

# Jason J. Saleem

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## EDUCATION

- 2003 **Ph.D.**, Industrial and Systems Engineering, Virginia Tech  
Specialization: Human Factors Engineering and Ergonomics
- 1999 **M.S.**, Industrial and Systems Engineering, Virginia Tech  
Specialization: Human Factors Engineering and Ergonomics
- 1997 **B.S.**, Industrial Engineering, University of Pittsburgh

## PROFESSIONAL EXPERIENCE

- Jan 2021-present Associate Professor  
Department of Industrial Engineering, University of Louisville
- Jan 2015-Dec 2020 Assistant Professor (Tenure Track)  
Department of Industrial Engineering, University of Louisville
- June 2013-Dec 2014 Technical Information Specialist (Human Factors Engineer)  
Human Factors Engineering, Health Informatics, Office of Informatics and Analytics, US Department of Veterans Affairs (VA)
- March 2007-June 2013 Research Scientist  
Center on Implementing Evidence-based Practice (CIEBP), US Department of Veterans Affairs (VA); and Regenstrief Institute, Inc.
- Visiting Assistant Research Professor  
Dept. of Electrical & Computer Engineering, Indiana University-Purdue University Indianapolis
- Nov 2005-Feb 2007 Research Scientist  
Center for Engineering Learning and Teaching, University of Washington
- Nov 2003-Oct 2005 Research Scientist  
VA Getting at Patient Safety Center, US Department of Veterans Affairs

## RESEARCH INTERESTS

- ◆ Integration of human factors engineering and ergonomics with development of clinical information systems (CIS)
- ◆ Innovation for next-generation health information technology (HIT) to support higher quality care and safety, including advances in: cognitive support; interface usability; information synthesis and sense-making; customization; and information management
- ◆ Provider-patient interaction with respect to exam room computing, as well as the coordination of multiple computing devices in a healthcare setting
- ◆ Workarounds to HIT and the resulting negative and positive impacts
- ◆ Clinical decision support systems, medical error reduction, biomedical informatics
- ◆ Human computer interaction (HCI), models and theories of HCI (e.g., distributed cognition)
- ◆ Usability engineering, design and evaluation of computer interfaces
- ◆ Integrating field and laboratory methods in research

- ◆ Work system design, considering both the organizational and cognitive components of a work system

## PROFESSIONAL ASSOCIATIONS

- ◆ Human Factors and Ergonomics Society (HFES), January 1998 – present
- ◆ Institute of Industrial and Systems Engineers (IISE), February 2022 - present
- ◆ American Medical Informatics Association (AMIA), September 2007 – December 2020
- ◆ Kentucky Academy of Science, April 2016 – present

## AWARDS AND HONORS

- ◆ Alpha Pi Mu: Industrial Engineering Honor Society, 1999 – present
- ◆ Recipient of the Outstanding Mentor of a Master’s Student Award from the UofL School of Interdisciplinary and Graduate Studies, May 2017
- ◆ Student Champion, selected by students for going above and beyond duties to provide exceptional or critical support to them during the pandemic, June 2021

## SPONSORED RESEARCH, GRANTS, CONTRACTS

(since joining University of Louisville)

### External Funding

1. PI, “Investigating User Needs for Modernization of VA Health Information Technology”, IPA PO# 776C33002 (GB230117), \$26,971, funded by US Dept of Veterans Affairs (VA) Office of Health Informatics, 10/01/2022 – 09/30/2023.
2. PI, “Examining VA Clinical Workflows to Assist with Virtual Care Tool Adoption”, IPA PO# 133C26004 (GB220239), \$26,568, funded by US Dept of Veterans Affairs (VA) Office of Connected Care, 10/01/2021 – 09/30/2022.
3. PI, “Increasing Adoption of Mobile Technologies across the Veterans Health Administration”, IPA PO# 133C16012 (GB210194), \$24,427, funded by US Dept of Veterans Affairs (VA) Office of Connected Care, 12/01/2020 – 09/30/2021.
4. PI, “Human Factors Services for Cognitive Medical Systems”, OIEB200270, \$43,721, funded by Cognitive Medical Systems, Inc., 11/01/19-9/29/2020.
5. PI, “Understanding User Needs and Context of Use for Health Information Technology”, IPA PO# 776c93021 (GB190311), \$31,610, funded by US Dept of Veterans Affairs (VA) Office of Health Informatics, 11/01/2018 – 09/30/2019.
6. PI, “Problem Analysis for Electronic Health Record (EHR) Modernization, IPA PO# 776c83017 (GB180162), \$22,990, funded by US Dept of Veterans Affairs (VA) Office of Informatics and Analytics, 10/01/2017 – 09/30/2018.
7. PI, “Ambulatory Clinic Exam Room Design with Respect to Computing Devices to Enhance Patient Centeredness”, 1R03HS024488-01A1 (GB161058), \$99,077, funded by Agency for Healthcare Research and Quality (AHRQ), 09/30/2016 – 02/28/2018.
8. PI, “Efficiency and Safety for Enterprise Health Management Platform Applications”, IPA PO# 776c73020 (GB170375), \$11,495, funded by US Dept of Veterans Affairs (VA) Office of Informatics and Analytics, 10/01/2016 – 09/30/2017.
9. PI, “Human Factors and Usability Support for the Enterprise Health Management Platform”, IPA PO# 776c63044 (GB160757), \$27,039, funded by US Dept of Veterans Affairs (VA) Office of Informatics and Analytics, 01/01/2016 – 09/30/2016.
10. Co-I, “Infection Prevention Program Development - Ebola Stimulus”, GB160701 and GB170166, \$250,800, funded by the Centers for Disease Control and Prevention (CDC), subaward through the Kentucky Department for Public Health (KDPH), 08/01/2015 – 06/30/2018.  
(PI: Ruth Carrico, PhD, RN)

