Y, Fabbri D, Kho A, Liebovitz D, Malin B. Mining the Best Observational Window to Model Social Phenomena. In 2018 IEEE 4th International Conference on Collaboration and Internet Computing. 2018;46-55.

14. Gao C, Yan C, Osmundson S, Malin BA, **Chen Y**. A deep learning approach to predict neonatal encephalopathy from electronic health records. The 7th IEEE International Conference on Healthcare Informatics. 2019; DOI: 10.1109/ICHI.2019.8904667

15. Gao C, Yan C, Osmundson S, Malin BA, **Chen Y**. Obstetric Patients with Repetitious Hospital Location Transfers Have Prolonged Stays. The 7th IEEE International Conference on Healthcare Informatics. 2019; DOI: 10.1109/ICHI.2019.8904557

16. Gao C, Osmundson S, Yan X, Edwards DV, Malin BA, **Chen Y**. Leveraging Electronic Health Records to Learn Progression Path for Severe Maternal Morbidity. Stud Health Technol Inform. 2019 Aug 21;264:148-152.

17. Gao C, Osmundson S, Yan X, Edwards DV, Malin BA, **Chen Y**. Learning to Identify Severe Maternal Morbidity from Electronic Health Records. Stud Health Technol Inform. 2019 Aug 21;264:143-147.

18. Zuber C, **Chen Y**. A temporal pattern discovery algorithm for predicting neonatal mortality in NICU postoperative patients. MedInfo 2019. In press

19. Kim C, Lehmann C, Schildcrout J, Hatch D, France D, **Chen Y**. Provider Networks in the Neonatal Intensive Care Unit Associate with Length of Stay. In 2019 IEEE 5th International

Conference on Collaboration and Internet Computing. 2019. DOI: 10.1109/CIC48465.2019.00024

20. Li P, Nelson SD, Malin BA, **Chen Y**. DMMS: A Decentralized Blockchain Ledger for the Management of Medication Histories. Blockchain in Healthcare Today. 2019 Jan 4:2(38). https://doi.org/10.30953/bhty.v2.38

21. Li T, Gao C, Yan C, Osmundson S, Malin B, **Chen Y**. Predicting Neonatal Encephalopathy From Maternal Data in Electronic Medical Records. AMIA 2018 Informatics Summit. 359-368. (The second place in the student paper competition)

22. Yin W, Gao C, Xu Y, Li B, Ruderfer D, **Chen Y**. Learning Opportunities for Drug Repositioning via GWAS and PheWAS Findings. AMIA 2018 Informatics Summit. 237-246.

23. **Chen Y**, Kho A, Liebovitz D, Ivory C, Osmundson S, Bian J, Malin B. Learning Bundled Care Opportunities from Electronic Medical Records. Journal of Biomedical Informatics. 2018; 77:1-10

24. **Chen Y**, Patel M, McNaughton C, Malin B. Interaction Patterns of Trauma Providers Are Associated with Length of Stay. Journal of the American Medical Informatics Association. 2018;25(7):790-799

25. Gao, C., Kho, A. N., Ivory, C., Osmundson, S., Malin, B. A., & **Chen, Y**. Predicting length of stay for obstetric patients via electronic medical records. Studies in health technology and informatics. 2017; (245):1019-1023.

26. Zheng T, Xie W, Xu l, Zhang Y, Yang G, **Chen Y**. A Machine Learning-based Framework to Identify Type 2 Diabetes through Electronic Health Records. International Journal of Medical Informatics. 2017; 97:120-127.

27. **Chen Y**, Lorenzi N, Sandberg W, Wolgast K, Malin B. Identifying Collaborative Care Teams through Electronic Medical Record Utilization Patterns. Journal of the American Medical Informatics Association. 2017;24(e1):e111-e120.

28. Yin ZJ, **Chen Y**, Fabbri D, Sun JM and Malin B. #PrayForDad: Learning the Semantics Behind Why Social Media Users Disclose Health Information. The 10th International AAAI Conference on Web and Social Media. 2016: 456-465.

29. Yan C, **Chen Y**, Li B, Liebovitz D, Malin B. Learning Clinical Workflows to Identify Subgroups of Heart Failure Patients. Proceedings of the American Medical Informatics Annual Fall Symposium. 2016:1248-1257.

30. **Chen Y**, Ghosh J, Bejan C, Gunter C, Kho A, Liebovitz D, Sun J, Denny J, Malin B. Building bridges across electronic health record systems through inferred phenotypic topics. Journal of Biomedical informatics. 2015; 55:482-93. PMID: 25841328, PMCID: 4464930 [Editors' Choice paper]

31. **Chen Y**, Xie W, Gunter C, Liebovitz D, Mehrotra S, Zhang H, Malin B. Inferring clinical workflow efficiency via electronic medical record utilization. Proceedings of the American

Medical Informatics Annual Fall Symposium. 2015: 416-425. [AMIA Maintenance of Certification]

32. Wang Y, Chen R, Ghosh J, Denny J, Kho A, **Chen Y**, Malin B, Sun J. Rubik: knowledge guided tensor factorization and completion for health data analytics. Proceedings of the 21st ACM SIGKDD Conference on Knowledge Discovery and Data Mining. 2015: 1265-1274.

