2023 CURRICULUM VITAE

***University of Pittsburgh***

# School of Medicine

## BIOGRAPHICAL

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| **Name:** Yalini Senathirajah, PhD |  |
| **Home Address:** 5260 Centre Avenue  Apt. #605  Pittsburgh, PA 15232 | **Business Address:** The Offices at Baum  5607 Baum Blvd  Pittsburgh, PA 15206 |
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| **Home Phone:** (347) 619-4021 | **Business Phone:** (412) 648-9214 |
| **E-mail Address:** [yalini@zoho.com](mailto:yalini@zoho.com) | yalini@pitt.edu |
| **Citizenship:** U.S.A. |  |

### EDUCATION AND TRAINING

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| --- | --- | --- | --- |
| **UNDERGRADUATE:** | | | |
| ***Dates Attended*** | ***Name & Location of Institution*** | *Degree Received & Year* | ***Major Subject*** |
| 1976-1979 | Harvard University, Cambridge MA | AB 1979 | Biology |
| **GRADUATE**: | | | |
| ***Dates Attended*** | ***Name & Location of Institution*** | *Degree Received & Year* | ***Major Advisor and Discipline*** |
| 1981-1983 | Ontario Veterinary College,  Guelph, Ontario | - | Veterinary Medicine |
| 2006-2010  2012  2014 | Columbia University, NYC, NY  Northeastern University,  Boston, MD  NIH campus, Bethesda, MD | PhD  NIH training  NIH training | Biomedical Informatics  (special public health informatics track)  Advisor: Suzanne B. Bakken, PhD, RN, Professor of Biomedical Informatics  NIH mHealth Summer  Institute  “Big Data” Bootcamp |
| 2015 | Carnegie Mellon University, Pittsburgh, PA | NIH training | Causal Discovery data analysis |
| **ADDITIONAL FORMAL TRAINING:** | | | |
| |  |  |  | | --- | --- | --- | | ***Dates***  ***Attended*** | *Name of Institute and Program* | ***Location*** | | | | |
| July, 2018 | NINR mHealth and Smart Technologies Summer Institute | | NIH Campus, Bethesda, MD |
| June, 2018 | Human Connectome Project Short Course | | Oxford University, UK |

## APPOINTMENTS and POSITIONS

#### ACADEMIC

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| --- | --- | --- |
| ***Years Inclusive*** | ***Name and Location of Institution*** | ***Rank/Title*** |
| Sep 2010-Apr 2011 | Dept. of Biomedical Informatics, Columbia University New York, NY | Instructor |
| Sep 2010-Sep 2011 | Columbia University Medical Center, New York, NY | Researcher |
| Jul 2011-Mar 2017 | State University of NY Downstate Medical Center, New York, NY | Assistant Professor |
| Apr-Dec 2017 | Northwell Health, Manhasset, NY | Associate Investigator |
| Dec 2017-Dec 2020 | University of Pittsburgh, Pittsburgh, PA | Visiting Associate Professor |
| Dec 2020-present | University of Pittsburgh, Pittsburgh, PA | Associate Professor |
| 2018-present | Medical Scientist Training Program (MSTP) University of Pittsburgh | Departmental Director |
| 2021-present | Institute of Health Policy, Management and Evaluation, University of Toronto | Adjunct Faculty |

**NON‐ACADEMIC:**

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| ***Years Inclusive*** | ***Name and Location of Institution*** | ***Rank/Title*** |
| 1975-1976 | Photobiology Lab, Medical Sciences Building, University of Toronto | Research assistant |
| 1976 | Veterinary College, University of Agriculture, Malaysia | Animal attendant and surgical assistant |
| 1978-1979 | Concord Field Station (Harvard University), Bedford, MA | Research Assistant |
| 1979 | Ministry of the Environment, Quebec | Lab technician |
| 1983-1989 | Cambridge MA and NYC | Freelance Translator, French English |
| 1984 | Harvard University, Cambridge, MA | Research Assistant |
| 1990-1996 | Consultant, New York, NY | Research Assistant and web master (varied positions) |
| 1995 | Global Information Infrastructure Conference, New York, NY | Technical Advisor/coordinator |
| 1996-1998 | World Education Services, New York, NY | Supervisor and researcher |
| 1998-2003 | Columbia Medical School/New York Presbyterian Hospital, New York, NY | Webmaster |
| 2004 | Columbia University School of Journalism, New York, NY | Webmaster |
| 2004-2005 | Harlem Health Promotion Center, Columbia University, New York, NY | Webmaster |

## MEMBERSHIPS IN PROFESSIONAL and SCIENTIFIC SOCIETIES

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| ***Organization*** | ***Year*** |
| American Medical Informatics Association (AMIA) | 2000-present |
| Member, SUNY Global Health Informatics group | 2015-2016 |
| Associate member – OSEHRA (Open-source electronic health record association) | 2014-2015 |
| Member, OpenHealthTools | 2013-2015 |
| Member, HIMSS Usability Task Force (national advisory body) | 2011-2013 |
| Member, National Institute of Health Informatics (Canada) (NIHI) | 2012-2015 |
| American Association for Technology in Psychiatry (AATP) | 2004-2006 |
| Association of Computing Machinery (ACM) | 2006-2014 |
| New York Academy of Science (NYAS) | 2009-2014 |
| American Public Health Association (APHA) | 2004-2008 |
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| Institute of Electrical and Electronics Engineers (IEEE) | 2018-present |
| Association for Computing Machinery (ACM)  National Institute of Health Study Section Membership  University of Pittsburgh Graduate Program in Biomedical Informatics  NIH | 2018-present  2018-present  2018-present |

## HONORS

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| ***Title of Award*** | ***Year*** |
| Finalist, Diana Forsythe Award for best qualitative-methods paper in 2006:  Health Information Seeking and Technology Use in Harlem – A Pilot Study Using Community-Based Participatory Research | 2006 |
| Best poster award, National Library of Medicine Informatics Trainee Conference: Development and Evaluation of a web 2.0-based EHR | 2009 |
| Best talk award, Robert Wood Johnson public health informatics fellows meeting: Rapid reconfiguration of a web 2.0-based EHR to meet an emerging need (H1N1) | 2009 |
| Best paper award, Context-Sensitive Health Informatics international meeting (MedInfo); Essential Questions: Accuracy, Errors and User Perceptions in a user-composable HER | 2013 |
| Ariadne award (winning team at Brigham/MIT medical hackathon – Twiage ‘app’ for emergency information transmission from ambulances to emergency departments) | 2013 |
| Finalist, ‘Ideas that Work’ International Innovation competition of the American Medical Informatics Association | 2014 |
| 2 papers mentioned in AMIA 2015 Year in Review | 2015 |
| Research prize, College of Health-Related Professions, Downstate medical center  Finalist, “User Control of Electronic Health Record Design and Diagnostic Reasoning” (one of 6 chosen abstracts of 148 submitted) presentation at the Diagnostic Error in Medicine (DEM) 11th International Conference, New Orleans | 2016  2018 |
| Ethics and informatics in the age of COVID-19: challenges and recommendations for public health organization and public policy. IMIA Year in Review selection. | 2020 |