11. PI, “IPA: Intergovernmental Personnel Agreement (Computing Devices and Ergonomics, Clinical Workflow Efficiency Study)”, IPA PO# 776c53080 (GB150788), \$26,345, funded by US Dept of Veterans Affairs (VA) Office of Informatics and Analytics, 04/01/2015 – 09/30/2015.

### **Internal Funding**

12. Co-I, “Understanding Barriers to Living Kidney Donation”, Transdisciplinary/Multidisciplinary Collaboration Research Planning Grant (TCRPG), \$25,000, funded by the Office of the Executive Vice President for Research and Innovation (EVPRI), 06/01/2020 – 05/31/2021. (PI: Monica Gentili, PhD)
13. PI, “Reducing Physician Burnout with University of Louisville Outpatient Physicians”, EVPRI RESEARCH – Type II (R-II), \$10,000, funded by the Office of the Executive Vice President for Research and Innovation (EVPRI), 06/01/2018 – 05/31/2019.

(before joining University of Louisville)

14. PI (Immediate Past), “Improving Consultation Management between Primary Care and Sub-Specialty Clinics”, VA HSR&D IIR, #12-102, \$590,602, funded by Dept of Veterans Affairs (VA) Health Services Research and Development, 10/2013 – 09/2015. (PI role transferred to Michael Weiner with change in position)
15. Consultant, “Integrated Decision Support for Cancer Screening” (Phase II), CDC 200-2012-52902, funded by the US Centers for Disease Control and Prevention (CDC), \$999, 919, 10/2012-9/2014. (PI: Laura Militello)
16. PI, “Circumventing Health IT: Identifying Patient Safety Risks”, VA HSR&D CDA 09024-1, funded by Dept of Veterans Affairs (VA) Health Services Research and Development, \$452,075, 10/2009 – 05/2013. (VA Research Career Development Award)
17. Co-PI, “Understanding Variations in CPRS Use Among Primary Care Clinicians”, VA HSR&D IIR, #08-300, funded by Dept of Veterans Affairs (VA) Health Services Research and Development, \$249,873, 4/2010 – 03/2013. (PI: Richard Frankel)
18. Consultant, “Integrated Decision Support for Cancer Screening” (Phase I), CDC 200-2011-M-41884, funded by the US Centers for Disease Control and Prevention (CDC), \$149,458, 10/2011-4/2012. (PI: Laura Militello)
19. Co-I, “Redesigning Medication Alerts to Support Prescriber Workflow”, VA HSR&D Pilot, PPO 09-298, funded by Dept of Veterans Affairs (VA) Health Services Research and Development, \$100,000, 09/2010 – 08/2011. (PI: Alissa Russ)
20. Co-I, “Improving Transfers of Care in VA Nursing and Medical Services”, VA HSR&D IIR, #07-241, funded by Dept of Veterans Affairs (VA) Health Services Research and Development, \$387,900, 05/2009 – 04/2011. (PI: Richard Frankel)
21. Co-I, “Implementing and Improving the Integration of Decision Support into Outpatient Clinical Workflow”, AHRQ ACTION RFTO#8 HIT, HSA2902006000131, funded by the Agency for Healthcare Research and Quality (AHRQ), \$400,000, 10/2007 – 03/2011. (PI: Bradley Doebbeling)
22. Co-I, “The Clinical Decision Support Consortium”, AHRQ HHS290200810010, funded by the Agency for Healthcare Research and Quality (AHRQ), \$2,498,229, 3/2008 - 3/2010. (PI: Blackford Middleton)
23. Co-I, “Factors Influencing Effective Implementation of My HealtheVet”, VA HSR&D STP, SHP 08-192, funded by Dept of Veterans Affairs (VA) Health Services Research and Development, \$69,000, 5/2008 – 9/2008. (PI: Neale R. Chumbler)
24. PI, “Human Factors Assessment of Paper Use with the Computerized Patient Record System”, VA HSR&D CIEBP Pilot, LIP 87-012, funded by Dept of Veterans Affairs (VA) Health Services Research and Development, \$30,000, 08/2007 – 2/2008.
25. Consultant, “Developing a Knowledge Base for RN Stacking: A Critical Patient Safety Strategy for Nursing Care Delivery”, funded by the National Patient Safety Foundation (NPSF), 2006-2008. (PI: Patricia R. Ebright)
26. Co-I, “Human Factors and the Effectiveness of Computerized Clinical Reminders”, VA HSR&D, TRX 02-216, funded by Dept of Veterans Affairs (VA) Health Services Research and Development, \$495,600, 7/2003 – 6/2006. (PI: Steven Asch)