33. **Chen Y**, Lorenzi N, Nyemba S, Schildcrout J, Malin B. We work with them? health workers interpretation of organizational relations mined from electronic health records. International Journal of Medical Informatics. 2014; 83(7): 495-506. PMID: 24845147, PMCID: 4159755

34. Zhang W, **Chen Y**, Cybulski T, Fabbri D, Gunter C, Lawlor P, Liebovitz D, Malin B. Decide Now or Later ?: Quantifying the Tradeoff between Prospective and Retrospective Access Decisions. Proceedings of the ACM SIGSAC Conference on Computer and Communications Security (CCS). 2014; 1182-1192.

35. **Chen Y**, Nyemba S, Malin B. Detecting anomalous insiders in collaborative information systems. IEEE Transactions on Dependable and Secure Computing. 2012; 9(3): 332-344. PMID: 24489520, PMCID: 3905623. [One of the top articles of 2012 in computer science by the journal ACM Computer Review]

36. **Chen Y**, Nyemba S, Zhang W, Malin B. Specializing network analysis to detect anomalous insider actions. Security Informatics. 2012; 1(1): 5. PMID: 23399988, PMCID: 3566705.

37. **Chen Y**, Nyemba S, Malin B. Auditing medical record accesses via healthcare interaction networks. Proceedings of the American Medical Informatics Association Annual Symposium. 2012; 93-102. PMID: 23304277, PMCID: 3540438.

38. Zhang W, **Chen Y**, Gunter C, Liebovitz D and Malin B. Evolving Role Definition Through Permission Invocation Patterns. Proceedings of the ACM Symposium on Access Control Models and Technologies (SACMAT). 2012:37-48

39. **Chen Y**, Nyemba S, Zhang W, and Malin B. Leveraging social networks to detect anomalous insider actions in collaborative environments. Proceedings of the 9th IEEE Intelligence and Security Informatics (ISI). 2011: 119-124. PMID: 25621314, PMCID: 4303584. [Best paper award]

40. **Chen Y**, Malin B. Detection of anomalous insiders in collaborative environments via relational analysis of access logs. Proceedings of the 1st ACM Conference on Data and Application Security and Privacy. 2011: 63-74. PMID: 25485309, PMCID: 4257138.

41. Li X, Xue Y, **Chen Y**, and Malin B. Context-Aware Anomaly Detection for Electronic Medical Record Systems. 2nd USENIX Workshop on Health Security and Privacy. 2011.

42. Yang S, Cheng X, **Chen Y**, Fang G, Zhang J, Xu H. Detect Events on Noisy Textual Datasets. Proceedings of the 12th Asia-Pacific Web Conference. 2010; 372-374

43. Liu X, Bai S, **Chen Y**, Cheng X. Improving the routing performance of KAD through social network analysis. IEEE symposium on Computers and Communications. 2010; 721-727

44. **Chen Y**, Cheng X, Yang S. Bursty Topics Extraction for Web Forums. 11th ACM International Conference on Web Information and Data Management (WIDM). 2009; 55-58.

45. **Chen Y**, Cheng X, Huang Y. A Wavelet-based Model to Recognize High-quality Topics on Web Forum. IEEE/WIC/ACM International Conference on Web Intelligence and Intelligent Agent Technology, WI. 2008; 343-351.

46. **Chen Y**, Dai L, Cheng X. GATS-C4.5: An Algorithm for Optimizing Features in Flow Classification. IEEE Consumer Communications and Networking Conference. 2008; 466-470.

47. **Chen Y**, Li W, Cheng X. Toward Building Lightweight Intrusion Detection System through Modified RMHC and SVM. 15th IEEE International Conference on Networks. 2007; 83-88

48. Li Y, Fang B, Guo L, **Chen Y**. Network anomaly detection based on TCM-KNN algorithm. ACM Symposium on Information, Computer and Communications Security. 2007; 13-19

49. **Chen Y**, Dai L, Li Y, Cheng X. Building lightweight intrusion detection system based on principal component analysis and C4.5 algorithm. 9th IEEE International Conference on Advanced Communication Technology. 2007; 2109-2112

50. Li Y, Fang B, Guo L, **Chen Y**. TCM-KNN Algorithm for Supervised Network Intrusion Detection. Pacific Asia Workshop on Intelligence and Security Informatics (PAISI). 2007; p141-151

51. Dai L, **Chen Y**, Yun X. Optimizing IP Flow Classification Using Feature Selection. The Eighth International Conference on Parallel and Distributed Computing, Applications and Technologies. 2007; 39-45.

52. **Chen Y**, Li Y, Cheng X, Guo L. Survey and Taxonomy of Feature Selection Algorithms in Intrusion Detection System. Conference on Information Security and Cryptology. LNCS4318. 2006; 153-167.

53. Li Y, Fang B, **Chen Y**, Guo L. A Lightweight Intrusion Detection Model Based on Feature Selection and Maximum Entropy Model. IEEE International Conference on Communication and Technology. 2006; 1-4.