##### PUBLICATIONS

**ORIGINAL PEER-REVIEWED ARTICLES**

1. Cohall AT, Dini S, **Senathirajah Y**, Nye A, Neu N, Powell D, Powell B, Hyden C. Feasibility of Using Computer-assisted Interviewing to Enhance HIV Test Counseling in Community Settings. Public Health Rep. 2008 Nov-Dec;123 Suppl 3:70-7.PMID:19166091 PMCID:PMC2567006.
2. **Senathirajah Y**, Bakken S. Architectural and Usability Considerations in the Development of a Web 2.0-based EHR. Stud Health Technol Inform (Advances in Information Technology and Communication in Health), 2009;143:315-321. doi: 10.3233/978-1-58603-979-0-315. PMID:19380954. **Senathirajah Y**, Kaufman, D., Bakken S. Visual Clustering Analysis of CIS Logfiles to Inform Creation of a User-configurable Web 2.0 CIS Interface. Meth Inform Medicine, 2011;50(4):337-48. Epub: June 21, 2011 doi:10.10.3414/ME09-01-0087 PMID:21691676. PMCID: PMC5926809.
3. **Senathirajah Y**, Bakken S. Important Ingredients for Health Adaptive Information Systems. In: User Centred Networked Health Care, A. Moen et al., Eds, 2011 European Federation for Medical Informatics, IOS Press, 2011. Stud Health Technol Inform. 2011;169:280-4. PMID:21893757 PMCID:PMC in process.
4. Merrill J, Phillips A, Keeling J, Kaushal R, **Senathirajah Y**. Effects of Automated Immunization Registry Reporting Via an Electronic Health Record Deployed in Community Practice Settings. Applied Clinical Informatics 2013 (4)2 p267-275. PMID:23874363 PMCID:PMC3716417
5. **Senathirajah Y**, Kaufman D, Bakken S. Essential Questions: Accuracy, Errors, and User Perceptions in a Modular, User-composable Electronic Health Record. In: Context-Sensitive Health Informatics: Human and Sociotechnical Approaches. Beuscart-Zephi, MD, Jaspers M, Kuziemsky C, Nohr C, Aarts J, eds., IOS Press. Stud Health Technol Inform 2013:194:181-187. (CSHI Best Paper award).
6. **Senathirajah Y**, Kaufman D, Bakken S. User Creativity and Problem Solving in a User-composable Electronic Health Record. In: EHealth-For Continuity of Care, Lovis C, Seroussi B, Hasman A, Pape-Haugaard L, Saka O, Andersen SK, eds., Stud Health Technol Inform 205:1209, 2014; IOS Press. Epub doi:10.3233/978-1-61499-432-9-1209. PMID:25160256.
7. **Senathirajah Y**, Kaufman D, Bakken S. Beyond Copy and Paste: Clinician Approaches to Meeting Information Needs During Note Writing. In: EHealth-For Continuity of Care Lovis C, Seroussi B, Hasman A, Pape-Haugaard L, Saka O, Andersen SK, eds., Stud Health Technol Inform 205:599-603, 2014; IOS Press. Epub doi:10.3233/978-1-61499-432-9-599. PMID:25160256.
8. **Senathirajah Y**, Kaufman D, Bakken S. (2014) The Clinician in the Driver's Seat: Part 1 - A User-composable Electronic Health Record Platform. J Biomed Inform 52(Dec):165-176. Epub: Oct 2014 doi:10.1016/j.jbi.2014.09.002. PMID:25240253 PMCID:PMC6027643.
9. **Senathirajah Y**, Kaufman D, Bakken S. (2014) Clinician in the Driver’s Seat: Part 2 - Intelligent Uses of Space in a Drag/drop User-composable Electronic Health Record. J Biomed Inform 52(Dec):177-188. Epub: Oct 2014 doi:10.1016/j.jbi.2014.09.008. PMID:25445921 PMCID:PMC5926811.
10. Kuziemsky CE, Nøhr C, Borycki EM, Kushniruk AW, **Senathirajah, Y**. Understanding the Context of Patient Safety Through The Lenses of Three IMIA Working Groups. Stud Health Technol Inform 2015:218:40615. PMID:26262545.
11. **Senathirajah Y**. (2015). Safer design - Composable EHRs and Mechanisms for Safety. Borycki EM, et al., eds., IOS Press. Stud Health Technol Inform 2015:218:40602. PMID:26262532
12. **Senathirajah Y**, Kaufman D, Bakken S. User-composable Electronic Health Record Improves Efficiency of Clinician Data Gathering for Patient Case Appraisal: A Mixed-Methods Study. eGEMs (Generating Evidence & Methods to Improve Patient Outcomes). 2016;4(1):7. doi: http://doi.org/10.13063/2327-9214.1176 PMID:27195306 PMCID:PMC4862763
13. Borycki E, **Senathirajah Y**, Kushniruk A, Palojoki S, Saranto K, Takeda H. Reducing Technology-induced Errors: Organizational and Health Systems Approaches. Sermeus W, Procter PM, Weber P, eds., doi:10.3233/978-1-61499-658-3-741. Stud. Health Technol Inform 2016;225:741-743.
14. Collins S, **Senathirajah Y**, Iribarren S, Yoon S, Dowding D. Deep Dive: Evaluation Methods for Electronic Health Records (Panel). doi:10.3233/978-1-61499-658-3-759. Stud. Health Technol Inform 2016;225:759-761. PMID: 27332332 PMCID:PMC in progress
15. Borycki E, Dexheimer J, Hullin C, Gong J, Jensen S, Kaipio J, Kennebeck S, Kirkendall E, Kushniruk A, Kuziemsky C, Marcilly R, Röhrig R, Saranto K, **Senathirajah Y**, Weber J, Takeda H. Methods for Addressing Technology-induced Errors: The Current State. Yearb Med Inform 2016;10(1 Nov):30-40. Epub: Nov 2016 Nov doi:10.15265/IY-2016-029. PMID:27830228 PMCID:PMC5171580
16. Roman LC, Ancker JS, Johnson SB, **Senathirajah, Y**. Navigation in the Electronic Health Record: A Review of the Safety and Usability Literature. J Biomed Inform. 2017:67(Mar):69-79. Epub: 2017Jan 11. pii: S1532-0464(17)30005-9. doi:10.1016/j.jbi.2017.01.005. PMID:28088527
17. Sockolow P, Schug S, Zhu J, Smith TJ, **Senathirajah Y**, Bloom S. At-Risk Adolescents as Experts in a New Requirements Elicitation Procedures for the Development of a Smart Phone Psychoeducational Trauma-informed Care Application. J Inform Social Care 2017:42(1);77-96. Epub: Jun 3:1-20 doi:10.1080/17538157.2016.1177532. PMID:27259373
18. Borycki E, **Senathirajah Y**, Kushniruk A. The Future of Mobile Usability, Workflow and Safety Testing. Stud. Health Technol Inform 2017;245:15-19. PMID:29295043.
19. Kushniruk A, **Senathirajah Y**, BoryckiE. Toward a Usability and Error "Safety Net": A Multi-Phased Multi-Method Approach to Ensuring System Usability and Safety. Stud. Health Technol Inform 2017;245:763-767. PMID:29295201.
20. Kushniruk A, **Senathirajah Y**, Borycki E. Effective Usability Engineering in Healthcare: A Vision of Usable and Safer Healthcare IT. Stud. Health Technol Inform 2017;245:1066-1069. PMID:29295265.
21. **Senathirajah** Y, Wang J, Borycki E, Kushniruk A. Mapping the Electronic Health Record: A Method to Study Display Fragmentation.. Stud. Health Technol Inform 2017;245:1138-1142. PMID:29295280.
22. Robbins R, **Senathirajah Y**, Wiliams NJ, Hutchinson C, Rapoport DM, Allegrante J, Cohall A, Rogers A, Ogedegbe O, Jean-Louis G. Developing a Tailored Website for Promoting Awareness About Obstructive Sleep Apnea (OSA) Blacks in Community-based Settings. Health Commun 2018 Jan 17:1-9. Epub: <https://doi.org/10.1080/10410236.2018.1423865> PMID:29338353 .
23. Robbins R, Allegrante J, Rapoport DM, **Senathirajah Y**, Rogers A, William N, Cohall A, Butler M, Ogedegbe O, Jean-Louis G. Tailored Approach to Sleep Health Education (TASHE): Preliminary Results for a Randomized Controlled Trial of a Web-Based Educational Tool to Promote Self-Efficacy for OSA Diagnosis and Treatment Among Blacks. <https://doi.org/10.1093/sleep/zsy061.569> Sleep 2018 Apr 41(S1):A212.
24. Rogers A, Robbins R, **Senathirajah Y**, Rapoport DM, Allegrante J, Ogedegbe G, Williams N, Bademosi-Kalinowski J, Chung A, Aird C, Jean-Louis G. Designing a Community-Engaged Intervention to Address Sleep Apnea Health Disparities: The Tailored Approach to Sleep Health Education (TASHE). <https://doi.org/10.1093/sleep/zsy061.580> Sleep 2018 Apr 41(S1):A216.
25. **Senathirajah Y**, Borycki E, Kushniruk A, Cato K. User Control of Electronic Health Record Design and Diagnostic Reasoning.. Epub: [doi:10.1515/dx.2018-0095](https://doi:10.1515/dx.2018-0095). Diagnosis 2018 5(4):eA62.
26. **Y. Senathirajah.** New Clinician-Controlled Composable Approaches to Health IT," 2018 IEEE International Symposium on Smart Electronic Systems (iSES) (Formerly iNiS), Hyderabad, India, 2018, pp. 140-140, doi: 10.1109/iSES.2018.00038.
27. Pelayo S, **Senathirajah Y.** Human factors and sociotechnical issues. International Medical Informatics Association Annual Yearbook, 2019 Aug;28(01):078-080. PMID31419819
28. Jackson G, Hu, J, Koutkias V, Bouaud J, Thiebaut R, Cossin S, Pelayo S, **Senathirajah Y**, Staccini P, Lau, Annie, Deserno T, Hsu W., Hackl W, Hoerbst A, Berner E, Bloomrosen M, Kalra D, Daniel C, Charlet J, Dhombres F, Warner J, Patt D, Grouin C, Grabar N, Smail M, Rance B. Year in Review through the Lens of the IMIA Yearbook. Proc. of the 17th World Congress on Medical and Health Informatics (Medinfo 2019)—Health and Wellbeing E-Networks for All, Lyon, France, August 25-30, 2019. IMIA Yearbook 2019.
29. **Senathirajah Y**, Borycki EM, Kushniruk A, Cato K, Wang J. Use of Eye Tracking in Studies of EHR Usability-The Current State: A Scoping Review. Studies in Health Technology and Informatics. 2019 August 21;264:1976-1977. PMID 31438436
30. Chung A, Seixas A, Williams N, et al. Development of "Advancing People of Color in Clinical Trials Now!": Web-Based Randomized Controlled Trial Protocol. *JMIR Res Protoc.* 2020 Jul 14;9(7):e17589. .
31. **Senathirajah Y**, Kaufman DR, Cato KD, Borycki EM, Fawcett JA, Kushniruk AW