27. Co-I, “Sustainability Evaluation of Improving HIV Care Quality”, (an extension of: Measuring HIV Quality of Care / Improving HIV Care Quality), VA HSR&D, HIS 99-042 / HIT 01-090 (Supplemental), funded by Dept of Veterans Affairs (VA) Health Services Research and Development, \$27,720, 11/2004 – 4/2005. (PI: Steven Asch)
28. Co-I, “Tools Ensuring Consumer Healthcare Safety (TECHS) / Project #3: Usability and Effectiveness of a Computer-Based Atrial Fibrillation Decision Support Tool”, VA HSR&D, REA-03-020, funded by Dept of Veterans Affairs (VA) Health Services Research and Development, \$304,000 for total grant (3 projects), 10/2003-9/2004. (PI: Joel Tsevat)

## REFEREED JOURNAL ARTICLES

(since joining University of Louisville)

1. **Saleem, J. J.**, Wilck, N. R., Murphy, J. J., & Herout, J. (2022). Veteran and staff experience from a pilot program of health care system distributed wearable devices and data sharing. *Applied Clinical Informatics*, 13(3), 532-540.
2. Whealin, J. M., **Saleem, J. J.**, Vetter, B., Roth, J. & Herout, J. (In Press). Development and cross-sectional evaluation of a text message protocol to support mental health well-being. *Psychological Services*.
3. Savoy, A., **Saleem, J. J.**, Barker, B. C., Patel, H., & Kara, A. (2022). Clinician perspectives on unmet needs for mobile technology among hospitalists: Workflow analysis based on semistructured interviews. *JMIR Human Factors*, 9(1):e28783.
4. Mahajan, P., Mollen, C., Alpern, E., Baird-Cox, K., Boothman, R., Chamberlain, J., Cosby, K., Epstein, H. M., Gegenheimer-Holmes, J., Gerardi, M., Giardina, T., Patel, V., Ruddy, R., **Saleem, J. J.**, Shaw, K., Sittig, D. F., & Singh, H. (2021). An operational framework to study diagnostic errors in emergency departments: Findings from a consensus panel. *Journal of Patient Safety*, 17(8), 570-575.
5. **Saleem, J. J.**, Read, J. M., Loehr, B. M., Frisbee, K. L., Wilck, N. R., Murphy, J. J., Vetter, B. M., & Herout, J. (2020). Veterans’ response to an automated text messaging protocol during the COVID-19 pandemic. *Journal of the American Medical Informatics Association*, 27(8), 1300-1305.
6. Read, J. M., Weiler, D. T., Satterly, T., Soares, C., & **Saleem, J. J.** (2019). Provider Preference in Exam Room Layout Design and Computing. *Applied Clinical Informatics*, 10(5), 972-980.
7. McNeil, J. C., Miller, P. A., & **Saleem, J. J.** (2019). Influential factors on selecting an engineering major in a first year course. *Journal of Professional Issues in Engineering Education and Practice*, 145(2), 1-8.
8. Weiler, D. T., Satterly, T., Rehman, S. U., Nussbaum, M. A., Chumbler, N. R., Fischer, G. M., & **Saleem, J. J.** (2018). Ambulatory clinic exam room design with respect to computing devices: A laboratory simulation study. *IISE Transactions on Occupational Ergonomics and Human Factors*, 6, 165-177.
9. **Saleem, J. J.**, & Weiler, D. T. (2018). Performance, workload, and usability in a multiscreen, multi-device, information-rich environment. *PeerJ Computer Science* 4:e162
10. Savoy, A., Militello, L. G., Patel, H., Flanagan, M. E., Russ, A. L., Daggy, J. K., Weiner, M., & **Saleem, J. J.** (2018). A cognitive systems engineering design approach to improve the usability of electronic order forms for medical consultation. *Journal of Biomedical Informatics*, 85, 138-148.
11. **Saleem, J. J.**, Savoy, A., Etherton, G., & Herout, J. (2018). Investigating the need for clinicians to use tablet computers with a newly envisioned electronic health record. *International Journal of Medical Informatics*, 110, 25-30.
12. Russ, A. L. & **Saleem, J. J.** (2018). Ten factors to consider when developing usability scenarios and tasks for health information technology. *Journal of Biomedical Informatics*, 78, 123-133.
13. Weiler D. T., Gibson, A. L., & **Saleem J. J.** (2018). The effect of role assignment in high fidelity patient simulation on nursing students: An experimental research study. *Nurse Education Today*, 63, 29-34.
14. Doggett, A., Weiler, D. T., **Saleem, J. J.** (2017). Variations in the usability of independent Web-based personal health records. *International Journal of Human-Computer Interaction*, 33(4), 280-286.

15. Militello, L. G., DiIulio, J. B., Borders, M. R., Sushereba, C. E., **Saleem, J. J.**, Haverkamp, D. Imperiale, T. F. (2017). Evaluating a modular decision support application for colorectal cancer screening. *Applied Clinical Informatics*, 8(1), 162-179.
16. Russ, A. L., Melton, B. L., Daggy, J. K., & **Saleem, J. J.** (2017). Pilot evaluation of a method to assess prescribers' information processing of medication alerts. *Journal of Biomedical Informatics*, 66, 11-18.  
\* A "Top 15" best publication, chosen out of 695 articles, from the 2017 literature by the International Medical Informatics Association (IMIA) 2018 Yearbook, Section on Human Factors and Organizational Issues. (Cited in Yearbook of Medical Informatics 2018:79-82)
17. Melton, B. L., Zillich, A. J., **Saleem, J.**, Russ, A. L., Tisdale, J. E., & Overholser, B. R. (2016). Iterative development and evaluation of a pharmacogenomic-guided clinical decision support system for warfarin dosing. *Applied Clinical Informatics*, 7(4), 1088-1106.
18. **Saleem, J. J.**, Militello, L. G., Russ, A. L. & Wilck, N. R. (2016). The need for better integration between applied research and operations to advance health information technology. *Healthcare: The Journal of Delivery Science and Innovation*, 4(2), 80-83.
19. Militello, L. G., **Saleem. J. J.**, Borders, M. R., Sushereba, C. E., Haverkamp, D., Wolf, S. P., & Doebbeling, B. N. (2016). Designing colorectal cancer screening decision support: A cognitive engineering enterprise. *Journal of Cognitive Engineering and Decision Making*, 10(1), 74-90.
20. **Saleem, J. J.**, Plew, W. R., Speir, R. C., Herout, J., Wilck, N. R., Ryan, D. M., Cullen, T. A., Scott, J. M., Beene, M. S., & Phillips, T. (2015). Understanding barriers and facilitators to the use of Clinical Information Systems for intensive care units and Anesthesia Record Keeping: A rapid ethnography. *International Journal of Medical Informatics*, 84(7), 500-511.  
\* Article selected as a finalist for the 2016 American Medical Informatics Association (AMIA) Diana Forsythe Award
21. Russ, A. L., Chen, S., Melton, B. L., **Saleem, J. J.**, Weiner, M., Spina, J., Daggy, J. K., & Zillich, A. J. (2015). Design and evaluation of an electronic override mechanism for medication alerts to facilitate communication between prescribers and pharmacists. *Annals of Pharmacotherapy*, 49(7), 761-769.

(before joining University of Louisville)

22. Russ, A. L., Zillich, A. J., Melton, B., Russell, S. A., Chen, S., Spina, J., Weiner, M., Johnson, E., Daggy, J. K., McManus, M. S., Hawsey, J., Puleo, A., Doebbeling, B. N., & **Saleem, J. J.** (2014). Applying human factors principles to alert design increases efficiency and reduces prescribing errors in a scenario-based simulation. *Journal of the American Medical Informatics Association*, 21(e2), e287-e296.  
\* Selected as one of the best articles published in 2014 in the 'Human Factors and Organizational Issues' subfield of medical informatics in the 2015 IMIA Yearbook of Medical Informatics
23. **Saleem, J. J.**, Flanagan, M. E., Russ, A. L., McMullen, C. K., Elli, L., Russell, S. A., Bennett, K. J., Matthias, M. S., Rehman, S. U., Schwartz, M. D., & Frankel, R. M. (2014). You and me and the computer makes three: variations in exam room use of the electronic health record. *Journal of the American Medical Informatics Association*, 21(e1), e147-e151.
24. Anderson, J. A., Godwin, K. M., **Saleem, J. J.**, Russell, S., Robinson, J. J., & Kimmel, B. (2014). Accessibility, usability and usefulness of a Web-based clinical decision support tool to enhance provider-patient communication around Self-management TO Prevent (STOP) Stroke. *Health Informatics Journal*, 20(4), 261-274.
25. Militello, L. G., Arbuckle, N. B., **Saleem, J. J.**, Patterson, E. S., Flanagan, M. E., Haggstrom, D. A., & Doebbeling, B. N. (2014). Sources of variation in primary care clinical workflow: Implications for the design of cognitive support. *Health Informatics Journal*, 20(1), 35-49.
26. Frankel, R. M., & **Saleem, J. J.** (2013). "Attention on the flight deck": What ambulatory care providers can learn from pilots about complex coordinated actions. *Patient Education and Counseling*, 93(3), 367-372.
27. **Saleem, J. J.**, Flanagan, M. E., Wilck, N. R., Demetriades, J., & Doebbeling, B. N. (2013). The next-generation electronic health record: perspectives of key leaders from the US Department of Veterans Affairs. *Journal of the American Medical Informatics Association*, 20(e1), e175-e177.

28. Flanagan, M. E., **Saleem, J. J.**, Militello, L. G., Russ, A. L., & Doebbeling, B. N. (2013). Paper- and computer-based workarounds to electronic health record use at three benchmark institutions. *Journal of the American Medical Informatics Association*, 20(e1), e59-e66.  
\* Selected as one of the best articles published in 2013 in the 'Human Factors and Organizational Issues' subfield of medical informatics in the 2014 IMIA Yearbook of Medical Informatics
29. Russ, A. L., Fairbanks, R. J., Karsh, B., Militello, L. G., **Saleem, J. J.**, & Wears, R. L. (2013). The science of human factors: Separating fact from fiction. *BMJ Quality & Safety*, 22(10), 802-808.
30. Frankel, R. M., Flanagan, M., Ebright, P., Bergman, A., O'Brien, C. M., Franks, Z., Allen, A., Harris, A., & **Saleem, J. J.** (2012). Context, culture and (non-verbal) communication affect handover quality. *BMJ Quality & Safety*, 21 Suppl 1, i121-i128.
31. Russ, A. L., Weiner, M., Russell, S. A., Baker, D. A., Fahner, W. J., & **Saleem, J. J.** (2012). Design and implementation of a hospital-based usability laboratory: Insights from a Department of Veterans Affairs laboratory for health information technology. *The Joint Commission Journal on Quality and Patient Safety*, 38(12), 531-540.
32. Rajput, Z. A., Mbugua, S., Amadi, D., Chepng'eno, V., **Saleem, J. J.**, Anokwa, Y., Hartung, C., Borriello, G., Mamlin, B. W., Ndege, S. K., & Were, M. C. (2012). Evaluation of an Android-based mHealth system for population surveillance in developing countries. *Journal of the American Medical Informatics Association*, 19(4), 655-659.
33. Russ, A. L., Zillich, A. J., McManus, M. S., Doebbeling, B. N., & **Saleem, J. J.** (2012). Prescribers' interactions with medication alerts at the point of prescribing: A multi-method, in situ investigation of the human-computer interaction. *International Journal of Medical Informatics*, 81(4), 232-243.
34. **Saleem, J. J.**, Haggstrom, D. A., Militello, L. G., Flanagan, M., Kiess, C. L., Arbuckle, N., & Doebbeling, B. N. (2011). Redesign of a computerized clinical reminder for colorectal cancer screening: A human-computer interaction evaluation. *BMC Medical Informatics and Decision Making*, 11, 74.
35. **Saleem, J. J.**, Russ, A. L., Neddo, A., Blades, P. T., Doebbeling, B. N., & Foresman, B. H. (2011). Paper persistence, workarounds, and communication breakdowns in computerized consultation management. *International Journal of Medical Informatics*, 80(7), 466-479.
36. Haggstrom, D. A., **Saleem, J. J.**, Russ, A. L., Jones, J., Russell, S. A., & Chumbler, N. R. (2011). Lessons learned from usability testing of a personal health record. *Journal of the American Medical Informatics Association*, 18 Suppl 1, i13-i17.
37. Patterson, E. S., Ebright, P. R., & **Saleem, J. J.** (2011). Investigating stacking: How do registered nurses prioritize their activities in real-time? *International Journal of Industrial Ergonomics*, 41(4), 389-393.
38. Chumbler, N. R., Haggstrom, D., & **Saleem, J. J.** (2011). Implementation of health information technology in VHA to support transformational change: Telehealth and personal health records. *Medical Care*, 49(12) Suppl 1, S36-S42.
39. Wess, M. L., **Saleem, J. J.**, Tsevat, J., Luckhaupt, S. E., Johnston, J. A., Wise, R. E., Kopke, J. E., & Eckman, M. H. (2011). Usability of an Atrial Fibrillation Anticoagulation Decision-Support Tool. *Journal of Primary Care & Community Health*, 2(2), 100-106.
40. Russ, A. L., **Saleem, J. J.**, Justice, C. F., Woodward-Hagg, H., Woodbridge, P. A., & Doebbeling, B. N. (2010). Electronic health information in use: Characteristics that support employee workflow and patient care. *Health Informatics Journal*, 16(4), 287-305.
41. Wu, S., Lehto, M. R., Yih, Y., **Saleem, J. J.**, Doebbeling, B. N. (2010). Impact of clinical reminder redesign on physicians' priority decisions. *Applied Clinical Informatics*, 1(4), 466-485.
42. Nazi, K. M., Hogan, T. P., Wagner, T. H., McInnes, D. K., Smith, B. M., Haggstrom, D., Chumbler, N. R., Gifford, A. L., Charters, K. G., **Saleem, J. J.**, Weingardt, K. R., Fischetti, L. F., & Weaver, F. M. (2010). Embracing a health services research perspective on personal health records: Lessons learned from the VA My HealtheVet system. *Journal of General Internal Medicine*; 25 Suppl 1, 62-67.
43. **Saleem, J. J.**, Russ, A. L., Sanderson, P., Johnson, T. R., Zhang, J., & Sittig, D. F. (2009). Current challenges and opportunities for better integration of human factors research with development of clinical information systems. *Yearbook of Medical Informatics*, 48-58.

44. **Saleem, J. J.**, Russ, A. L., Justice, C. F., Hagg, H., Ebright, P. R., Woodbridge, P. A., & Doebbeling, B. N. (2009). Exploring the persistence of paper with the electronic health record. *International Journal of Medical Informatics*, 78(9), 618-628.
41. Atman, C. J., Adams, R. S., Cardella, M. E., Turns, J., Mosborg, S., & **Saleem J.** (2007). Engineering design processes: A comparison of students and expert practitioners. *Journal of Engineering Education*, 96(4), 359-379.  
\* Wickenden Award for Best Paper published in *Journal of Engineering Education* during 2007
42. Boehm-Davis D. A., Casali, J. G., Kleiner, B. M., Lancaster, J., **Saleem, J. J.**, & Wochinger, K. (2007). Pilot performance, strategy and workload while executing approaches at steep angles with lower landing minima. *Human Factors*, 49(5), 759-772.
43. **Saleem J. J.**, Patterson E. S., Militello, L., Anders, S., Falciglia, M., Wissman, J. A., Roth, E. M., & Asch, S. M. (2007). Impact of clinical reminder redesign on learnability, efficiency, usability, and workload for ambulatory clinic nurses. *Journal of the American Medical Informatics Association*, 14(5), 632-640.
44. **Saleem J. J.**, & Kleiner, B. M. (2006). A Case-based review of critical incidents in General Aviation for improved safety. *International Journal of Applied Aviation Studies*, 6(2), 271-281.
45. **Saleem J. J.**, Patterson E. S., Militello, L., Render, M. L., Orshansky, G., & Asch, S. M. (2005). Exploring barriers and facilitators to the use of computerized clinical reminders. *Journal of the American Medical Informatics Association*, 12(4), 438-447.
46. **Saleem J. J.**, & Kleiner, B. M. (2005). The effects of nighttime and deteriorating visual conditions on pilot performance, workload, and situation awareness in General Aviation for both VFR and IFR approaches. *International Journal of Applied Aviation Studies*, 5(1), 107-120.
47. **Saleem J. J.**, Kleiner, B. M., & Nussbaum, M. A. (2003). Empirical evaluation of training and a work analysis tool for participatory ergonomics. *International Journal of Industrial Ergonomics*, 31(6), 387-396.
48. Kirst, M., & **Saleem, J.** (2000). Overcoming mail-sorting overload. *Ergonomics in Design*, 8(1), 10-17.

## REFEREED CONFERENCE PROCEEDINGS PAPERS

(since joining University of Louisville)

1. **Saleem, J. J.**, Asan, O., Militello, L. G., Montague, E., & Read, J. M. (2021). Research and design trends for exam room computing to enhance patient centeredness. [Panel Paper]. In *Proceedings of the Human Factors and Ergonomics Society 65th Annual Meeting*, 196-200.
2. **Saleem, J. J.**, Maddox, K., Herout, J., & Ruark, K. (2021). Parallel assessment tracks for human-centered design (PATH): A framework for transitioning to a new health information technology system. In *Proceedings of the Human Factors and Ergonomics Society 65th Annual Meeting*, 294-298.
3. **Saleem, J. J.**, Price, M., Read, J. M., Bae, K. H., Gentili, M., Becker, J. A., & Pendleton, M. E. (2020). Provider burnout as it relates to the electronic health record and clinical workflow. In *Proceedings of the Human Factors and Ergonomics Society 64th Annual Meeting*, 598-602.
4. **Saleem, J. J.**, Moon, B., Bross, E., Anders, S., Conway, B., Wilck, N. R., Frisbee, K. L., & Herout, J. (2020). Understanding veteran attitudes, interests, and needs for virtual care applications. In *Proceedings of the Human Factors and Ergonomics Society 64th Annual Meeting*, 731-735.
5. Patterson, E. S., Anders S., Militello, L. G., **Saleem, J. J.**, Perry, S., Rothwell, C., & Weiler, D. (2020). Predicting the future: Diverse perspectives on the transformation of healthcare delivery over the next 15 years. [Panel Paper]. In *Proceedings of the Human Factors and Ergonomics Society 64th Annual Meeting*, 671-674.
6. **Saleem, J. J.**, Weiler, D. T., Satterly, T., Nussbaum, M. A., Chumbler, N. R., Fischer, G. M., & Rehman, S. U. (2018). Field investigation of ambulatory clinic exam room design with respect to computing devices: A pilot study. In *Proceedings of the Human Factors and Ergonomics Society 62nd Annual Meeting*, 518-522.

7. **Saleem, J. J.**, & Herout, J. (2018). Transitioning from one electronic health record (EHR) to another: A narrative literature review. In *Proceedings of the Human Factors and Ergonomics Society 62nd Annual Meeting*, 489-493.
8. Herout, J., Dobre, J., Plew, W., & **Saleem, J. J.** (2018). Gathering information in healthcare settings: A tool to facilitate on-site work. In *Proceedings of the Human Factors and Ergonomics Society 62nd Annual Meeting*, 600-604.
9. Herout, J., **Saleem, J. J.**, Weinger, M., Grundmeier, R. W., Patterson, E. S., Anders, S., & Hettinger, A. Z., (2018). EHR to EHR transitions: Establishing and growing a knowledge base [Panel Paper]. In *Proceedings of the Human Factors and Ergonomics Society 62nd Annual Meeting*, 513-517.
10. Read, J., & **Saleem, J. J.** (2017). Task performance and situational awareness with a virtual reality head-mounted display. In *Proceedings of the Human Factors and Ergonomics Society 61st Annual Meeting*, 2105-2109.
11. Weiler, D. T., & **Saleem, J. J.** (2017). Role assignment in high fidelity patient simulation and the effects on nursing students self-efficacy development. In *Proceedings of the Human Factors and Ergonomics Society 61st Annual Meeting*, 671-675.
12. Weiler, D. T., Villajuan, S., Edkins, L., Cleary, J., & **Saleem, J. J.** (2017). Wearable heart rate monitor technology accuracy in research: A comparative study between PPG and ECG technology. In *Proceedings of the Human Factors and Ergonomics Society 61st Annual Meeting*, 1292-1296.
13. **Saleem, J. J.**, Herout, J., & Wilck, N. R. (2016). Function-specific design principles for the electronic health record. In *Proceedings of the Human Factors and Ergonomics Society 60th Annual Meeting*, 578-582.
14. Weiler, D. T., & **Saleem, J. J.** (2016). Identifying an effect of simulation role assignment on critical thinking development in baccalaureate nursing students: A proof of concept. In *Proceedings of the Human Factors and Ergonomics Society 60th Annual Meeting*, 1818-1822.
15. Dorris, A. E., Quesada, P. M., & **Saleem, J. J.** (2016). Effects of vocal and instrumental music on running. In *Proceedings of the Human Factors and Ergonomics Society 60th Annual Meeting*, 507-511.
16. Reale, C., **Saleem, J. J.**, Patterson, E. S., Hettinger, A. Z., Anders, S., Miller, A. (2016). Promoting patient safety with human factors methods: Practical approaches to current medication management issues [Panel Paper]. In *Proceedings of the Human Factors and Ergonomics Society 60th Annual Meeting*, 647-651.
17. **Saleem, J. J.**, Militello, L. G., Montague, E., Trbovich, P., Russ, A. L., & Patterson, E. S. (2015). Human factors research and design trends for the modern exam and hospital room [Panel Paper]. In *Proceedings of the Human Factors and Ergonomics Society 59th Annual Meeting*, 567-571.

(before joining University of Louisville)

18. Militello, L. G., Borders, M. R., Arbuckle, N. B., Flanagan, M. E., Hall, N., **Saleem, J. J.**, & Doebbeling B. (2014). Persuasive health educational materials for colorectal cancer screening. In *Proceeding of the Human Factors and Ergonomics Society 58th Annual Meeting*, 609-613.
19. **Saleem, J. J.**, Adams, S., Frankel, R. M., Doebbeling, B. N., & Patterson, E. S. (2013). Efficiency strategies for facilitating computerized clinical documentation in ambulatory care. *Studies in Health Technology and Informatics [MEDINFO 2013 Proceedings]*, 192, 13-17.
20. **Saleem, J. J.**, Flanagan, M., Militello, L. G., Arbuckle, A., Russ, A. L., Burgo-Black, A. L., & Doebbeling, B. N. (2011). Paper persistence and computer-based workarounds with the electronic health record in primary care. In *Proceedings of the Human Factors and Ergonomics Society 55th Annual Meeting*, 660-664.
21. Russ, A. L., Militello, L. G., **Saleem, J. J.**, Wears, R. L., Fairbanks, R. J., & Karsh, B. (2011). Human factors education for healthcare audiences: Ideas for the way forward [Panel Paper]. In *Proceedings of the Human Factors and Ergonomics Society 55th Annual Meeting*, 808-812.
22. Flanagan, M., Arbuckle, N., **Saleem, J. J.**, Militello, L. G., Haggstrom, D. A., & Doebbeling, B. N. (2011). Development of a Workflow Integration Survey (WIS) for implementing computerized clinical decision support. In *Proceedings of the American Medical Informatics Association 2011 Annual Symposium*, 427-434.



23. Russell, S. A., **Saleem, J. J.**, Haggstrom, D. A., Russ, A. L., & Chumbler, N. R. (2010). A novel tool to track and analyze qualitative usability data: Lessons learned from the VA's personal health record. In *Proceedings of the Human Factors and Ergonomics Society 54th Annual Meeting*, 1264-1268.
24. Russ, A. L., **Saleem, J. J.**, McManus, M. S., Frankel, R. M. & Zillich, A. J. (2010). The workflow of computerized medication ordering in primary care is not prescriptive. In *Proceedings of the Human Factors and Ergonomics Society 54th Annual Meeting*, 840-844.
25. Russ, A. L., Baker, D. A., Fahner, W. J., Milligan, B. S., Cox, L., Hagg, H. K., & **Saleem, J. J.** (2010). A Rapid Usability Evaluation (RUE) method for health information technology. In *Proceedings of the American Medical Informatics Association 2010 Annual Symposium*, 702-706.
26. **Saleem, J. J.**, Militello, L. G., Arbuckle, N., Flanagan, M., Haggstrom, D. A., Linder, J. A., Doebbeling, B. N. (2009). Provider perceptions of colorectal cancer screening decision support at three benchmark institutions. In *Proceedings of the American Medical Informatics Association 2009 Annual Symposium*, 558-562.
27. Haggstrom, D. A., **Saleem, J. J.**, Militello, L. G., Arbuckle, N., Flanagan, M., Doebbeling, B. N. (2009). Examining the relationship between clinical decision support and performance measurement. In *Proceedings of the American Medical Informatics Association 2009 Annual Symposium*, 223-227.
28. Russ, A. L., Zillich, A. J., McManus, M. S., Doebbeling, B. N., **Saleem, J. J.** (2009). A human factors investigation of medication alerts: Barriers to prescriber decision-making and clinical workflow. In *Proceedings of the American Medical Informatics Association 2009 Annual Symposium*, 548-552.
29. Russ, A. L., **Saleem, J. J.**, McManus, M. S., Zillich, A. J., & Doebbeling, B. N. (2009). Computerized medication alerts and prescriber mental models: Observing routine patient care. In *Proceedings of the Human Factors and Ergonomics Society 53rd Annual Meeting*, 655-659.
30. Russ, A. L., **Saleem, J. J.**, Justice, C. F., Hagg, H., Woodbridge, P. A., & Doebbeling, B. N. (2009). Healthcare workers' perceptions of information in the electronic health record. In *Proceedings of the Human Factors and Ergonomics Society 53rd Annual Meeting*, 635-639.
31. Wu, S., Lehto, M., Yih, Y., **Saleem, J. J.**, & Doebbeling, B.N. (2009). On improving provider decision making with enhanced computerized clinical reminders. In *Proceedings of the 13th International Conference on Human-Computer Interaction; Lecture Notes in Computer Science*, 5620, (pp. 569–577). Springer-Verlag.
32. **Saleem J. J.**, Russ, A. L., Justice, C. F., Hagg, H., Woodbridge, P. A., & Doebbeling, B. N. (2008). Paper use with the electronic medical record: An important supplement or negative circumvention? In *Proceedings of the Human Factors and Ergonomics Society 52nd Annual Meeting*, 773-777.
33. **Saleem J. J.**, Patterson, E. S., Militello, L., Asch, S. M., Doebbeling, B. N., & Render, M. L. (2007). Using human factors methods to design a new interface for an electronic medical record. In *Proceedings of the American Medical Informatics Association 2007 Annual Symposium*, 640-644.
34. Wu, S., Lehto, M., Yih, Y., **Saleem, J. J.**, & Doebbeling, B. N. (2007). Relationship of estimated resolution time and computerized clinical reminder adherence. In *Proceedings of the American Medical Informatics Association 2007 Annual Symposium*, 334-338.
35. Kilgore, D., Yasuhara, K., **Saleem, J. J.**, & Atman, C. J. (2006). What brings women to the table? Female and male students' perceptions of ways of thinking in engineering study and practice. In *Proceedings of the Frontiers in Education 36th Annual Meeting*, S2G-1–S2G-6.
36. **Saleem J. J.**, Patterson E. S., Militello, L., Render, M. L., Orshansky, G., & Asch, S. A. (2005). Clinical reminders: Explaining variability in adoption by nurses and physicians at four outpatient clinics. In *Proceedings of the Human Factors and Ergonomics Society 49th Annual Meeting*, 1079-1083.
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- performance in a low-fidelity static aircraft simulator. In *Proceedings of the 12th Biennial International Symposium on Aviation Psychology*, 2, 700-705.
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## INVITED AND NON-REFEREED ARTICLES

(since joining University of Louisville)

1. Herout J., Frisbee, K. L., Wilck, N. R., Kabel, M., Bantt, D., Evans, N. C, Markowitz, G., & **Saleem, J. J.** (2019). Evaluation of mobile tablet computers for use in the Veterans Health Administration. In *Proceedings of the 2019 International Symposium on Human Factors and Ergonomics in Health Care*, 8(1), 18-22.

(before joining University of Louisville)

2. **Saleem, J. J.**, Frankel, R. M., Doebbeling, B. N., & Patterson, E. S. (2014). Patterns in patient safety with computerized consult management and clinical documentation. In *Proceedings of the 2014 International Symposium on Human Factors and Ergonomics in Health Care*, 3(1), 134-141.

## LETTERS TO THE EDITOR

(before joining University of Louisville)

1. Russ, A. L., Militello, L. G., **Saleem, J. J.**, Fairbanks, R. J., & Wears, R. L. (2013). Response to Separating fact from opinion – a response to ‘The Science of human factors: separating fact from fiction’. *BMJ Quality & Safety*, 22(11), 964-966.
2. Russ, A. L., Weiner, M., **Saleem, J. J.**, & Wears, R. L. (2012). When ‘technically preventable’ alerts occur, the design – not the prescriber – has failed. *Journal of the American Medical Informatics Association*, 19(6), 1119.
3. **Saleem, J. J.**, Patterson, E. S., Russ, A. L., & Wears, R. L. (2011). The need for a broader view of human factors in the surgical domain. *Archives of Surgery*, 146(5), 631-632.

## BOOK CHAPTERS

(before joining University of Louisville)

1. