

## CURRICULUM VITAE

University of Pittsburgh  
School of Medicine

## BIOGRAPHICAL

**Name:** Harry S. Hochheiser      **Business Address:** The Offices at Baum  
5607 Baum Blvd., Suite 417  
**Email:** [harryh@pitt.edu](mailto:harryh@pitt.edu)      **Pittsburgh, PA 15206**  
**Business Phone:** (412) 648-9300

**Web:** <https://www.dbmi.pitt.edu/directory/name/harry-hochheiser/>

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## EDUCATION and TRAINING

### UNDERGRADUATE

1985 - 1989	Massachusetts Institute of Technology Cambridge, Massachusetts, USA	BS Computer Science and Engineering
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### GRADUATE

1989 - 1991	Massachusetts Institute of Technology Cambridge, Massachusetts, USA	MS Electrical Engineering and Computer Science Rishiyur S. Nikhil, PhD
1998 - 2003	University of Maryland College Park, Maryland, USA	PhD Computer Science Ben Shneiderman, PhD

### POSTGRADUATE

7/2003 - 7/2006	National Institute on Aging Baltimore, MD	Post-Doctoral Computational Biology Ilya Goldberg, PhD
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## APPOINTMENTS and POSITIONS

### ACADEMIC

1991 - 1993	Tufts University School of Medicine Boston, Massachusetts, USA	Research Staff Rehabilitation Medicine
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1998 - 2003	University of Maryland College Park, Maryland, USA	Graduate Student Computer Science
2003 - 2006	Image Informatics, Computational Biology Unit  National Institute on Aging Baltimore, Maryland USA	Postdoctoral Researcher Laboratory of Genetics
2006 - 2009	Towson University Towson, Maryland USA	Assistant Professor Computer and Information Sciences
2009 - 2017	Medicine University of Pittsburgh Pittsburgh, Pennsylvania, USA	Assistant Professor Biomedical Informatics
2012 - 2017	Kenneth P. Dietrich School of Arts and Sciences  University of Pittsburgh Pittsburgh, Pennsylvania, USA	Assistant Professor Intelligent Systems Program (Secondary Appointment)
2016-2017	School of Medicine University of Pittsburgh	Associate Director Biomedical Informatics Training Program
2017 - present	School of Medicine University of Pittsburgh Pittsburgh, Pennsylvania, USA	Associate Professor Biomedical Informatics
2017 - present	School of Computing and Information University of Pittsburgh Pittsburgh, Pennsylvania, USA	Associate Professor Intelligent Systems Program (Secondary Appointment)
2017 - present	School of Medicine University of Pittsburgh	Director Biomedical Informatics Training Program
2020 - present	School of Medicine University of Pittsburgh	Associate Professor Clinical and Translational Science (Secondary Appointment)
2024 - present	School of Medicine University of Pittsburgh Pittsburgh, Pennsylvania, USA	Professor Biomedical Informatics

2024 - present	School of Computing and Information University of Pittsburgh Pittsburgh, Pennsylvania, USA	Professor Intelligent Systems Program (Secondary Appointment)
2024 - present	School of Medicine University of Pittsburgh	Professor Clinical and Translational Science (Secondary Appointment)

#### **NON-ACADEMIC**

1993 - 1995	Massachusetts General Hospital Boston, Massachusetts, USA	Software Developer Biomedical Engineering
5/1995 - 12/1995	AT&T Bell Labs Murray Hill, New Jersey, USA	Software Developer
1996 - 1998	H. Systems Princeton, New Jersey, USA	Consultant
6/1999 - 9/1999	IBM T.J. Watson Labs Hawthorne, New York, USA	Summer Intern

#### **MEMBERSHIP in PROFESSIONAL and SCIENTIFIC SOCIETIES**

2004 - Present	Member, Association of Computing Machinery
2009 - Present	Member, American Medical Informatics Association

#### **HONORS and AWARDS**

2014-2015, 2017-2018,	Hattie Becich award for Best Instructor, University of Pittsburgh
2021-2022	Biomedical Informatics Training Program
2002	Selected for Doctoral Consortium, ACM Special Interest Group on Computer-Human Interaction
2002 - 2003	America Online Fellowship in Human-Computer Interaction

#### **PUBLICATIONS**

##### **1. ORIGINAL PEER REVIEWED ARTICLES:**

##### **Original Peer Reviewed Journal Articles:**

1. **Hochheiser H**, Shneiderman B. Performance Benefits of Simultaneous over Sequential Menus as Task Complexity Increases. *International Journal of Human-Computer Interaction*. 2000; 12 (2):173-192.
2. **Hochheiser H**, Shneiderman B. Interactive Exploration of Time Series Data. In: *Lecture Notes in Artificial Intelligence #2226. Discovery Science 2001*; 2001. p.441-446.
3. **Hochheiser H**, Shneiderman B. Using Interactive Visualizations of WWW Log Data to Characterize Access Patterns and Inform Site Design. *Journal of the American society for Information Systems*. 2001; 54 (4):331-343.
4. **Hochheiser H**. The Platform for Privacy Preference as a Social Protocol: An Examination within the U.S. Policy Context. *ACM Transactions on Internet Technology*. 2002; 2 (4):276-306.
5. Shneiderman B, **Hochheiser H**. Universal Usability as a Stimulus to Advanced Interface Design. *Behaviour & Information Technology*. 2002; 20 (5):367-376.
6. **Hochheiser H**, Shneiderman B. Dynamic Query Tools for Time Series Data Sets: Timebox Widgets for Interactive Exploration. *Information Visualization*. 2004; 3:1-18.
7. Goldberg IG, Allan C, Burel JM, Creager D, Falconi A, **Hochheiser H**, Johnston J, Mellen J, Sorger PK, Swedlow JR. The Open Microscopy Environment (OME) Data Model and XML file: open tools for informatics and quantitative analysis in biological imaging. *Genome biology*. 2005; 6 (5):R47. PMCID: PMC1175959. PMID: 15892875.
8. **Hochheiser H**, Lazar J. HCI and societal issues: a framework for engagement. *International Journal of Human-Computer Interaction*. 2007; 23 (3):339-374. (invited).
9. Sauer G, Lazar J, **Hochheiser H**, Feng J. Towards A Universally Usable Human Interaction Proof: Evaluation of Task Completion Strategies. *ACM Transactions on Accessible Computing*. 2010; 2 (4):15:1-15:32. [DOI: 10.1145/1786774.1786776](https://doi.org/10.1145/1786774.1786776)
10. Sauer G, Holman J, Lazar J, **Hochheiser H**, Feng J. Accessible Privacy and Security: A Universally Usable Human-Interaction Proof. *Universal Access in Information Society*. 2010; 9 (3):239-248.
11. **Hochheiser H**, Lazar J. Revisiting breadth vs. depth in menu structures for blind users of screen readers. *Interacting with Computers*. 2010; 22 (5):389-398.
12. **Hochheiser H**, Aronow BJ, Artinger K, Beaty TH, Brinkley JF, Chai Y, Clouthier D, Cunningham ML, Dixon M, Donahue LR, Fraser SE, Hallgrímsson B, Iwata J, Klein O, Marazita ML, Murray JC, Murray S, de Villena FP, Postlethwait J, Potter S, Shapiro L, Spritz R, Visel A, Weinberg SM, Trainor PA. The FaceBase Consortium: a comprehensive program to facilitate craniofacial research. *Dev Biol*. 2011 Jul 15; 355 (2):175-82. PMCID: PMC3440302. PMID: 21458441.
13. Kohle-Erscher A, Chatterjee P, Osmanbeyoglu HU, **Hochheiser H**, Bartos C. Evaluating the barriers to point-of-care documentation for nursing staff. *Comput Inform Nurs doi: 10.1097/NCN.0b013e3182343f1*. 2012 Mar; 30 (3):126-33. PMID: 22024972.
14. Romagnoli KM, Handler SM, Ligons FM, **Hochheiser H**. Home-care nurses' perceptions of unmet information needs and communication difficulties of older patients in the immediate post-hospital discharge period. *BMJ quality & safety*. 2013 Apr; 22 (4):324-32. PMCID: PMC3694324. PMID: 23362507
15. Handler SM, Boyce RD, Ligons FM, Perera S, Nace DA, **Hochheiser H**. Use and Perceived Benefits of Mobile Devices by Physicians in Preventing Adverse Drug Events in the Nursing

- Home. Journal of The American Medical Directors Association. 2013 Oct 2. PMID: 24094901, PMCID: PMC4351260
16. Brinkley JF, Borromeo C, Clarkson M, Cox TC, Cunningham MJ, Detwiler LT, Heike CL, **Hochheiser H**, Mejino L, Travillian RS, Shapiro LG. The Ontology of Craniofacial Development and Malformation for translational craniofacial research. *Seminars in Medical Genetics* DOI: 10.1002/ajmg.c.31377. 2013 Oct 4; 1-14. PMCID: PMC4041627. PMID: 24124010.
  17. Lazar J, **Hochheiser H**. Legal Aspects of Interface Accessibility in the U.S. *Communications of the ACM*. 2013 Dec; 56 (12):74-80.
  18. Romagnoli KM, Handler SM, **Hochheiser H**. Home care: more than just a visiting nurse. *BMJ quality & safety*. 2013 Dec; 22 (12):972-4. PMCID: PMC4120108. PMID: 23940375. doi: 10.1136/bmjqqs-2013-002339.
  19. Wentz B, **Hochheiser H**, Lazar J. A Survey of Blind Users on the Usability of Email Applications. In: *Universal Access in the Information Society International Journal*. Springer-Verlag, 2013 Aug. p.327
  20. Borromeo CD, Schleyer TK, Becich MJ, **Hochheiser H**. Finding collaborators: toward interactive discovery tools for research network systems. *Journal of Medical Internet Research*. 2014; 16 (11):e244. PMID: 25370463, PMCID: PMC4376239 doi: 10.2196/jmir.3444.
  21. Ligons FM, Mello-Thoms C, Handler SM, Romagnoli KM, **Hochheiser H**. Assessing the impact of cognitive impairment on the usability of an electronic medication delivery unit in an assisted living population. *International Journal of Medical Informatics*. 2014 Jul 27. PMID: 25153770 PMCID: PMC4268135.
  22. Landis-Lewis Z, Brehaut JC, **Hochheiser H**, Douglas GP, Jacobson RS. Computer-supported feedback message tailoring: theory-informed adaptation of clinical audit and feedback for learning and behavior change. *Implementation Science: IS*. 2015 Jan 21; 10 (1):12. PMID: 25603806 PMCID: PMC4320482. doi: 10.1186/s13012-014-0203-z.
  23. Haendel MA, Vasilevsky N, Brush M, **Hochheiser H**, Jacobson J, Oellrich A, Mungall C, Washington N, Kohler S, Lewis S, Robinson P, Smedley D. Disease insights through crossspecies phenotype comparisons. *Mamm Genome*. 2015 Jun 20; 2015 (9577):1-8. PMID: 26092691. PMCID: PMC4602072, doi: 10.1007/s00335-015-9577-8.
  24. Strange C, Senior RM, Sciurba FC, O'Neal S, Morris A, Wisniewski SR, Bowler R, **Hochheiser H**, Becich MJ, Zhang Y, Leader JK, Methe BA, Kaminski N, Sandhaus RA, Study Group G. Rationale and Design of the Genomic Research in Alpha-1 Antitrypsin Deficiency and Sarcoidosis Study: Alpha-1 Protocol. *Ann Am Thorac Soc*. 2015 Jul 8; 1-35. PMID: 26153726. PMCID: PMC4627425 doi: 10.1513/AnnalsATS.201503-143OC.
  25. Moller DR, Koth LL, Maier LA, Morris A, Drake W, Rossman M, Leader JK, Collman RG, Hamzeh N, Sweiss NJ, Zhang Y, O'Neal S, Senior RM, Becich MJ, **Hochheiser H**, Kaminski N, Wisniewski SR, Gibson KF, Study Group G. Rationale and Design of the Genomic Research in Alpha-1 Antitrypsin Deficiency and Sarcoidosis Study (GRADS): Sarcoidosis Protocol. *Ann Am Thorac Soc*. 2015 Jul 20. PMID: 26193069. PMCID: PMC4627423.
  26. Mungall CJ, Washington NL, Nguyen-Xuan J, Condit C, Smedley D, Köhler S, Groza T, Shefchek K, **Hochheiser H**, Robinson PN, Lewis SE, Haendel MA. Use of model organism and disease

- databases to support matchmaking for human disease gene discovery. *Human Mutation*. 2015 Oct; 36 (10):979-84. PMID: 26269093 PMCID: PMC5473253 DOI: 10.1002/humu.22857
27. Cooper GF, Bahar I, Becich MJ, Benos PV, Berg J, Espino JU, Glymour C, Jacobson RC, Kienholz M, Lee AV, Lu X, Scheines R, Center for Causal Discovery team (**Hochheiser H**). The center for causal discovery of biomedical knowledge from big data. *Journal of The American Medical Informatics Association: JAMIA*. 2015 Nov; 22 (6):1132-6. PMID: 26138794. PMCID: PMC5009908 doi: 10.1093/jamia/ocv059.
28. Romagnoli KM, Boyce R, Empey PE, Adams S, **Hochheiser H**. Bringing clinical pharmacogenomics information to pharmacists: a qualitative study of information needs and resource requirements. *International Journal of Medical Informatics*. 2016 Feb; 86:54-61. PMID: 26725696. PMCID: PMC4720137 doi: 10.1016/j.ijmedinf.2015.11.015.
29. **Hochheiser H**, Ning Y, Hernandez AM, Horn JR, Jacobson RS, Boyce R. Using Nonexperts for Annotating Pharmacokinetic Drug-Drug Interaction Mentions in Product Labeling: A Feasibility Study. *JMIR Research Protocols*. 2016 Apr 11; 5 (2). PMCID: 4844909. PMID: 27066806. doi: 10.2196/resprot.5028.
30. Lazar J, Abascal J, Barbosa S, Barksdale J, Grossklags J, Gulliksen J, Johnson J, McEwan T, Martínez-Normand L, Michalk W, Tsai J, van der Veer G, von Axelson H, Walldius A, Whitney G, Winckler M, Sabatier P, Wulf V, Churchill EF, Cranor L, Davis J, Hedge A, **Hochheiser H**, Hourcade J, Lewis C, Nathan L, Paterno F, Reid B, Quesenberry W, Selker T, Wentz B. HumanComputer Interaction and International Public Policymaking: A Framework for Understanding and Taking Future Actions. *Foundations and Trends(r) Human-Computer Interaction*. 2016 May 2; 9 (2):65-148. doi: 10.1561/1100000062.
31. Stein CD, Xiao X, Levine S, Schleyer TK, **Hochheiser H**, Thyvalikakath TP. A prototype mobile application for triaging dental emergencies. *Journal of The American Dental Association*. 2016 May 17. PMID: 27206728. PMCID: PMC5045825 doi: 10.1016/j.adaj.2016.03.021.
32. McMurry JA, Köhler S, Washington NL, Balhoff JP, Borromeo C, Brush M, Carbon S, Conlin T, Dunn N, Engelstad M, Foster E, Gourdine JP, Jacobsen JO, Keith D, Laraway B, Xuan JN, Shefchek K, Vasilevsky NA, Yuan Z, Lewis SE, **Hochheiser H**, Groza T, Smedley D, Robinson PN, Mungall CJ, Haendel MA. Navigating the Phenotype Frontier: The Monarch Initiative. *Genetics*. 2016 Aug; 203 (4):1491-5. PMCID: PMC4981258. PMID: 27516611. doi: 10.1534/genetics.116.188870.
33. Smedley D, Schubach M, Jacobsen J, Köhler S, Zemojtel T, Spielmann M, Jäger M, **Hochheiser H**, Washington N, McMurry J, Haendel MA, Mungall CJ, Lewis SE, Graza T, Valentini G, Robinson PN. A Whole-Genome Analysis Framework for Effective Identification of Pathogenic Regulatory Variants in Mendelian Disease. *American Journal of Human Genetics*. 2016 Aug 25. PMID: 27569544 PMCID: PMC5011059 [Available on 2017-03-01] DOI: 10.1016/j.ajhg.2016.07.005
34. **Hochheiser H**, Castine M, Harris D, Savova G, Jacobson RS An information model for computable cancer phenotypes. *BMC Medical Informatics and Decision Making* Sep 15;16(1):121. doi: 10.1186/s12911-016-0358-4. PMID: 27629872 PMCID: PMC5024416.

35. Fisher AM, Ding MQ, **Hochheiser H**, Douglas GP Measuring time utilization of pharmacists in the Birmingham Free Clinic dispensary BMC Health Serv Res. 2016 Sep 29;16(1):529, PMID: 27687973 PMCID: PMC5043635
36. Links AE, Draper D, Lee E, Guzman J, Valivullah Z, Maduro V, Lebedev V, Didenko M, Tomlin G, Brudno M, Girdea M, Dumitriu S, Haendel MA, Mungall CJ, Smedley D, **Hochheiser HS**, Arnold AM, Coessens B, Verhoeven S, Bone W, Adams D, Boerkoel CF, Gahl WA, Sincan M. Distributed Cognition and Process Management Enabling Individualized Translational Research: The NIH Undiagnosed Diseases Program Experience. Frontiers in Medicine 3(October 2016):1-9 Article number 39 12 Oct 2016. PMID: 27785453 PMCID: PMC5060938 DOI: 10.3389/fmed.2016.00039
37. Mungall CJ, McMurry JA, Köhler S, Balhoff JP, Borromeo C, Brush M, Carbon S, Conlin T, Dunn N, Engelstad M, Foster E, Gourdine JP, Jacobson JOB, Keith D, Laraway B, Lewis SE, NguyenXuan J, Shefchek K, Vasilevsky N, Yuan Z, Washington N, **Hochheiser H**, Groza T, Smedley D, Robinson PN, Haendel MA. The Monarch Initiative: an integrative data and analytic platform connecting phenotypes to genotypes across species. Nucleic Acids Res 2017 Jan 4; 45 (D1): D712-D722 PMID: 27899636 PMCID: PMC5210586.
38. Romagnoli KM, Nelson SD, Hines L, Empey P, Boyce RC, **Hochheiser H**. Information needs for making clinical recommendations about potential drug-drug interactions: a synthesis of literature review and interviews. BMC Med Inform Decis Mak. 2017 Feb 22;17(1):21. doi: 10.1186/s12911-017-0419-3. PMID: 28228132, PMCID: PMC5322613.
39. Romagnoli KM, Boyce RD, Empey PE, Ning Y, Adams S, **Hochheiser H**. Design and evaluation of a pharmacogenomics information resource for pharmacists. J Am Med Inform Assoc 2017 Feb 26; 2017 Jul 1;24(4):822-831. PMID: 28339805 PMCID: PMC6080676 doi: <https://doi.org/10.1093/jamia/ocx007>.
40. Calvitti A, **Hochheiser H**, Ashfaq S, Bell K, Chen Y, El Kareh R, Gabuzda MT, Liu L, Mortensen S, Pandey B, Rick S, Street RL, Weibel N, Weir C, Agha Z. Physician activity during outpatient visits and subjective workload, J. Biomed. Inf. 2017, May, 69:135-149. PMID: 28323114. DOI: 10.1016/j.jbi.2017.03.011.
41. Trivedi, G, Pham P, Chapman WW, Hwa R, Wiebe J, **Hochheiser H**. NLPReViz: an interactive tool for natural language processing on clinical text. Journal of the American Medical Informatics Association 22 July, 2017. DOI: 10.1093/jamia/ocx070. PMID: 29016825 PMCID: PMC6381768.
42. Savova GK, Tseytlin E, Finan S, Castine M, Miller T, Medvedeva O, Harris, D, **Hochheiser H**, Lin C, Chavan G, Jacobson RS. DeepPhe: A Natural Language Processing System for Extracting Cancer Phenotypes from Clinical Records. Cancer Research, November 2017; Volume 77, Issue 21, e115. DOI: 10.1158/0008-5472.CAN-17-0615. PMID: 29092954 PMCID: PMC5690492
43. Markam H, **Hochheiser H**, Kuntoro K, Notobroto HB. Exploring Midwives' Need and Intention to Adopt Electronic Integrated Antenatal Care. Perspectives in Health Information Management. Winter 2018. PMID: 29618961 PMCID: PMC5689442 Available at: <http://perspectives.ahima.org/exploringmidwivesneedandintention/>.
44. Ogoe, H, Asamani, J., **Hochheiser, H**. and Douglas, G. Assessing Ghana's eHealth workforce: implications for planning and training. Human Resources for Health 2018 16:65 DOI:10.1186/s12960-018-0330-8. PMID: 30482223 PMCID: PMC6260724.

45. Schnetz MP, **Hochheiser HS**, Danks DJ, Landsittel DP, Vogt KM, et al. The triple variable index combines information generated over time from common monitoring variables to identify patients expressing distinct patterns of intraoperative physiology. *BMC Medical Research Methodology*. 2019 January; 19(17). PMCID: PMC6332613.
46. Wu DTY, Chen AT, Manning JD, Levy-Fix G, Backonja U, Borland D, Caban JJ, Dowding DW, **Hochheiser H**, Kagan V, Kandaswamy S, Kumar M, Nunez A, Pan E, Gotz D. Evaluating visual analytics for health informatics applications: a systematic review from the American Medical Informatics Association Visual Analytics Working Group Task Force on Evaluation. *Journal of the American Medical Informatics Association*, ocy190, February 14, 2019 DOI: [10.1093/jamia/ocy190](https://doi.org/10.1093/jamia/ocy190). PMID: 30840080.
47. Trivedi G, Hong C, Dadashzadeh ER, Handzel RM, **Hochheiser H**, Visweswaran S. Identifying incidental findings from radiology reports of trauma patients: An evaluation of automated feature representation methods. *International Journal of Medical Informatics*. 2019 Sept 129; 81-7. DOI: [10.1016/j.ijmedinf.2019.05.021](https://doi.org/10.1016/j.ijmedinf.2019.05.021) PMID:31445293 PMCID: PMC 6717529
48. Warner JL, Dymshyts D, Reich CG, Gurley MJ, **Hochheiser H**, Moldwin ZH, Belenkaya R, Williams AE, Yang PC. HemOnc: A New Standard Vocabulary for Chemotherapy Regimen Representation in the OMOP Common Data Model. *J Biomed Inform*. 2019 Jun 22. doi: [10.1016/j.jbi.2019.103239](https://doi.org/10.1016/j.jbi.2019.103239) PMID:31238109; PMCID: PMC6697579.
49. Cai C, Cooper GF, Lu KN, Ma X, Xu S, Zhao Z, Chen X, Xue Y, Lee AV, Clark N, Chen V, Lu S, Chen L, Yu L, **Hochheiser HS**, Jiang X, Wang JQ, Lu X. Systematic discovery of the functional impact of somatic genome alterations in individual tumors through tumor-specific causal inference. *PLOS Comput Biol*, 2019 Jul 15(7):e1007088. DOI: [10.1371/journal.pcbi.1007088](https://doi.org/10.1371/journal.pcbi.1007088). PMID: 31276486; PMCID: PMC6650088.
50. Trivedi G, Dadashzadah ER, Handzel RM, Chapman WW, Visweswaran S, **Hochheiser H**. Interactive NLP in Clinical Care: Identifying Incidental Findings in Radiology Reports. *Appl Clin Inform* 2019;10:4, 655–69. DOI: [10.1055/s-0039-1695791](https://doi.org/10.1055/s-0039-1695791). PMID: 31486057; PMCID: PMC6727024
51. King, AJ, Cooper, GF, Clermont, G, **Hochheiser H**, Hauskrecht, M, Sittig, DF, Visweswaran, S, Using Machine Learning to Selectively Highlight Patient Information, *Journal of Biomedical Informatics* (2019), DOI: [10.1016/j.jbi.2019.103327](https://doi.org/10.1016/j.jbi.2019.103327). PMID: 31676461; PMCID: PMC6932869.
52. Grizzle AJ, Hines LE, Malone DC, Kravchenko O, **Hochheiser H**, Boyce RD. Testing the face validity and inter-rater agreement of a simple approach to drug-drug interaction evidence assessment. *J Biomed Inform*. 2020 Jan;101:103355. Epub 2019 Dec 12. DOI: [10.1016/j.jbi.2019.103355](https://doi.org/10.1016/j.jbi.2019.103355). PMID: 31838211; PMC7537787.
53. King AJ, Cooper GF, Clermont G, **Hochheiser H**, Hauskrecht M, Sittig DF, Visweswaran S. Leveraging Eye Tracking to Prioritize Relevant Medical Record Data: Comparative Machine Learning Study. *J Med Internet Res* 2020;22(4):e15876. DOI: [10.2196/15876](https://doi.org/10.2196/15876). PMID: 32238342; PMC7163414
54. Yuan Z, Finan S, Warner J, Savova G, **Hochheiser H**. Interactive Exploration of Longitudinal Cancer Patient Histories Extracted from Clinical Text. *JCO Cancer Clinical Informatics* May 2020 DOI: [10.1200/CCI.19.00115](https://doi.org/10.1200/CCI.19.00115) PMID: 32383981; PMC7265796
55. **Hochheiser H**, Valdez RS. Human-Computer Interaction, Ethics, and Biomedical Informatics.

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56. Barda AJ, Horvat CM, **Hochheiser H**. A qualitative research framework for the design of usercentered display of explanations for machine learning model predictions in healthcare. BMC Medical Informatics and Decision Making. 2020 Oct 8;20(1):257. DOI: 10.1186/s12911-02001276-x. PMID: 33032582
  57. Calzoni L, Clermont G, Cooper GF, Visweswaran S, **Hochheiser H**. Exploring novel graphical presentations of clinical data in a Learning Electronic Medical Record. Appl Clin Inform 2020; 11(04): 680-691. DOI: 10.1055/s-0040-1709707. PMID: 33058103; PMCID: PMC7560537.
  58. Tajgardo M, Cooper GF, King AJ, Clermont G, **Hochheiser H**, Hauskrecht M, Sittg DF, Visweswaran S. Modeling physician variability to prioritize relevant medical record information. JAMIA Open Dec 31;3(4):602-610. DOI: [10.1093/jamiaopen/ooaa058](https://doi.org/10.1093/jamiaopen/ooaa058) PMID: 33623894 PMCID: PMC7886572
  59. Chu, J, Zang, W, Vukmirovic M, Yan X, Adams T, Delullis G, Hu B, Mihajilnec A, Schupp JC, Becich MJ, **Hochheiser H**, Gibson KF, Chen ES, Morris A, Leader JK, Wisniewski SR, Zhang Y, Sciurba FC, Collman RG, Sandhaus R, Herzog EL, Patterson KC, Sauler M, Strange C, Kaminski N, on behalf of the GRADS Investigators. Gene coexpression networks reveal novel molecular endotypes in alpha-1 antitrypsin deficiency. Thorax 2021 DOI: 10.1136/thoraxjnl-2019214301. PMID: 33303696
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  62. Visweswaran S, King AJ, Tajgardo M, Calzoni L, Clermont G, **Hochheiser H**, Cooper GF. Evaluation of eye tracking for a decision support application. JAMIA Open 2021 Aug 2;4(3) DOI: 10.1093/jamiaopen/ooab059. PMID: 34350394 PMCID: PMC8327376
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5. **Hochheiser H**, Verma 2022 A Information Visualization in Mental Health Research and Practice. In Mental Health Informatics: Enabling a Learning Mental Healthcare System, Tenenbaum JD and Ranallo, A., eds. Springer International.
6. **Hochheiser H**, Romagnoli K. 2022 Usability/Human Centered Design. In How to build and implement clinical decision support for pharmacogenomic precision medicine, Devine B and Boyce R, eds. Elsevier.

#### 5. PUBLISHED ABSTRACTS (in Scientific Journals)

None

#### 6. ABSTRACTS (not published in Scientific Journals)

1. Borromeo C, Schleyer TK, Becich MJ, Hochheiser H. Finding collaborators: Towards interactive tools for research social networks. Poster presented at: Second Annual VIVO Conference; 2011 Aug 24-26; Washington, DC.
2. Borromeo C, Schleyer TK, Becich MJ, Hochheiser H. Finding collaborators: Towards interactive tools for research social networks. Poster presented at: CTSA Informatics Key Function Committee All-Hands Meeting; 2011 Oct 12-13; Bethesda, MD.
3. Washington N, Mungall C, Hochheiser H, Gupta A, Bandrowski A, Grethe J, Martone M, Vasilevsky N, Haendel M. Semantic Integration of Genotype-phenotype Resources. Poster presented at: AMIA Summit on Translational Bioinformatics; 2013 Mar 18-20; San Francisco, CA.
4. Conrad A, Hochheiser H, Chapman W, Hwa R, Wiebe JM. Tightly-Coupled Natural Language Processing and Visualization for Electronic Medical Record Chart Review. Poster presented at: AMIA Summit on Clinical Research Informatics; 2013 Mar 20-22; San Francisco, CA.
5. Washington NL, Brush M, Bandrowski A, Borromeo C, Eilbeck K, Espino J, Grethe J, Gupta A, Hochheiser H, Hoffman S, Lewis SE, Lui L, Martone M, Mungall CJ, Robinson P, Smedley D, Torniai C, Vasilevsky N, Haendel MA. Reducing variability in variation data using a common genotypephenotype model. Poster presented at: American Society of Human Genetics; 2013 Oct 22-26; Boston, MA.
6. Landis-Lewis Z, Hochheiser H, Douglas GP, Crowley RS. Toward a Model of Tailored Clinical Audit and Feedback. Poster presented at: AMIA Annual Symposium; 2013 Nov 16-20; Washington, DC.

7. Liu Y, Castine M, Hong M, Hochheiser H, Chapman WW. Schema Builder: A Web-based User Interface for Authoring and Sharing Natural-Language Processing Schemas. Poster presented at: AMIA Annual Symposium; 2013 Nov 16-20.
8. Ayvaz S, Zhu Q, Hochheiser H, Brochhausen M, Horn J, Dumontier M, Samwald M, Boyce R. DrugDrug Interaction Data Source Survey and Linking. Poster presented at: AMIA TBI 2014; 2014 Apr 7-11; San Francisco, CA.
9. Borromeo C, Washington NL, Mungall C, Espino JU, Haendel MA, Smedley D, Jacobsen J, Hochheiser H. Visualizing clinically similar phenotypes. Poster presented at: AMIA TBI 2014; 2014 Apr 7-11; San Francisco.
10. Landis-Lewis Z, Brehaut JC, Hochheiser H, Douglas GP, Crowley RS. Automated decision support for tailoring clinical audit and feedback. Poster presented at: KT Canada Summer Institute; 2014 Jun 9-11; Quebec City, Canada.
11. Borromeo C, Washington NL, Mungall CJ, Boes R, Haendel MA, Martone M, Hochheiser H. The Monarch Initiative Phenotype Grid. Poster presented at: BioVis 2014; 2014 Jul 11-12; Boston, MA.
12. Trivedi G, Pham P, Chapman W, Hwa R, Wiebe JM, Hochheiser H. Bridging the Natural Language Processing Gap: An Interactive Clinical Text Review Tool. Poster presented at: AMIA 2015 Joint Summits on Translational Science; 2015 Mar 23-27; San Francisco, CA.
13. Morris A, Methe B, Hochheiser H, Collman RG, Zhang Yingze, Maier L, Koth LL, Woodruff PG, Rossman M, Gibson KF, Drake W, Herzog E, Moller DR, Wisniewski SR, Kaminski N, Ghedin E. Associations Of The Lung Microbiome With Sarcoidosis Severity And Phenotype. Poster presented at: American Thoracic Society International Conference; 2015 May 15-20; Denver, CO.
14. O'Neal S, Kaminski N, Becich MJ, Hochheiser H, Moller DR, Gibson KF, Strange C, Sandhaus RA, Senior R, Chen ES, Morris A, Methe B, Ghedin E, Leader J, Petro N, Lynn H, Zhang Y, Silfies L, Protivnak D, Martinez M, Wisniewski SR. Recruitment And Quality Control In Two Simultaneous Protocols. Poster presented at: American Thoracic Society International Conference; 2015 May 15-20; Denver, CO.
15. Yan X, Delullis J, Lynn H, O'Neal S, Hochheiser H, Becich MJ, Moller D, Gibson KF, Strange C, Sandhaus R, Senior R, Chen E, Morris A, Methe B, Ghedin E, Leader J, Petro N, Zhang Y, Silfies L, Protivnak D, Martinez M, Wisniewski SR, Kaminski N. RNAseq In Sarcoidosis And Alpha-1 Antitrypsin Deficiency Patients. Poster presented at: American Thoracic Society International Conference; 2015 May 15-20; Denver, CO.
16. King A, Cooper GF, Hochheiser H, Visweswaran S. Development and Evaluation of a Prototype of a Learning Electronic Medical Record System. Poster presented at: NLM Informatics Training Conference; 2015 Jun 23-24; Bethesda, MD.
17. Fisher A, Ding M, Hochheiser H, Douglas GP. A Baseline Assessment of the Dispensary Workflow in the Birmingham Free Clinic: A Time-Motion Study of Pharmacist Tasks. Poster presented at: AMIA 2015 Annual Symposium; 2015 Nov 14-18; San Francisco.
18. Zhang J, Avery K, Chen Y, Ashfaq S, Rick S, Zheng K, Weibel N, Hochheiser H, Weir C, Bell K, Gabuzda M, Farber N, Pandey B, Calvitti A, Liu L, Street R, Agha Z. A Preliminary Study on EHRAssociated Extra Workload Among Physicians. Poster presented at: AMIA 2015 Annual Symposium; 2015 Nov 14-18; San Francisco.
19. Ashfaq S, Rick S, Difley M, Mortensen S, Avery K, Weibel N, Pandey B, Bell K, Weir C, Hochheiser

- H, Chen Y, Zhang J, Zheng K, Street R, Gabuzda M, Farber N, Liu L, Calvitti A, Agha Z. Analysis of Computerized Clinical Reminder Activity and Usability Issues. Poster presented at: AMIA 2015 Annual Symposium; 2015 Nov 14-18; San Francisco, CA.
20. Vukmirovic M, Yan X, Gibson KF, Gulati M, Deluliis G, Woolard T, Adam T, Hu B, Aurelien N, O'Neal SM, Becich M, Hochheiser H, Herzog EL, Senior RM, Chen ES, Morris AM, Leader JK, Zhang Y, Garcia JGN, Wisniewski SR, Benos PV, Maier LA, Moller DR, Drake WP, Koth LL, Kaminski N. RNA Sequencing of Bronchoalveolar Lavage Cells In Subjects With Sarcoidosis Reveals Gene Expression Patterns Associated With Advanced Scadding Stage And Treatment Effects. Poster Presented at American Thoracic Society, 2017.
21. Yan X, Vukmirovic M, Gulati M, Herzon EL, Gibson KF, Deluliis G, Woolard T, Adams T, Hu B, Aurelien N, O'Neal SM, Becich M, Hochheiser H, Senior RM, Chen ES, Morris AM, Leader JK, Zhang Y, Garcia JGN, Wisniewski SR, Benos PV, Maier LA, Moller DR, Drake WP, Kaminski N, Koth LL. RNA Sequencing Of Peripheral Blood Mononuclear Cells Reveals Gene Expression Changes Associated With Disease Progression And Response To Therapy In Sarcoidosis. Poster Presented at American Thoracic Society, 2017.
22. Yan X, Vukmirovic M, Gulati M, Gibson KF, Deluliis G, Woolard T, Adams T, Hu B, Aurelien N, O'Neal S, Becich M, Hochheiser H, Senior RM, Chen ES, Morris AM, Leader JK, Zhang Y, Garcia JGN, Wisniewski SR, Herzog EL, Drake WP, Benos PV, Maier LA, Moller DR, Koth LL, Kaminski L A Comparison Of Bronchoalveolar Lavage Cells (BAL) And Peripheral Blood Mononuclear Cells (PBMC) Genome Wide Expression Patterns In Sarcoidosis, Poster Presented at American Thoracic Society, 2017.
23. Li K, Methé BA, Morris AM, Ghedin E, Hochheiser H, Collman RG, Yang Y, Frank B, Fitch A, Maier LA, Koth LL, Woordruff PG, Rossman M, Gibson KF, Drake WP, Herzog E, Moller DR, Wisniewski S, Senior R, Garcia JGN, Chen ES, Strange CB, Sandhaus RA, Becich M, Kaminski N. Microbiota In Alpha-1 Antitrypsin Deficiency And Sarcoidosis. Poster Presented at American Thoracic Society, 2017.
24. Vukmirovic M, Yang X, Gulati M, Drake WP, Gibson KF, Deluliis G, Woolard T, Adams T, Hu B, Aurelien N, O'Neal SM, Becich M, Hochheiser H, Senior RM, Herzog EL, Chen ES, Morris AM, Leader JK, Zhang Y, Garcia JGN, Wisniewski SR, Benos PV, Maier LA, Moller DR, Koth LL, Kaminski N. Race Distinct Gene Expression Patterns In Peripheral Blood Mononuclear Cells And Bronchoalveolar Lavage Cells Of Sarcoidosis Subjects. Poster Presented at American Thoracic Society, 2017.
25. Chu, J, Vukmirovic M, Yan X, Zang W, Deluliis G, Woolard T, Adams T, Hu B, Aurelien N, O'Neal SM, Becich M, Hochheiser H, Gibson KF, Senior RM, Chen ES, Morris AM, Leader JK, Zhang Y, Wisniewski SR, Sciurba FC, Sandhaus RA, Strange CB, Kaminski N. The Effect Of PiZ Genotype And Augmentation Therapy On Bronchoalveolar Lavage (BAL) And Peripheral Blood Mononuclear Cell (PBMC) Transcriptomes In Alpha-1 Antitrypsin Deficiency. Poster Presented at American Thoracic Society, 2017.
26. Gulino K, Geber A, Twaddle A, Methé BA, Morris AM, Hochheiser H, Collman RG, Zhang Y, Maier LA, Koth LL, Rossman M, Gibson KF, Drake WP, Herzog L, Moller DR, Wisniewski S, Senior RM, Garcia JGN, Chen ES, Strange CB, Sandhaus RA, Becich M, Kaminski N, Ghedin E. BacteriophageHost Relationships In Alpha-1 Antitrypsin Deficiency And Sarcoidosis. Poster Presented at American Thoracic Society, 2017.

27. Calzoni L, Clermont C, Cooper GF, Hochheiser H, Visweswaran S. Exploring Novel Graphical Representations of Clinical Data in a Learning EMR. Poster presented at the AMIA 2017 Annual Meeting.
28. N Emeagwali, M Vukmirovic, X Yan, KF Gibson, M Gulati, G Deluliis, T Adams, B Hu, X Li, A Mihaljinec, S O'Neal, M Becich, H Hochheiser, E Herzog, ES Chen, AM Morris, JK Leader, Y Zhang, JGN Garcia, SR Wisniewski, PV Benos, LA Maier, DR Moller, K Patterson, WP Drake, L Koth, N Kaminski. MicroRNA Sequencing of Peripheral Blood Mononuclear Cells and Disease Staging and Severity in Sarcoidosis. Poster Presented at: Cell And Matrix Microenvironments Modulate Lung Disease Poster Discussion Session, May 21, 2018. San Diego CA.
29. M Vukmirovic, X Yan, KF Gibson, M Gulati, G Deluliis, T Adams, B Hu, X Li, A Mihaljinec, N Emeagwali, SM O'Neal, M Becich, H Hochheiser, E Herzog, ES Chen, AM Morris, JK Leader, Y Zhang, JGN Garcia, SR Wisniewski, PV Benos, LA Maier, DR Moller, K Patterson, WP Drake, LL Koth, N Kaminski, GRADS Investigators. Weighted Gene Co-Expression Network Analysis of Bronchoalveolar Lavage Cells Transcriptome Identifies New Molecular Endotypes in a Large Cohort of Subjects with Sarcoidosis. Poster presented at: American Thoracic Society, Clinical Studies In Sarcoidosis, May 22, 2018. San Diego CA.
30. K Li, AM Morris, E Ghedin, H Hochheiser, RG Collman, Y Zhang, B Frank, A Fitch, LA Maier, L Koth, P Woodruff, MD Rossman, KF Gibson, WP Drake, E Herzog, DR Moller, JGN Garcia, ES Chen, CB Strange, R Sandhaus, N Kaminski, BA Methe, GRADS study investigators. Microbiota and Clinical Variable Associations in Alpha-1 Antitrypsin Deficiency and Sarcoidosis. Poster presented at: American Thoracic Society, Clinical Studies In Sarcoidosis, May 22, 2018. San Diego CA.
31. J-H Chu, W Zang, M Vukmirovic, X Yan, T Adams, B Hu, A Mihaljinec, SM O'Neal, MJ Becich, H Hochheiser, KF Gibson, ES Chen, AM Morris, JK Leader, SR Wisniewski, Y Zhang, FC Sciurba, RG Collman, R Sandhaus, CB Strange, N Kaminski, GRADS Investigators. American Thoracic Society, Mechanistic And Translational Studies In COPD, Poster Discussion Session, May 23, 2018, San Diego CA.
32. A. Johnson, J. Schabdach, L. Rost, H. Hochheiser Identification of Data Science Applications to Data Management in a Biomedical Imaging Research Center. Poster presented at AMIA 2018 Annual Meeting, San Francisco CA
33. L. Calzoni, G. Clermont, G.F. Cooper, S. Visweswaran, H. Hochheiser Design of a Learning Electronic Medical Record: A Qualitative Study of ICU Clinicians' Information Needs and Practices. Poster presented at AMIA 2018 Annual Meeting, San Francisco CA
34. S. Al-alawneh, H. Hochheiser, R.S. Jacobson Classification of Radiology and Pathology Findings to Support Breast Imaging QA/QI System. Poster presented at AMIA 2018 Annual Meeting, San Francisco CA.
35. Beeghly-Fadiel A, Warner JL, Finan S, Masanz J, Hochheiser H, Savova G. Abstract 5114: Deep phenotype extraction to facilitate cancer research: Extending DeepPhe to ovarian cancer. Cancer Research/Proceedings AACR Annual Meeting 2019: March 29-April 3, 2019 Atlanta, GA. DOI: 10.1158/1538-7445.SABCS18-5114 Published July 2019.
36. King AJ, Cooper GF, Hochheiser H, Clermont G, Visweswaran S. Make electronic health record more efficient using machine learning. Poster presented at AMIA 2019 Annual Meeting, Washington, DC.
37. Moldwin ZH, Hochheiser H, Warner JL. HemOnc: Evaluation of information models for cancer therapy representation. Poster presented at AMIA 2019 Annual Meeting, Washington, DC.

38. Pérez Claudio E, Visweswaran, S, **Hochheiser H** Comparison of ML Explanation Performance: Predicting the Outcomes of Patients with Community-Acquired Pneumonia. Poster presented at AMIA 2021 Annual Meeting, San Diego, CA.
39. Wilson T, Clermont G, **Hochheiser H**. Outcome Prediction for Small-Bowel Obstruction Poster presented at AMIA 2021 Annual Meeting, San Diego, CA.
40. Wang M, Patel SR, von Hollen D, Trivedi G, **Hochheiser H** Clusters and Classification Analysis of Sleep Apnea Phenotypes. Poster presented at University of Pittsburgh 6<sup>th</sup> Annual Sleep and Circadian Science Research Day, 2021
41. Frisch, SO, Newman-Griffis D, Weng Z, Zegre-Hemsey JZ, Callaway CW, **Hochheiser H**, Devon HA, Bakken S, Sejdic E Apache Clinical Text Analysis Knowledge Extraction System (ctakes) Identifies One Out of Five Suspicious Symptoms of Acute Coronary Syndrome from Emergency Department Nursing Triage Notes 8 November 2021; Circulation 2021;144;A9389
42. Salerno J, Shadbolt S, Espino J, Levander J, Stazer J, Contamin L, Cross A, Arcury-Quandt A, Pokutnaya D, **Hochheiser H** The Models of Infectious Disease Agent Study (MIDAS) Coordination Center: 2021 Update Poster presented at the Epidemics 2021 conference.
43. Wilson, T, **Hochheiser H** Resource Utilization in Reinforcement Learning-Based Blood Product Resuscitation for GI Hemorrhage 18<sup>th</sup> Annual Surgical Congress 2023.
44. Horvat C, Butler, G, Pulver C, Marasco D, **Hochheiser H**, Warmus H, Cote S, O'Brien J, Rubin S, Clark R, Bart R, Suresh H. Development, Deployment, and Refinement of an Adaptive Digital Safety Net at a Children's Hospital. 2024 AMIA Informatics Summit Meeting Podium Presentation

## 7. SOFTWARE

1. NLPReViz: An Interactive Tool for Natural Language Processing on Clinical Text  
<https://nlpreviz.github.io/>
2. Phenogrid: The Monarch Initiative Phenotype similarity widget.  
<https://github.com/monarchinitiative/phenogrid>.

## PROFESSIONAL ACTIVITIES

### TEACHING Undergraduate Courses

Year(s)	Course Number & Title	Role
9/2006 - 12/2006	COSC 483, Design and Analysis of Algorithms	Primary Instructor
9/2006 - 12/2006,	COSC 236, Introduction to Computer Science I	Primary Instructor
2/2007 - 5/2007		
9/2007 - 12/2007		
2/2008 - 5/2008,	COSC 605, Introduction to Computer Science II	Primary Instructor
9/2008 - 12/2008,		
2/2009 - 5/2009		

### Graduate Courses

Year(s)	Course Number & Title	Role
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2/2007 - 5/2007	COSC 686, Graphics: Information Visualization	Primary Instructor
9/2007 - 12/2007	COSC 617, Distributed Information Systems: Advanced Web Development	Primary Instructor
2/2008 - 5/2008	COSC 605, Human-Computer Interaction	Primary Instructor
12/2009	BIOINF 2011 Introduction to clinical informatics	Guest Lecture
5/2010 - 8/2010, 5/2011 - 6/2011, 9/2012 - 12/2012	BIONF 2121, Human Computer Interaction and Evaluation	Primary Instructor
11/2010	BIOINF 2011 Introduction to clinical informatics	Guest Lecturer
11/2011	BIOINF 2011 Introduction to clinical informatics	Guest Lecturer
8/27/2012 - 12/15/2012	BIOINF - 2121 - 24389, Human-Computer Interaction and Evaluation	Primary Instructor
10/2012	BIOINF 2011 Introduction to clinical informatics	Guest Lecturer
8/26/2013 - 12/14/2013	BIOINF - 2121 - 22622, Human-Computer Interaction and Evaluation Methods	Primary Instructor
11/2013	BIOINF 2011 Introduction to clinical informatics	Guest Lecturer
8/2014- 12/14/2014	BIOINF - 2121 - 22622, Human-Computer Interaction and Evaluation Methods	Primary Instructor
3/2014	BIOINF 2016: Foundations of Translational Bioinformatics	Guest Lecturer
11/2014	BIOINF 2011 Introduction to clinical informatics	Guest Lecturer
8/2015- 12/14/2015	BIOINF - 2121 - 22622, Human-Computer Interaction and Evaluation Methods	Primary Instructor
11/2015	BIOINF 2011 Introduction to clinical informatics	Guest Lecturer
8/2016- 12/14/2016	BIOINF - 2121 - 22622, Human-Computer Interaction and Evaluation Methods	Primary Instructor
10/2016	BIOINF 2011 Introduction to clinical informatics	Guest Lecturer
8/2017- 12/14/2017	BIOINF - 2121 - 22622, Human-Computer Interaction and Evaluation Methods	Primary Instructor
1/6/2014 - 4/26/2014	ISSP - 2990 - 29682, Independent Study	Primary Instructor
5/5/2014 - 8/9/2014	ISSP - 2990 - 20323, Independent Study	Primary Instructor
5/5/2014 - 8/9/2014	ISSP - 2900 - 20437, Graduate Internship	Primary Instructor

8/25/2014 - 12/13/2014	BIOINF - 2121 - 29498, Human-Computer Interaction and Evaluation Methods	Primary Instructor
8/31/2015 - 12/19/2015	BIOINF - 2121 - 27251, Human-Computer Interaction and Evaluation Methods	Primary Instructor
8/31/2015 - 12/19/2015	ISSP - 2990 - 25912, Independent Study	Primary Instructor
1/6/2016 - 4/30/2016	ISSP - 2990 - 25806, Independent Study	Primary Instructor
8/31/2016 - 12/19/2016	BIOINF - 2121, Human-Computer Interaction and Evaluation Methods	Primary Instructor
8/31/2017 - 12/19/2017	BIOINF - 2121, Human-Computer Interaction and Evaluation Methods	Primary Instructor
2/2017	BIOINF 2016: Foundations of Translational Bioinformatics	Guest Lecturer
11/2017	BIOINF 2011 Introduction to clinical informatics	Guest Lecturer
8/26/2018-12/19/2018	BIOINF 2134, Publication and Presentation in Biomedical Informatics	Primary Instructor
10/2018	BIOINF 2011 Introduction to clinical informatics	Guest Lecturer
8/26/2019-12/19/2019	BIOINF 2134, Publication and Presentation in Biomedical Informatics	Primary Instructor
10/2019	BIOINF 2170 Foundations of Biomedical Informatics 1	Guest Lecturer, Information Visualization
3/2020	BIOINF 2170 Foundations of Biomedical Informatics 2	Guest Lecturer, Human-Computer Interaction
8/26/2020-12/19/2020	BIOINF 2134, Publication and Presentation in Biomedical Informatics	Primary Instructor
10/2020	BIOINF 2170 Foundations of Biomedical Informatics 1	Guest Lecturer, Information Visualization
3/2021	BIOINF 2170 Foundations of Biomedical Informatics 2	Guest Lecturer, Human-Computer Interaction
8/31/2021-12/16/2021	BIOINF 2134, Publication and Presentation in Biomedical Informatics	Primary Instructor
10/2021	BIOINF 2170 Foundations of Biomedical Informatics 1	Guest Lecturer, Information Visualization

3/2022	BIOINF 2170 Foundations of Biomedical Informatics 2	Guest Lecturer, Human-Computer Interaction
8/30/2022-12/15/2022	BIOINF 2134, Publication and Presentation in Biomedical Informatics	Primary Instructor
10/26/2022	Mental Health Informatics: University of California, San Francisco, MS in Health Informatics program	Guest Lecturer, Information Visualization
10/2022	BIOINF 2170 Foundations of Biomedical Informatics 1	Guest Lecturer, Information Visualization
3/2023	BIOINF 2170 Foundations of Biomedical Informatics 2	Guest Lecturer, Human-Computer Interaction
8/29/2023-12/14/2023	BIOINF 2134, Publication and Presentation in Biomedical Informatics	Primary Instructor
10/2023	BIOINF 2170 Foundations of Biomedical Informatics 1	Guest Lecturer, Information Visualization
3/2024	BIOINF 2170 Foundations of Biomedical Informatics 2	Guest Lecturer, Human-Computer Interaction
8/2024-12/2024	BIOINF 2134, Publication and Presentation in Biomedical Informatics	Primary Instructor
10/24/2024	10-742: Machine Learning in Healthcare (Carnegie-Mellon University)	Guest Lecturer, Cancer Phenotyping

## MENTORING AND ADVISING

### Research Advising:

#### Primary Research Advisor to the following students in the Master's Program:

2010-2012	Fernando Suarez Obando, MD, MS (obtained 2012) in Biomedical Informatics
2010-2013	Charles Borromeo, MS (obtained 2013) in Biomedical Informatics
2011-2013	Corey Stein, MS (obtained 2013) in Biomedical Informatics
2021-present	Tanupat Boonchalermvichien (expected in 2024) in Biomedical Informatics <i>Primary Research Advisor to the following students in the Doctoral Program:</i>

2010-2015	Katrina Romagnoli, PhD (obtained 2015) in Biomedical Informatics
2013-2019	Amie Barda, PhD (obtained 2019) in Biomedical Informatics
2014-2019	Guarav Trivedi, PhD (obtained 2019) in Intelligent Systems Program

2016-present Luca Calzoni (expected 2024) in Biomedical Informatics  
2017-2021 Saja Al-Alawneh, PhD (obtained 2021) in Biomedical Informatics  
2019-present Tanner Wilson (expected 2023) in Biomedical Informatics  
2020-present Eddie Perez Claudio (expected 2025) in Biomedical Informatics

*Primary Research Advisor to the following post-doctoral scholars and associates:*

2013-2014 Elizabeth Leslie, PhD, Post-Doctoral Scholar in Biomedical Informatics  
2020-2022 Denis Newman-Griffis, PhD, Post-Doctoral Scholar in Biomedical Informatics

*Primary Research Advisor to the following Summer Short-Term Trainees:*

2017 Laura Obregon in Biomedical Informatics NLM T15  
2020 Sarah Coufal in Biomedical Informatics NLM T15  
2022 Sophia Hernandez in Biomedical Informatics NLM T15

*Other Summer Mentoring:*

2012-present Mentor, UPMC Hillman Summer Academy/COSBBI Internship Program  
2023-presnt Mentor,

*Academic and Career Advising:*

*Academic Advising to following students in Biomedical Informatics Training Program:*

2010-2011 Melissa Castine, PhD trainee  
2010-2012 Frank Ligons, PhD trainee  
2011-2013 Richard Oldham, MS trainee  
2012-2015 John Frazier, PhD trainee  
2012-2014 Soyapi Mumba, MS trainee  
2013-2017 Arielle Fisher, PhD trainee  
2014-2016 Sergio Castro, MS trainee  
2015-2020 Jhon Camacho Sanchez, PhD trainee  
2015-2017 Samuel Rosko, PhD trainee  
2016-2018 Menna Abaye, MS trainee  
2018-2020 Esmaeel Dadashzadeh, MS trainee  
2018-2022 Meghan Matlack, PhD trainee  
2019-2021 Yingci Liu, MS trainee  
2021- Chenyu Li, PhD trainee  
2022- Rumana Rashid, PhD trainee

- 2022- Harikesh Subramanian, MS  
trainee
- 2022- Junyan Tao, MS trainee

Graduate Committees:

Member of the MS Thesis Committees of the following graduate students:

- 2012 Jhon Camacho Sanchez, MS – Biomedical Informatics Training Program
- 2012 Patrice Thorpe Jamison, MS - Biomedical Informatics Training Program
- 2012 Nara Um, MS, MS - Biomedical Informatics Training Program
- 2011 Pooja Chatterjee, MS - Biomedical Informatics Training Program
- 2013 Marc Clayton, MS - Biomedical Informatics Training Program
- 2014 Andres Hernandez, MS - Biomedical Informatics Training Program
- 2014 Reza Sadeghian, MS, MS - Biomedical Informatics Training Program
- 2015 Andrew King, MS - Biomedical Informatics Training Program
- 2015 Adam Handen, MS - Biomedical Informatics Training Program
- 2015 Arielle Fisher, MS - Biomedical Informatics Training Program
- 2015 Erik Segerdell, MS – Biomedical Informatics at Oregon Health & Science University
- 2017 Samuel Rosko, MS - Biomedical Informatics Training Program
- 2017 Timothy Mtonga, MS - Biomedical Informatics Training Program
- 2017 Saja Al-Alawneh, MS - Biomedical Informatics Training Program
- 2019 Adriana Johnson, MS - Biomedical Informatics Training Program
- 2021 Shuyu Lu, MS - Biomedical Informatics Training Program

Member of the PhD Dissertation Committees of the following graduate students:

- 2009 Graig Sauer, ScD – Towson University
- 2016 Vicky Chen, PhD - Biomedical Informatics Training Program
- 2016 Enrique Valazquez, PhD – Human Genetics Graduate Program
- 2017 Kevin McDade, PhD - Biomedical Informatics Training Program
- 2017 Arielle Fisher, PhD - Biomedical Informatics Training Program
- 2018 Andrew King, PhD - Biomedical Informatics Training Program
- 2018 Jose Posada, PhD - Biomedical Informatics Training Program
- 2020 Timothy Mtonga, PhD - Biomedical Informatics Training Program
- 2020 Xueer Chen, PhD - Biomedical Informatics Training Program
- 2021 Adriana Johnson, PhD - Biomedical Informatics Training Program
- 2022 Brandan Dunham, PhD - Biomedical Informatics Training Program
- 2024 Shaungzia Ren, PhD – Intelligent Systems Program
- 2024 Amir Mina, PhD - Biomedical Informatics Training Program
- 2025 Sanya Taneja - Intelligent Systems Program

Member of the Comprehensive Examination Committee of the following graduate students:

2015 Rafael Ceschin - Biomedical Informatics Training Program  
2015 Arielle Fisher - Biomedical Informatics Training Program  
2015 Amie Barda - Biomedical Informatics Training Program  
2015 Andrew King - Biomedical Informatics Training Program  
2015 Adam Handen - Biomedical Informatics Training Program  
2016 Victor Ruiz Herrera - Biomedical Informatics Training Program  
2018 Timothy Mtonga - Biomedical Informatics Training Program  
2018 Saja Al-Alawneh - Biomedical Informatics Training Program  
2019 Luca Calzoni - Biomedical Informatics Training Program  
2020 Andrew Beckley - Biomedical Informatics Training Program  
2021 Han Zhang - Biomedical Informatics Training Program  
2021 Smitha Edakalavan - Biomedical Informatics Training Program  
2022 William Reynolds - Biomedical Informatics Training Program  
2022 Aidan Lakshman - Biomedical Informatics Training Program  
2022 Maxwell Reynolds - Biomedical Informatics Training Program  
2022 Joy Roy - Biomedical Informatics Training Program  
2023 Koushul Ramjattun – Biomedical Informatics Training Program  
2023 Israel Dilan-Pantajos - Biomedical Informatics Training Program

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## RESEARCH

### Current research support

Grant Number (funded)	Grant Title	Role in Project %	Years Inclusive	Source \$ Amount
R01NS118716	Bio-digital Rapid Alert to MPI (with R. Clark. A. Au, C. Horvat)	Identify Neuromorbidity 20%	2021-2026	NIHNDS \$460,982
R24GM153920	MIDAS Coordination Center - Years 6-10	PI – 25%	2024-2029	NIGMS \$900,000
U24CA248010	Cancer Deep Phenotyping from Electronic Medical Records	MPI (with J. Warner, G. Savova)	2020-2025	NIH/NCI \$618,441

T15 LM007059	Pittsburgh Biomedical Informatics Training Program	PI 10%	2017-2022	NLM/NIH \$1,098,092
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### Past research support

Grant Number  Grant Title  (funded)	Role in Project  % Effort	Years  Inclusive	Source  \$ Amount
U24GM132013 MIDAS Coordination Center	2021-2024 PI 25%	NIH/NIGMS	\$952,321
UH3 CA243120	Natural Language Processing Platform for Cancer Surveillance	MPI (with E. Durbin, J.Warner, G. Savova) 10%	2021-2024 NIH/NCI \$525,849
N/A	Data Driven Apnea patient journeys	PI 25%	2020-2021 Philips Respirronics \$154,632
U24GM13201302S1	Accelerating Covid-19 Modeling Research by Improving the Discovery and New Use of Data: Leveraging Community Engagement and Automation of Curation Workflows (MIDAS)	Co-I 20%	2020-2021 NIGMS \$334,466
IPA	Natural Language Processing	Co-I 5%	2020-2021 10,066
1UG3CA243120	Natural Language Processing Platform for Cancer Surveillance	Co-PI 10%	07/19/2019 - NIH/NCI \$302,625
U54HG008540	Center for Causal Modeling and Discovery of Biomedical Knowledge from Big Data	Co-I 20%	9/15/2014 - 8/31/2018 NHGRI \$7,924,466
1 U24 CA184407-01	Cancer Deep Phenotype Extraction from Electronic Medical Records	Co-I 8%	5/1/2014 - 4/30/2020 (NCE) NIH/NCI \$571,836
1 R01 LM012095	Development and Evaluation of a Learning Electronic Medical Record System	Co-I 15%	9/15/2015- 6/30/2019 NIH

3T15LM007059-31S1	Pittsburgh Biomedical Informatics Training Program (Supplement)	PI 10%	9/1/17- 6/30/2018	NLM \$100,000
3T15LM007059-32S2	The internship in Biomedical Research, Informatics, and Computer Science (iBRIC): Biomedical Informatics and Data Science research experiences for students from Minority Serving Institutions	PI 10%	9/1/18- 6/30/2019	NLM \$100,000
3T15LM007059-32S1	Data science curriculum enhancements for graduate health and biomedical sciences at Minority Serving Institutions	PI 10%	9/1/17- 6/30/2018	NLM \$75,000
1U01DE024425-01	Human Genomics Analysis Interface for FaceBase 2	Co-I 5%	5/1/2014 - 4/30/2019	NIH \$129,005
U2GGH00729	Improving the delivery & management of HIV /AIDS care in Malawi through Appropriate Medical Informatics	Co-I 10%	2/1/2014 - 2/1/2018	Baobab Health Trust (CDC) \$49,446
1 R01 LM011838-01	Addressing gaps in clinically useful evidence on drug-drug interactions	Co-I 5%	2/1/2014 - 1/31/2018	NIH/NLM \$284,322
1R24 OD011883	Semantic LAMHDI: Linking diseases to model organism resources	Co-I 25%	9/1/2012 - 6/30/2017	Oregon Health Sciences University (NIH) \$72,000
5U01 HL112707-02A1S1	Supplement to Sarcoidosis and A1AT Genomics & Informatics Center	Co-I 2%	5/1/2013 - 11/30/2015	NIH \$72,377
R24OD011883	Supplement to Supplement to Semantic LAMHDI: Linking diseases to model organism resources	Co-I 1.5%	8/1/2014 - 7/31/2015	NIH \$88,284

N/A	Multi-Level Mentoring	PI (Multiple)	Nat'l Coalition of Woman & Academic IT Alliance Seed Fund \$15,000
5R01HS021290	Quantifying Electronic Medical Records Usability to Improve Clinical Workflow	Co-I 10%	7/1/2012 - 6/30/2016 AHRQ \$67,936
1R01LM010964	Interactive Search and Review of Clinical Records with Multilayered Semantic Annotation	Co-I 10%	7/1/2011 - 8/31/2015 NIH \$484,626
1U01HL112707	Sarcoidosis and A1AT Genomics & Informatics Center	Co-I 10%	4/1/2012 - 3/31/2015 NIH \$112,152
3U01DE020050-03S1	Ontology-based integration of human studies data	Co-I 10%	9/9/2011 - 4/30/2014 NIH \$517,877
5 U01 DE020057-04	FaceBase Data Management and Coordination Hub	Co-I Marazita	9/21/2009 - 4/30/2014 University of Iowa (NIH) \$1,499,235

90TR0002-01	SHARP Area 4: Secondary Use of EHR Data	Co-I 20%	4/1/2012 - 3/31/2014	DHHS \$50,000
N/A	A Randomized Controlled Trial to Assess the Impact of a Telemedicine Medication Delivery Unit on Medication Adherence Following Hospitalization for Congestive Heart Failure	Co-I 5%	4/1/2012 - 3/31/2013	InRange Systems \$290,128
NSF Course, Curriculum, and Laboratory Innovation	Building Security In: Injecting Security throughout the Undergraduate Computing Curriculum	PI 2008-09, Consultant 2009-2011	9/15/2008 - 8/31/2011	NSF \$399,511
FY2010-007	Feasibility of Using a Telemedicine Medication Delivery Unit for Older Adults that Require Medication Assistance During Transition from Hospital to Home	2.5% (donated)	11/01/2010- 6/30/2011	Pennsylvania Department of Aging \$99,709
N/A	CPATH CDP: Piloting Pathways for Computational Thinking in a General Education Curriculum	Co-I 2008-09, Consultant 2009present	9/1/2008 - 8/31/2010	NSF \$139,981
N/A	Integration of Model Organism Databases with Interactive Visualization	Co-I	2006	Towson University Faculty Development and Research Committee
N/A	NIOSH Education and Research Center Pilot Project Research Training Award: Evaluating Menu Selection Task Performance of Blind Users of Screen Readers	Co-I	2006	Johns Hopkins University Bloomberg School of Public Health \$10,882

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### Other Research Related Activities

## **Patents**

Lazar JK, Hochheiser H, Feng J, Sauer G, Holman JD Universally Usable Human-Interaction Proof. US 8,245,277 B2. Issued on 2012 Aug 12.

09/13/2019

## **Invention Disclosures**

1. Hochheiser HS, Borromeo CD, Haendel M, Washington N, Mungall C The Phenogrid phenotype-model similarity visualization 2015
2. Visweswaran S, Cooper GF, Hochheiser H, King AJ Learning Electronic Medical Record System 2015
3. Chapman WW, Pham PNV , Trivedi G, Hwa R, Wiebe JM An Interactive Tool for Natural Language Processing on Clinical Text 2015

## **Editorships**

2013 - Present	Academic Editor, PeerJ
2015 - Present	Academic Editor, PeerJ Computer Science
2015 - Present	Associate Editor, BMC Medical Informatics and Decision Making
2019 - 2024	Associate Editor, Frontiers in Digital Health
2021 - Present	Section Editor, PLoS Digital Health
2023 – Present	Associate Editor, BMC Digital Health

## **Manuscript Reviewer**

2009 - 2009	Reviewer, Advances in Bioinformatics
2009 - Present	Reviewer, Interacting with Computers
2010 - Present	Reviewer, BioData Mining
2010 - Present	Reviewer, Journal of Medical Internet Research
2010 - Present	Reviewer, JAMIA
2012- Present	Reviewer, Journal of Medical Internet Research
2012 - Present	Reviewer, ACM Transactions on Intelligent Systems and Technology
2012 - Present	Reviewer, International Journal of Human-Computer Studies
2012 - Present	Reviewer, International Journal of Telemedicine and Applications
2012 - Present	Reviewer, IEEE Transactions on Computer Graphics and Applications
2012 - Present	Reviewer, Information Visualization
2013 - Present	Reviewer, BMC Medical Informatics and Decision Making
2013 - Present	Reviewer, ACM Transactions on Human-Computer Interaction
2013 - Present	Reviewer, Journal of Biomedical Semantics
2013 - Present	Reviewer, Advanced Visual Interfaces
2014 - Present	Reviewer, BMC Bioinformatics
2014 - Present	Reviewer, European Journal of Dental Educations
2014 - Present	Reviewer, Global Health Conference
2015 - Present	Reviewer, BMC Health Services Research
2015 - Present	Reviewer, Bioinformatics
2015 - Present	Reviewer, F1000 Research
2015 - Present	Reviewer, MedInfo

2016 - Present	Reviewer, Journal of Biomedical Informatics
2016 - Present	Reviewer, International Journal of Computer-Human Interaction
2016 - Present	Reviewer, Pharmaceutical Research
2017 - Present	Reviewer, Applied Clinical Informatics
2017 - Present	Reviewer, Computer Methods and Programs in Biomedicine
2017 - Present	Reviewer, PLoS ONE
2017 - Present	Reviewer, Journal of Healthcare Informatics Research
2017 - Present	Reviewer, Journal of Computational and Graphical Statistics.
2017 - Present	Reviewer, IEEE Pervasive Computing
2017 - Present	Reviewer, Personalized Medicine
2017 - Present	Reviewer, Pharmacotherapy
2018 - Present	Reviewer, Journal of Biomedical Informatics
2018 - Present	Reviewer, Molecular Diagnosis and Therapy
2018 - Present	Reviewer, Entropy
2018 - Present	Reviewer, Medicines
2018 - Present	Reviewer, Nature Digital Medicine
2018 - Present	Reviewer, Behavior and Information Technology
2018 - Present	Reviewer, Molecular Diagnosis and Therapy
2019 - Present	Reviewer, Computer Graphics Forum
2019 - Present	Reviewer, Eurasian Journal of Medicine and Oncology
2019 - Present	Reviewer, Information Visualization
2019 - Present	Reviewer, Frontiers in Genetics
2019 - Present	Reviewer, Applied Ergonomics
2019 - Present	Reviewer, Scientific Reports
2019 - Present	Reviewer, Applied Clinical Informatics Open
2020 - Present	Reviewer, JAMIA Open
2020 - Present	Reviewer, IEEE Computer Graphics and Applications
2020 - Present	Reviewer, Journal of Health Care for the Poor and Underserved
2020 - Present	Reviewer, Knowledge and Information Systems
2020 - Present	Reviewer, HealthInfo
2020 - Present	Reviewer, International Journal of Medical Informatics
2020 - Present	Reviewer, Health Informatics
2021 - Present	Reviewer, BMJ Open
2021 - Present	Reviewer, Methods of Information in Medicine
2021 - Present	Reviewer, Saudi Pharmaceutical Journal
2021 - Present	Reviewer, Transactions on Visualization and Computer Graphics
2023 - Present	Reviewer, American Journal of Public Health
2023 - Present	Reviewer, JCO Cancer Clinical Informatics
2024 - Present	Reviewer, Bioinformatics Advances
2024 - Present	Reviewer, Health Informatics Journal
2024 - Present	Reviewer, Informatics
2024 - Present	Reviewer, Sage Public Health

## **Grant Reviewing**

2007 - 2009	Proposal Review Panels, National Science Foundation
2013	Temporary Committee Member, Veteran's Administration
2015	Swiss National Science Foundation Review
2017	PSI Foundation Review
March 2017	NIH SBIR Review
June 2017	NIH SBIR Review
March 2018	NIH SBIR Review
November 2018	NIH SBIR Review
November 2019	NCI ITCR Review
March 2020	NIH SBIR Review
September 2020	Icelandic Research Fund Review
November 2020	NCI ITCR Review
March 2021	NCI Special Emphasis Panel – Visualization
March 2021	NCI SBIR Review
July 2021	NIH Special Emphasis Panel
October 2021	NIH CDMA Review
2020-2021	Ad-hoc Review, Austrian Science Fund
March 2022	NIH Special Emphasis Panel
July 2022	NIH Special Emphasis Panel
November 2022	Dunhill Medical Trust
February 2023	NIH ITCR Review
March 2023	NCI SBIR Review
September 2023	NIH ITCR Review
April 2024	NIH SBI Review
June 2024	NIH CDMA Review

## **CURRENT RESEARCH INTERESTS**

Data Science  
Infectious Disease Modeling  
Public Health Informatics  
Natural Language Processing  
User-centered design  
Human-Computer Interaction  
Clinical Informatics  
Information Visualization  
Machine Learning  
Pharmacoinformatics  
Biosurveillance  
Machine learning  
Clinical Informatics

## **INVITED SEMINARS AND LECTURESHIPS**

### **Local Presentations**

1. Hochheiser H Translational Data Sharing: Informatics Challenges and Opportunities Magee Women's Research Institute Work-in-Progress, February 2014.
2. Hochheiser H. Improving Cognitive Support in EMRs Joint Clinical Research, Investigation, and Systems Modeling of Acute Illness (CRISMA)/Biomedical Informatics Research Meeting, July 2018
3. Hochheiser H. Clinician-Focused Machine Learning University of Pittsburgh Intelligent Systems Program Forum, January 2021.
4. Hochheiser H. Natural language and visual analytics tools for cancer cohort discovery and data abstraction. UPMC Hillman Cancer Center Cancer Epidemiology and Prevention (CEP) Program Monthly Seminar Series, May 2024.

### **Regional Presentations**

1. Hochheiser H Challenges in Supporting Translational Bioinformatics Data Sharing and Reuse. Carnegie-Mellon University Human-Computer Interaction Institute Seminar Series, March 2012.

### **National Presentations**

1. Hochheiser H. Interactive Visualizations of Bioinformatics Data. Presented at: Towson University Molecular Biology, Biochemistry, and Bioinformatics Club; 2006 Oct.
2. Bioinformatics Visualization: Advanced User Interfaces for Data Exploration and Interpretation. 2006 Nov; Towson University Molecular Biology, Biochemistry, and Bioinformatics Seminar.
3. Hochheiser H. Voting: The Evolving Political and Technical Landscape. Presented at: ACM Washington DC Chapter; 2008 Sep.
4. Hochheiser H. Voting: The Evolving Political and Technical Landscape. Presented at: ACM Baltimore MD Chapter; 2008 Dec.
5. Borromeo CD, Schleyer TK, Hochheiser H, Becich MJ. Finding Collaborators: Towards Interactive Tools for Research Network Systems. Presented at: AMIA 2012 Annual Symposium; 2012 Nov 37; Chicago, IL.
6. Hochheiser H, Adventures in Translational Bioinformatics Texas A&M Health Sciences Center February 2013.
7. Brinkley J, Mejino J, Detwiler L, Travillian R, Clarkson M, Cox T, Heike C, Cunningham M, Hochheiser H, Shapiro L. Towards Understanding Craniofacial Abnormalities: The Ontology of Craniofacial Development and Malformation. Presented at: AMIA Summit on Clinical Research Informatics; 2013 Mar 20-22; San Francisco, CA.
8. Borromeo C, Espino JU, Washington NL, Martone M, Mungall CJ, Haendel MA, Hochheiser H. Toward interactive visual tools for comparing phenotype profiles. Presented at: Phenotype Day 2014, BioOntologies SIG, ISMB; 2014 Jul 12; Boston, MA.

9. Hochheiser H, Jacobson RS, Savova G, Denny J, Washington N. Didactic Panel: Natural Language Processing for Phenotype Extraction: Challenges in Extraction and Representation. Presented at: AMIA 2015 Annual Symposium; 2015 Nov 14-18; San Francisco.
10. Mungall C, Jacobsen J, Balhoff J, Nguyen-Xuan J, Lewis S, Schefchek K, Keith D, McMurry S, Bhattacharya S, Haendel M, Hochheiser H, Köhler S, Robinson, P, Groza T. Making Phenotypic Data Computable and Discoverable, Podium Presentation, AMIA 2017 Joint Summits.
11. Boone D, Gopalakrishnan V, Becich MJ, Hochheiser H Interactive Panel: A STEM Pipeline for Biomedical Informatics: Five-year progress report from Pittsburgh. Panel Presentation, 2017 AMIA InSPIRE Conference.
12. Savova G, Tsetylin E, Finan S, Castine S, Miller T, Medvedeva O, Harris D, Hochheiser H, Lin C, Chavan G, Jacobson R. DeepPhe - A Natural Language Processing System for Extracting Cancer Phenotypes from Clinical Records. Podium Presentation 2017 AMIA Annual Meeting.
13. Kaplan, B, Liaw, S-T, Subbian, V, Courtney, KL Hochheiser, H., Goodman KW. Promoting Ethical and Professional Responsibility in Biomedical Informatics Education. Workshop Presented at the 2017 AMIA Annual Meeting.
14. H. Hochheiser "Capturing High-Resolution Temporal Cancer Phenotypes using DeepPhe." Presentation at the NAACCR 2018 conference, June 9-14 2018.
15. Hochheiser H. , Mostafa J., Gehlenborg N., McWeeney S., Florance, V. Data Science in Biomedical Informatics Education: Critical Problems and Innovative Solutions Panel presented at AMIA 2018 Annual Meeting, San Francisco CA
16. Hochheiser H. Interactive tools for precision medical informatics University of Puerto Rico Medical Sciences Campus, April 2019.
17. Savova, G, Hochheiser, H. DeepPhe: A Natural Language Processing System for Extracting Cancer Phenotypes from Clinical Records. National Cancer Institute, Center for Biomedical Informatics and Information Technology Data Science Seminar Series, October 2019.
18. Durbin E, Hochheiser H, Petkov V, Rivera D, Savova G, Warner J Tools and Software to Automate and Normalize the Cancer Data Abstraction Workflow. Workshop accepted to 2020 NAACCR Annul Conference, June 2020, Philadelphia, PA . *Accepted by canceled due to the COVID19 pandemic.*
19. Savova, G, Hochheiser, H. DeepPhe: A Natural Language Processing System for Extracting Cancer Phenotypes from Clinical Records. Vanderbilt University Department of Biomedical Informatics Seminar Series, April 2021.
20. G. Savova, Hochheiser H. Deep Phenotyping for Cancer Extraction (DeepPhe).. and other biomedical informatics highlights. Brown University/Rhode Island Hospital, December 2023.

## **International Presentations**

1. Hochheiser H. Interactive Tools for Translational Bioinformatics: Preliminary Lessons from the FaceBase Coordination and Management Hub Vienna University of Science and Technology December 2010.

## SERVICE

### University and Medical School Service

2012-present	Member, Department of Biomedical Informatics Strategic Planning Group
2017-2019	Member, School of Medicine Planning and Budget Committee
2017-present	Director, Graduate Training Program in Biomedical Informatics
2017-present	Biomedical Informatics Graduate Training Program M.S/Ph.D Curriculum Committee
2017-present	Chair, Biomedical Informatics Training Program Admissions Committee
2017-present	Chair, Biomedical Informatics Training Program Student Evaluation Committee
2017-present	Member, University of Pittsburgh School of Medicine Graduate Council
2018-present	Member, Institute for Clinical Research Education PhD Admissions Committee
2025-present	University of Pittsburgh Momentum Grants reviewer

### National Service

2004 - Present	Member, US Public Policy Committee, Association of Computing Machinery
2016 - 2020	Member, American Medical Informatics Association Public Policy Committee
2018 – 2021	External advisor, University of Puerto Rico Post-Master's Doctoral program in Clinical and Translational Medicine
2021 – Present	Human-Centered Design Subcommittee (HCDS) of the Scientific Registry of Transplant Recipients (SRTR) Review Committee (SRC).

### Conference Planning & Review

2007-2009, 2021	Member of Program Committee, IEEE Information Visualization Symposium
2008-2022	Program Committee Member, International Symposium on Visual Computing
2009-2010	Program Committee Member, Symposium on Usable Privacy and Security
2009-1010	Program Committee Member, Security and Privacy in Medical and Home-Care Systems Workshop
2012- Present	Reviewer, AMIA Annual Symposium
2012	Program Committee, International Symposium on Visual Computing 2012
2012-Present	Program Committee, ACM Advanced Visual Interfaces Conference
2013	Reviewer, ACH SIGCHI 2013
2013-2019	Reviewer, AMIA Translational Informatics Summit
2013-2014	Member, Program Committee, Great Lakes Bioinformatics Conference
2014-2024	Member, Program Committee, IEEE International Conference on Health Informatics
2018	Program Committee, AMIA Educator's conference
2020	Co-Chair Workshop on Visual Analytics in Health Care
2021	Program Committee, AMIA Annual Meeting
2022	Program Committee, Transdisciplinary AI (TransAI 2022)
2022	Program Committee, First International Conference on Hybrid Human-Artificial Intelligence
2024	Reviewer, International Conference on Hybrid Human-Artificial Intelligence