Characterizing and Visualizing Display and Task Fragmentation in the Electronic Health Record: Mixed Methods Design. JMIR Hum Factors 2020,7(4) e18484

1. **Y. Senathirajah**, S. Pelayo, Section Editors of the IMIA Yearbook Section on Human Factors and Organizational Issues. International Medical Informatics Association Yearbook 2020, 202 April 17;1:

1-309

1. Bright, TJ, Rajamani S, Williams KS, Chapman WW, Tiase VL, **Senathirajah Y**, Unertl KM, B. McCoy AB. Making the Case for Workforce Diversity in Biomedical Informatics to Help Achieve Equity-Centered Care: A Look at the AMIA First Look Program. Journal of the American Medical Informatics Association. 2021. 00(0), 2021, 1–5. ocab246, <https://doi.org/10.1093/jamia/ocab246>
2. Borycki E, Kushniruk A, Kletke R, Vimarlund V, **Senathirajah Y**, Quintana Y. Enhancing Safety During a Pandemic Using Virtual Care Remote Monitoring Technologies and UML Modeling. Yearbook Medical Informatics. Epub 2021 April. <https://pubmed.ncbi.nlm.nih.gov/33882599/>
3. **Senathirajah, Y**, Hribar M, Section Editors of the IMIA Yearbook Section on Human Factors and Organizational Issues. Human Factors and Organizational Issues Section Synopsis IMIA Yearbook Medical Inform 2021:100-4
4. **Senathirajah Y,** Cho H, Fawcett J, Mondejar KM, Cato K, Broadwell P, Yoon S. Application of Natural Language Processing to Learn Insights on the Clinician’s Lived Experience of Electronic Health Records. Studies in Health Technology and Informatics. Stud Health Technol Inform. 2022 Jan 14; 289:81-81. PMID: 35062097 PMCID: PMC8830606.
5. SolomonidesA**,** Clarkson M, Rahimzadeh VN, Petersen C, Schreiber R, DeMuro,PR, Dua P, Goodman KW, Kaplan B, Koppel R, Lehmann CU, Pan E, and **Senathirajah Y**.  Ethics and informatics in the age of COVID-19: challenges and recommendations for public health organization and public policy.  Journal of the American Medical Informatics Association, 28(1), 2021, 184–189
6. Chokshi, S, **Senathirajah Y,** Yadav V, et al. A Comparative Evaluation of Measurement-Based Psychiatric Care Delivered via Specialized Telemental Health Platform Versus Treatment As Usual: A Retrospective Analysis. 2022 Cureus 14(1): e21219. doi:10.7759/cureus.21219
7. Cheng L, **Senathirajah** **Y**. Testing medical student diagnostic reasoning using clinical data visualizations. Short communication, Studies in Health Technology and Informatics (MIE2022). 2022 May 25;294:819-820. doi: 10.3233/SHTI220596. PMID: 35612216.
8. Roy J, Levy D, **Senathirajah Y**. Defining Telehealth for Research, Implementation, and Equity. J Med Internet Res 2022;24(4):e35037, URL: <https://www.jmir.org/2022/4/e35037>, DOI: 10.2196/3503
9. **Senathirajah Y,** Solomonides AE. Best Papers in Human Factors and Sociotechnical Development. Yearbook Medical Informatics 2022; 31(01): 221-225. DOI: 10.1055/s-0042-1742543.

<https://www.thieme-connect.com/products/ejournals/html/10.1055/s-0042-1742543>

1. Cheng L, **Senathirajah Y**.  Using Clinical Data Visualizations in Electronic Health Record User Interfaces to Enhance Medical Student Diagnostic Reasoning: Randomized Experiment. JMIR Hum Factors

2023;10:e38941. URL: <https://humanfactors.jmir.org/2023/1/e38941>

doi: [http://dx.doi.org/10.2196/38941](https://nam12.safelinks.protection.outlook.com/?url=http%3A%2F%2Fdx.doi.org%2F10.2196%2F38941&data=05%7C01%7Clkm16%40pitt.edu%7C6591c3b6daee447283b208dafa9692dd%7C9ef9f489e0a04eeb87cc3a526112fd0d%7C1%7C0%7C638097821861943705%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=9mGKFlE0lbInzB98Lw4C0WZjycIgZHVNk1xzExFN6kc%3D&reserved=0)

1. Kaufman D, **Senathirajah Y**, Cato K, Kushniruk A, Borycki E, Minshall S, Daniel P and Roblin P. Navigating Infection Control Processes in a COVID-19 Only Safety-Net Hospital at the Height of the Pandemic. Paper accepted to Context-Sensitive Health Informatics (CSHI) 2023, Melbourne, Australia.
2. Borycki, E.M., Kushniruk, A.W., Oluka, A., Minshall, S., Cato, K., **Senathirajah, Y**., Kaufman, D.  Modelling Information Needs and Sources in a COVID-19 Designated Hospital. Studies in Health Technology and Informatics.  Studies in Health Technology and Informatics. 2023 May;302:881-885. DOI: 10.3233/shti230294. PMID: 37203522.
3. **Senathirajah Y**,Kaufman D, Borycki E, Kushniruk A, Cato K. Comparing Responses to COVID-19 Across Institutions: Conceptualization of an Emergency Response Maturity Model. Studies in Health Technology and Informatics. 2023 May;302:907-908. DOI: 10.3233/shti230304. PMID: 37203532.
4. Daniel P. Arquilla, B, Roblin, P., **Senathirajah, Y.**, Cato, K., & Kaufman, D. (2023). Comparison of Public Health IT Reporting Capabilities Between a Large Network Hospital and Small Independent Hospital During Disaster Response. *Prehospital and Disaster Medicine,* 2023; *38*(S1), S147-S147. doi:10.1017/S1049023X23003850
5. Daniel P., Arquilla B, Roblin, P., Kaufman, D., Cato, K., & **Senathirajah, Y.** (2023). A Characterization of the Burden from Mandated COVID-19 Public Health Reporting on a Small Independent Hospital in New York City. *Prehospital and Disaster Medicine,* 2023, *38*(S1), S65-S66. doi:10.1017/S1049023X23001978
6. **Senathirajah, Y.** Flexible Composable Health IT Platforms for Emergency Response. Prehospital and Disaster Medicine, 2023, 38\*S1), S86-S86. Doi 10.1017/S1049023X23002479

**OTHER PEER-REVIEWED PUBLICATIONS**

1. **Senathirajah Y**, Kukafka R, Guptarak M, Cohall A. Health Information Seeking and Technology Use in Harlem - A Pilot Study Using Community-Based Participatory Research. AMIA Annu Symp Proc. Washington, DC. 2006:704-8. PMID:17238432 PMCID:PMC1839423.
2. Ancker JS, **Senathirajah Y**, Weber EU, Kukafka R. Risk and Experience: Effects of Experiential Learning and Patient Characteristics in Interpretation of Dynamic Risk Graphics. AMIA Annu Symp Proc. Washington, DC. 2006:844. PMID:17238464 PMCID:PMC1839486.
3. Cohall AT, **Senathirajah, Y**, Dini S, Nye A, Powell D, Powell B. An Online Audio Computer- Assisted Self-Interview for Pre-Screening Prior to Rapid HIV Testing in a Vulnerable Population. AMIA Annu Symp Proc. Chicago, IL 2007 Oct 11:915. PMID:18694015.
4. Sheinfeld Gorin S, Franco R, Hajiani F, **Senathirajah Y**. Systematic Development and Usability Testing of a Physician-Based Prostate Cancer Education Program in an African American Community. AMIA Annu Symp Proc., Chicago, IL. 2007 Oct 11:1112. PMID: 18694209
5. **Senathirajah Y**, Bakken S. Development of User-Configurable Information Source Pages for Medical Information Retrieval. AMIA Annu Symp Proc., Chicago, IL. 2007 Oct 11:1109. PMID:18694206
6. Chan C, Khan S, Nwankwo V, **Senathirajah Y**, Kukafka R. Building a Collaborative Global Health Informatics Website. AMIA Annu Symp Proc., Washington, DC. 2008, pp:895. PMID: 18999008
7. **Senathirajah Y**, Bakken S. Logfile Analysis of CIS Use to Inform Creation of a User-Configurable Widget-Based Web 2.0 CIS Interface: A Feasibility Study. AMIA Annu Symp Proc. San Francisco, CA. 2009.
8. **Senathirajah Y**, Kaufman D., Bakken S. Cognitive Analysis of a Highly Configurable Web 2.0 EHR Interface. AMIA Annu Symp Proc. Washington, DC. 2010:732-736. PMID:21347075 PMCID:PMC3041363.
9. **Senathirajah Y**, Bakken S. When Speed is Essential: Rapid Configuration of a User-Configurable ‘Web 2.0’ Based EHR for H1N1 Decision Support. Proc. of the 5th International Symposium on Human Factors Engineering in Health Informatics, Trondheim, Norway, August 2011.
10. Levy D., **Senathirajah Y. Practical Applications of Telehealth at the Bedside on an Inpatient COVID-19 Specific Unit.** AMIA 2021 Virtual Clinical Informatics Conference, May 2021
11. Kaufman DR, **Senathirajah Y**, Fawcett J., Cato K, Kushniruk A, Borycki EM, Arquilla B, Daniel P.  Enhancing Health Information Technology for Pandemic Response Workflow in a Specialized COVID-19 Safety-Net Hospital.  AMIA Virtual Clinical Informatics Conference May 2021.
12. Ozeran, L, Patrick J, **Senathirajah Y,** Foster, WJ, Schreiber, R**.** Reverse clinician burnout trends by exploring clues from global variances.  2021 Panel AMIA 2021, San Diego, CA.
13. Bright, TJ, Agunwa C, Unertl K, Bear Don’t Walk IV O, **Senathirajah Y**. Representation requires intentionality: Our Journey to Creating a Diverse Informatics Workforce. Panel AMIA 2021, San Diego CA.
14. Cheng L, **Senathirajah Y**. Testing the effect of clinical data visualizations on medical student diagnostic reasoning. Virtual poster accepted to ANZA-SIDM 2022 Improving Diagnosis conference.
15. **Senathirajah, Y,** Kaufman, DR, Borycki EM, Kushniruk AW, Cato K, Minshall S, Daniel P, Arquilla B, Roblin P. Assessing Pandemic Readiness to Promote Equity in Health IT. Poster, AMIA 2022, Washington DC.
16. **Poli D, Kaufman** DR, **Senathirajah Y**, Borycki EM, Kushniruk AW, Cato K, Minshall S, Daniel P, Arquilla B, Roblin P. Impact of COVID-19 on Infection Control in a Small Independent Hospital. Poster, AMIA 2022, Washington DC.
17. Chaney K, Hettinger AZ, **Senathirajah Y**, Adelman J, Singh H. Making EHRs SAFER: Evidence-based Informatics Solutions for Supporting Clinician Cognition. AMIA Annual Symposium 2023 Panel. November 11-15, 2023, New Orleans, Louisiana

**OTHER NON-PEER REVIEWED PUBLICATIONS (Review articles, proceedings of conferences and symposia, invited manuscripts. Letters to the editor, editorials, media presentations, lay publications)**

**BOOKS, BOOK CHAPTERS, AND MONOGRAPHS**

1. The future of prevention in primary care. In: Prevention Practice in Primary Care, Sheinfeld-Gorin, Ed. Oxford University Press. 2014.
2. Y. Senathirajah1, S. Pelayo2, Section Editors of the IMIA Yearbook Section on Human Factors and

Organizational Issues. International Medical Informatics Association Yearbook 2020

***Book Translation – Non peer Reviewed:***

1. Telecommunications Systems, D.W. Fontolliet, Artech House, Dedham, MA 1986. 600 pp
2. Advanced Mathematical Methods for Practicing Engineers, K. Arbenz & A. Wolhauser, Artech House, MA 1987
3. Kaufman D, **Senathirajah Y**, Cato K, Kushniruk A, Borycki E, Minshal S, Roblin P, Daniel P. Studies in Health Technology and Informatics. Ebook Volume 304. Context Sensitive Health Informatics and the Pandemic Boost Navigating Infection Control Processes in a COVID-19 Only Safety-Net Hospital at the Height of the Pandemic. 2023 Pages 67-71. DOI 10.3233/SHT1230371

**PUBLISHED ABSTRACTS – Peer Reviewed (in Scientific Journals)**

1. **Senathirajah Y**, Kaufman D, Borycki E, Kushniruk A, Cato K. Comparing Responses to COVID-19-19 Across Institutions: Conceptualization of an Emergency Response Maturity

Model. Medical Informatics Europe 2023 (MIE 2023), Goteborg, Sweden May 2023

**ABSTRACTS (peer-reviewed but not published in Scientific Journals)**

1. **Senathirajah Y**, Bakken S. (2009). MedWISE: Clinical Mashups Development. American Medical Informatics (AMIA) Annual Symposium, San Francisco, CA., November 14-18, 2009 (Poster)
2. **Senathirajah Y**, Johnson SB, Bakken S. Clustering to create user profiles of clinical and translational researchers**.** American Medical Informatics (AMIA) Annual Symposium, San Francisco, CA, November 14-18,2009 (Poster).
3. **Senathirajah Y**, Bakken S. Applying mixed methods to examine usability of a web 2.0-based EHR. American Medical Informatics (AMIA) Spring Congress, Orlando, FL., May 28-30, 2009. (Practice-based research track, Poster).
4. **Senathirajah Y**, Kaufman D., Bakken S. The Clinician in the Driver's Seat: Cognition and Interaction in MedWISE. AMIA Annu Symp Proc., 2012, p. 1653 (Podium Presentation)
5. Saiku I, **Senathirajah Y**, Malik U, Borycki E, Kushniruk A, Malik U, Wang J. Remote Usability Testing Method for an EHR Platform. American Medical Informatics (AMIA) Annual Symposium, Washington, D.C., November 4-8, 2017 (Poster).
6. Khader S, Shaheen I, Stewart M, **Senathirajah Y**, Hirsch J, Chelico J, Hajizadeh N. Discovering Drivers of Mortality in Severe Acute Respiratory Distress Syndrome: An Investigation Using Machine Intelligence Methods. American Medical Informatics (AMIA) Annual Symposium, San Francisco, CA, November 3-7, 2018 (Poster).
7. Osmani S, Khan S, Horsky J, **Senathirajah Y**. Usability Testing of MedWISER3: A Novel, Card-Based Electronic Health Record Interface. American Medical Informatics (AMIA) Annual Symposium, San Diego CA October 28-Nov 3rd 2021. (Poster).
8. Cheng L, **Senathirajah Y.** A Picture’s Worth a Thousand...Data Points: Utilizing Clinical Data Visualizations in Electronic Health Record User Interfaces to Enhance Medical Student Diagnostic Reasoning. Poster, U. Pittsburgh Medical School Med Ed Day, Sept 16, 2022.

###### PROFESSIONAL ACTIVITIES

**TEACHING:**

**All courses were taught to informatics graduate students once/year unless otherwise stated.**

**Courses**

**Year(s) Course name Students/**

**All courses were taught to informatics graduate students once/year unless otherwise stated.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  | | |  |  |
| **Courses**  **Year(s)** |  | **Course name** |  | **Students/**  **class** | **Semesters** | **Total course hours** |
| 2008 | Introduction to Medical Informatics | | 25 | |  | 45 hours | |
| 2009 | Methods in Medical Informatics | | 15 | |  | 45 hours | |
| 2010-2011 | Columbia HIT Certificate in Medical Informatics | | | 81 |  | 90 hours | |
| 2011-2017 | MIMS 5100 | Introduction to Medical Informatics | | 15-25 |  | 225 | |
|  | MIMS 112 | Decision Support |  | 15-25 |  | 225 | |
|  | MIMS 5708, 5709 Clinical Internship | |  | 15-25 | All Semesters | 720 | |
|  | MIMS 5121 Master’s Essay in Informatics | | | 15-25 | All semesters | 720 | |
|  | MIMS 201 | Topics in Medical Informatics | | 15-25 |  | 180 | |
| 2017 | Informatics - Pathology Residents | |  | 15 | Seminar | 8 hours | |
| 2019-2021 | Informatics Methods Course | |  | 17 | ½ first year | 45 hours | |
| 2019-2022 | BIOINF 2070 Foundations of  Biomedical Informatics | |  | 9-17 | 4 | 14 hours | |
| 2021-2022 | Health Informatics:ICT in Healthcare | |  | 34 | Summer | 45 hours | |

**Department of Biomedical Informatics**

7/1/2018-presentDirector, Medical Sciences Training Program (MSTP)

7/1/2018-present Member, Biomedical Informatics Student Admissions Committee

**Faculty Mentoring of Students**

**Direct supervision**

2015-2016 Mentored Cornell master’s student for research thesis: Lisette Roman, advisee.

2011-2017 Mentored 69 students for master’s essay research projects (in collaboration with external mentors)

2017 Advisor, 6 Junior Faculty Researchers, Northwell Health

2018 Mentored Manuel Alvarez Rios from the University of Puerto Rico, student in the University of Pittsburgh Cancer Institute (UPCI) Academy’s Computer Science, Biology, and Biomedical Informatics (CoSBBI) Summer Innovation Internship, a fulltime eight-week academy for high school students.

2018- Undergraduate student, Yucheng Gong, Computer Science, University of Pittsburgh.

2019- Undergraduate student, Weiyu Zhao, Computational Biology, University of Pittsburgh

2019- Undergraduate Jungshang JIa, Computational Science, University of Pittsburgh

2019-10/2019 Graduate student, Smitha Edakalavan, University of Pittsburgh, for short term project- Dyspnea2Dx

2019- Graduate student, Mahbaneh Torbati, University of Pittsburgh, for short term project-Dyspnea2Dx

2020 Undergraduate student, John Stroud, First Experiences in Research program, University of Pittsburgh

2020 Undergraduate student, Zhao Welyu, First Experiences in Research program, University of Pittsburgh

2020 Undergraduate student, Jia Junshang, First Experiences in Research program, University of Pittsburgh

2020 PhD students, Joy Roy, Eddie Perez Claudio, Luca Calzoni

2021-2022 Undergraduate Richa Desai (Pitt Chancellor’s Scholar)

Medical student Lucy Cheng (summer research)

Medical student Emanuel Feld (summer research)

Medical resident Aaron Chaise (summer research)

High school student Ritika Bhatnagar

PhD student Sneha Vaidhyam

2019-present Hospitalist attending Deborah Levy

2021 3 undergraduate computer science students (course project)

2022 PharmD student Zeshui Yu

2022 PhD students Tanupat Boonchalermvichien, Israel O. Dilan, Chenyu Li (course project)

2022 Computer science master’s student Vivek Kumar

2022 ISP student Mengdi Weng

2022 Pharmacy student Yu Zeshui

2022 Medical student Lucy Cheng

2023 Supervised the following students for the spring semester for their final capstone projects (in Computer Science): Ahmad Taha, Yanding Liu, Lesong Jia, Shihong Ling,Yutong Zhang, Shulei Zang, Gina Ying Wang, Srinivasagam Jaidee Dilip

2023 Supervising the following students for the fall semester for final capstone projects in HCI:

Rujuta Vaida, Zhiyun Chen, Travis Labarre, Adam, Muskaan Jain, Russel Chu, Haotian Wu, Luqian Chen, Zhuochun Li.

*Member of the PhD Dissertation Committee of the following graduate students:*

2023 PhD Committee of Eddie Perez, Dept. of Biomedical Informatics Training Program. *User-interface design and functional, human, and application-grounded evaluation of an explainable clinical decision support system that predicts patient neurobehavioral complications in the PICU.”*

2023 PhD Committee of Saba Dadsetan, ISP program. Topic: “*Evaluation of the Efficacy of Self-Supervised Learning versus Harmonization Techniques in Mitigating MRI Scanner Variabilities for Alzheimer's Progression Analysis using MRI."*

2023 PhD Committee of Amir Mina, Dept. of Biomedical Informatics Training Program. *Advancing perioperative Stroke Prevention Integrating Machine Learning with EEG Monitoring for Ischemic Risk Assessment in Carotid Endarterectomy.*

**Informal Mentoring**: Master’s students, Columbia University; others (e.g., attending at Mass General Brigham). Undergraduate, graduate, medical students/ residents, attending, junior faculty, business, high school and social science students from a variety of formal education backgrounds.

**RESEARCH**

**Current Grant Support**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Grant number (funded)** | **Grant title** | **Role in Project** | **Years Inclusive** | **Source $ Amount** |
| RO1HS028220 | Evaluating and Enhancing Health Information Technology for COVID-19 Response Workflow in a Specialized COVID-19 in a Medically Underserved Community | MPI (Kaufman, David PI)  20%  3.60 calendar months | 10/1/2020-9/30/2022 | AHRQ  910,684 |
|  | RECOVER project to understand Post-Acute Sequelae of Covid via Computable Phenotypes | MPI(?) in chart of chart abstraction | 6/15/22 – 12/31/22 | 30% salary/6 months |
| NA | Phillips Respironics project to use R3 data to understand comorbidities and factors affecting sleep disorders. | Co-PI | 2022-2023 | 10% salary |
| R01HS023708 | Finding the Safer Way: Novel Interaction Design Approaches to Health IT Safety | Principal Investigator  20% Effort  3.60 calendar months | 07/01/2015-04/30/2020 | AHRQ  Project Directs  $619,926  Project Indirects  $345,865 |
|  |  |  |  |  |

**Prior Grant Support**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Grant number (funded)** | **Grant title** | **Role in Project** | **Years Inclusive** | **Source $ Amount** |
| 1P20CA192994-01A1 | Feasibility studies to build collaborative partnerships to reduce racial/ethnic disparities in GI cancer research  (PI: Ellen Li) | Site Principal Investigator/ Informatics  2% Effort | 2015-2019 | NCI P20  Project Directs  $720,000  Project Indirects  $480,000  Total Project:  $1,200,000 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Grant number (funded)** | **Grant title** | **Role in Project** | **Years Inclusive** | **Source $ Amount** |
| N/A | Right for Everyone: Flexible Technology for Multicultural Care | Principal Investigator  20% Effort  3.60 calendar months | 2016-2017 | Downstate Medical Center  Total Project Funding  $50,000 |

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| --- | --- | --- | --- | --- |
| **Grant number (funded)** | **Grant title** | **Role in Project** | **Years Inclusive** | **Source $ Amount** |
| N/A | Partnership to Study Racial/Ethnic Differences in GI Cancer Biology | Site Principal Investigator  5% Effort | 2016-2017 | SUNY Health Network  Total Project Funding  $150,000 |

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| --- | --- | --- | --- | --- |
| **Grant number (funded)** | **Grant title** | **Role in Project** | **Years Inclusive** | **Source $ Amount** |
| N/A | Clinical Integrated Data Repository | Site Principal Investigator  10% Effort | 2014-2015 | SUNY Health Network  Total Project Funding  $149,000 |

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| --- | --- | --- | --- | --- |
| **Grant number (funded)** | **Grant title** | **Role in Project** | **Years Inclusive** | **Source $ Amount** |
| R25HL116378 | Tailored Sleep Health Education  (PI: Jean-Louis Girardin) | Consultant  5% Effort | 2012-2016 | NHLBI  Total Project Funding  $1,068,188 |

**Additional Past Grant participation** (i.e. grants which I received or participated in but did not write)

2005-2009 CDC Participatory research award to Harlem Health Promotion Center

2006-2010 NLM/Robert Wood Johnson public health informatics training fellowship

2006-2010 NRSA training grant

2006-2010 Clinical and Translational Science award (Columbia Medical Center)

2006-2008 Abbott Laboratories award to Harlem Health Promotion Center (for creation and testing of online rapid HIV testing advising and decision support system)

**OTHER RESEARCH RELATED ACTIVITIES**

Provisional patent for system to improve electronic health record software.

2011-2017

Participation in **6 ‘Hacking Medicine’ hackathons held by MIT or other groups.** Advised and participated asgroup member in multiple group projects: 1. Created award-winning EMS app to provide rapid patient and situation information to the receiving ED once the patient is stable 2. Created crowdsourcing platform for young researchers to be funded for small research projects 3. Work on better wayfinding methods for hospitals. Served as mentor to Brown medical school hackathon.

2012-present

**Peer Reviewer**, AMIA Annual meeting, Context-Sensitive HealthInformatics, Medical Informatics Europe, AMIA Joint Summits, Journal of Biomedical Informatics, IEEE Consumer Electronics Magazine and various other journals and conferences

**2014**

Participated in **Columbia Medical area innovation** group–to facilitate innovation developmentamong medical, engineering and business students/faculty.

2015-present

**Peer reviewer**, NIH SBIR/STTR grants (informatics/technology section)

**CURRENT RESEARCH INTERESTS**

My main area of research interest is improving the design and usability of electronic health records and health IT systems in general, using a novel paradigm together with modern web technical approaches. This is based on giving nonprogrammer clinicians more control via a drag/drop platform approach which allows them to create their own software and tools. It has promise to increase the software’s efficiency and cognitive support, fit to clinician ways of thinking, work contexts, public health emergencies, ease of use, and evolvability to meet future needs and different specialty and work contexts.

* Current AHRQ-funded research in EHR safety, clinical cognition, usability and efficiency using simulation studies with clinicians and large online computing study methods.
* Interests and further training in mHealth and global health include participation in the NIH mHealth summer institute training in interdisciplinary research and ‘out of the box’ thinking to create new prevention and healthcare delivery modes. This included using the rapidly advancing technologies of sensors, mobile devices, continuous patient monitoring, and analysis, and visualization of the resulting ‘big data’ and ‘small data’ to allow rapid interpretation by a range of users.
* using informatics for patient/consumer engagement, particularly in minority communities and the underserved, global health informatics, and analytics to improve healthcare. Further details are below.
* project to improve workflow and care delivery in clinics by having language-specific data collection (PROMIS measures) from patients in waiting rooms, on tablets. This uses read-aloud audio and pictures to assist those with limited English proficiency, and/or translation needs. The program then provides decision support to the receiving clinicians, allowing them to focus on more critical aspects of the patient’s care rather than on intake questioning. This may improve access to care in several ways, by making questioning more understandable by the patient, streamlining workflow, and reducing clinic time, allowing the clinician to focus more of the visit on actual care and decision making.
* health portal site to inform minority patients about sleep disorders and cardiovascular health, to improve their sleep hygiene. These studies are being extended (in several grant applications) to detect provider- and institutional-level barriers to sleep disorder assessment and treatment and address these barriers via patient- and clinician-facing digital tools.
* cell phone ‘app’ to provide mental health/stress support to minority underserved teens, with training in avoidance of excessive risk-taking in social relationships.
* use of mobile technologies (mHealth) to assess patient health parameters remotely and continuously, developing methods for analysis and visualization of the data for clinical use. An additional project involves combination of the MedWISER composable approach for global health particularly rapid emergency action.

**Research review activities**

2012-present Peer Reviewer, AMIA Annual meeting, Journal of Biomedical Informatics, Context-Sensitive Health Informatics, Medical Informatics Europe, AMIA Joint Summits, various other journals and conferences

2015-present Peer reviewer, NIH SBIR/STTR grants (informatics/technology section)

**SEMINARS AND INVITED LECTURESHIPS RELATED TO RESEARCH**

**\* = Peer-reviewed original research**

**Professional Presentations**

2009 MedWISE: a web 2.0-based EHR. Theater-style demonstration, American Medical Informatics Association Annual Meeting, Demonstrated MedWISE experimental clinical information system. San Francisco, CA

2009\* Rapid Configuration of a web 2.0-based EHR to meet an emerging need (H1N1). National Library of Medicine/Robert Wood Johnson Public Health Informatics Fellows meeting, Portland, OR (Prize)

2009 Architectural and Usability Considerations in the development of a Web 2.0-based EHR. Victoria, British Columbia

2010 Design and Evaluation of a Widget-based ‘Web 2.0’ Electronic Health Record. National

Library of Medicine Informatics Training Conference, Denver CO 2010.

2010 Invited Talk: Design and Evaluation of a Widget-based ‘Web 2.0’ Electronic Health Record, Danish National Health IT conference, Nyborg, Denmark, October 2010.

2011 MedWISE, a Highly User-configurable Web 2.0-based Electronic Health Record. Yalini Senathirajah, Suzanne Bakken. Theatre-style demonstration, Medical Informatics Europe, Oslo, August 2011.

2013 Invited talk, University of Waterloo School of Public Health departmental seminar

2014 MedWISE: User-composable approaches to healthcare systems. AMIA iHealth ‘Ideas that Work’ competition finalist, Orlando FL January 2014.

2014 Intelligent Medical Objects – Invited talk for C-suite executives

2014 University of Toronto – departmental seminar (invited)

2015 Informatics Grand Rounds, Johns Hopkins Medical School, February 2015. (invited)

2015 University of Utah Medical School Informatics Lecture (invited)

2015 HITlab, New York city (invited, not for profit healthcare technology group): Designing for Doctors: R01 for Designing a better EHR

2015 Partners Healthcare informatics seminar (invited)

2015 Center for Behavioral and Cardiovascular Health, Columbia Medical School. (invited)

2015 8th International Conference on Ethics in Biology, Engineering and Medicine (invited)

2016 Grand Rounds, University of Buffalo medical school, (invited)

2016 HITlab Summit, invited speaker, NYC

2016 Informatics seminar, New York University School of Medicine (invited)

2016 Downstate research disparities group seminar (invited)

2016 Informatics Seminar, University of Pittsburgh department of biomedical informatics,

(invited)

2016**\*** Arcia A, Cato K, Ceber RM, **Senathirajah Y**, Yoon S. Visualization of Patient-reported Outcomes, Didactic Panel. Proc. AMIA Annual Fall Symposium, Chicago, Illinois, Nov 12-16, 2016.

2017**\* Senathirajah Y**, Kushniruk A, Patrick J, Koppel R, Borycki E. Immediate Adaptability. Panel S10. Proc. AMIA iHealth 2017 Clinical Informatics Conference, Philadelphia, PA, May 2-4, 2017.

2017**\*** Kushniruk A, Borycki E, **Senathirajah** Y, Hullin D. What Will Be Required to Make Sure Healthcare IT Actually Does What is Expected: Technical and Legal Requirements and Issues. Panel. 16th World Congress on Medical and Health Informatics (Medinfo 2017)—Precision Healthcare Through Informatics. Hangzhou, China, August 21-25, 2017.

2017**\*** Kushniruk A, Borycki E, **Senathirajah Y,** Hudson D. Are EHRs “Overloading” Health Professionals? Issues, Advances and New Directions from Cognitive Science and Usability Engineering. Panel S74. AMIA Annu Symp Proc., Nov 2017, pp. 298-300.

2017 Use of research grade low-cost EEG headsets – demonstration to students in Arthur Ashe program, NYC.

2017 Northwell Health Feinstein Institute, Long Island NY. (invited)

2017 Brown medical school, Providence RI. (invited)

2018\* User Control of Electronic Health Record Design and Diagnostic Reasoning (one of 6 chosen abstracts of 148 submitted), Diagnostic Error in Medicine (DEM) 11th International Conference, New Orleans, LA

2018 Keynote Speaker: New Clinician-Controlled Composable Approaches to Health IT.

International Conference on Info Tech ICIT 2018, Bhubaneswar, India

2019 Invited Talk: Novel Approaches to Health Information Technology. Intelligent Systems Program, University of Pittsburgh, February 22.

2019 Invited Talk: New approaches to EHR system design. Universite de Lille, Lille, France

2019 Unertl KM, Bright TJ, **Senathirajah Y**. Building connections between computation and health: Medical informatics. Academic Panel at TAPIA 2019 Conference, San Diego, California, September 18-21, 2019.

2021 Adaptations to Covid 19 in a safety net hospital in New York City. AMIA clinical informatics conference May 2021

2021 Invited talk as guest of honour: Novel approaches in health information technology. Chinese American Scholars and Professionals Association (CAASP) May 2021

2021 Invited talk as guest of honour: Novel approaches in health information technology. IEEE Day Celebration, October 2021

2021 Invited talk to Greater New York Hospital Association, Emergency Preparedness Coordinating Council: Hospital Adaptation, Resilience and Regulatory Reporting Burden to the COVID-19 Pandemic: Progress to Date. October 2021.

2021 Invited talk (one of 3 grantees selected by AHRQ for national webinar): Composable Approach in Health IT and Cognitive Support for Clinicians. October 2021

2021 Invited Guest lecture, Downstate medical sciences university, November 2021

2022 Invited talk to Asthma UK Center for Applied Research (AUKCAR) (University of Edinburgh). Coping with Covid: Informatics issues in a New York City safety net Covid-only hospital. February 2022.

2022 Invited talk at VADA – Information and system needs for Covid in a safety net hospital. Visual Analytics and Data conference, University of Victoria School of Health Information, June 2022.

2022 Invited guest lecture: U. Pittsburgh School of Nursing. Mixed methods research approaches in development and testing of technology interventions for patient health. August 2022.

2023 Invited guest lecture: Entwined purposes: Needs and new methods in informatics and system change

Western University, January 2023.

2023 Invited talk: Flexible Composable Health IT Platforms for Emergency Response

World Association for Disaster and Emergency Response (WADEM) Annual Meeting, Killarney Ireland May 9-12

2023 Invited Talk: RECOVER – alternate data?  Presentation on issues in PASC data analyses and equity to

RECOVER National Community Engagement Group (NCEG), June 8, 2023.

2023 Invited Talk:  Sociotechnical Issues: Larger reasons why EHRs are not well designed.  End Burnout

Group, October 2023

**SERVICE**

**University and Medical School**

SUNY Downstate Medical Center

**Center-wide University Service**

2015-2017 SUNY Downstate health disparities research committee (external with SUNY Albany)

2011-2016 Occasional ad hoc consultation re: information systems, research/clinical data

**Service to the College of Health Related Professions (CHRP)**

2011-2017 Committees: Academic policy, student technology fee, technology committee, CAPQ (tenure and promotions committee), clinical coordinators and faculty committees. Special committee for academic dismissal appeals.

**Service to the Medical Informatics Program**

2011-2017 Clinical coordinator: Added many new NYC internships and coordinate the internships for all medical informatics students

2011-2017 Technical coordinator: handled all technical decisions, purchase, setup, coordination with IT staff and creation of technical exercises for medical informatics students

2011-2017 Student group advising – Advise the student officers and other students on problems, coordination activities, jobs and special events.

2011-2016 Major technology and teaching/curriculum revision: Revised decision support and other course contents to include greater hands-on experience and updated findings, collaborative work with other Downstate departments, work to diversify and bring technology facilities up to date, coordination with other informatics departments in New York city.

2013-2016 Department representative to AMIA Academic Forum (national professional body in charge of academic rules, accreditation, curriculum, and similar issues). Member of junior faculty subsection working on development and sharing of teaching materials.

2023 Invited member of the Advisory Board for the Health Informatics (HI) program at SUNY

Downstate Health Science University.

**University of Pittsburgh Medical School**

2018-present Department of Biomedical Informatics, University of Pittsburgh, Medical Scientist Training Program (MSTP) Director

2018-2020 Department of Biomedical Informatics, University of Pittsburgh, Biomedical Informatics Training Program, Student Admissions Committee

2018-present Department of Biomedical Informatics, University of Pittsburgh, Strategic Plan Committee

2020 Mentor to National Library of Medicine summer intern

2020-2021 Faculty search committee, SCI school

**University of Toronto Institute for Health Policy, Management and Evaluation**

Advisory committees on research, publications, and strategy.

2023 Department of Biomedical Informatics’ Faculty Search Committee

**Diversity, Equity, and Inclusion Activities**

2006-present Member, AMIA women’s pipeline subcommittee. Mentor to junior faculty and students.

2017-18 Mentored 1 student, National Institutes of Health (NIH), Programs to Increase Diversity Among Individuals Engaged in Health-Related Research (PRIDE)

2015– present Informal mentoring of women/minority students in other schools/orgs.

Fall 2019 Presenter: Unertl KM, Bright TJ, Senathirajah Y. Building connections between computation and health: Medical informatics. Academic Panel at TAPIA 2019 Conference, San Diego, California, September 18-21, 2019.

09/2020 Presenter: Senathirajah Y, Bright T, Unertl K. Charting your informatics career plan: Pathways toward careers in biomedical informatics. Tapia 2020, Virtual, September 16-19, 2020

2019-present Researcher in health equity (e.g. Dyspnea2Dx project)

11/20-6/21 ICDS faculty recruitment committee (participating because of my experience in disparities research)

2021-2022 Contribute to small faculty committee to facilitate equity and URM inclusion planning and activities for the department

2020-2021 On the faculty development core for the FIRST grant and leading DBMI’s participation in the FIRST grant

2021-present AMIA’s Diversity, Equity, and Inclusion (DEI) Advancement of Health Equity and Antiracism in Healthcare Subcommittee

2021-2023 PI R01 grant for Covid19 disparities research

2021 See also publications and conference activities in disparities

2020-present Subcommittee member AMIA Pathways subcommittee of women in AMIA

**Community Activities**

2015 Arthur Ashe Duke program – Mentor to minority high school students being trained in research.

2016-present HITlab Scholar, HITlab health information technology research international NGO. Provide advising and collaborate on health-IT related projects and research. See HITlab.org

2006-2010 Clinical and Translational Science Award (Informatics committee), Columbia University

**National Activities**

2006-present Member, American Medical Informatics Association working groups: clinical informatics, implementation, education, global health, knowledge in motion, public health, data visualization, ethical, legal and social implications.

2012-present Peer Reviewer, AMIA Annual meeting, Journal of Biomedical Informatics, Journal of the American Medical Informatics Association (JAMIA), AMIA Joint Summits, various other journals and conferences.

2015-present Peer reviewer, NIH SBIR/STTR grants (informatics/technology section, NINDS sectons)

2022 Founder member of AMIA group to decrease physician burnout

2022 Graduate of AMIA Women’s Leadership Program

**International Activities**

2008-2014 Pearl human rights organization

2012-2017 Peer reviewer, Context-Sensitive Health Informatics, Medical Informatics Europe

2015 Medinfo judge of student paper competition for largest international informatics conference

2017 Scientific Program committee member, for section on safety. MedInfo 2017.

2019-present Co-Editor, Human Factors and Organizational Issues Section of the International Medical Informatics Association (IMIA) Yearbook.

2019 Program Committee, Human Factors Section, IEEE ICHI 2019, Beijing, China, June 10-13.

2020 Judge of MedStartr International Innovation Competition, New York, New York

2020-present Scientific Program Committee, AMIA Virtual Clinical Informatics Conference 2021

2021 Judge, University of Toronto bioengineering course innovation.

2022 Associate Editor, Journal of Medical Informatics Research Human Factors

2022 Judge, University of Toronto medical student research day poster competition (virtual)

2022 Founder and co-editor, Design in Informatics journal stream, Frontiers in Digital Health

2022 Reviewer, Natural Sciences and Engineering Research Council of Canada (NSERC)

2022 Reviewer, Canada Research Chairs program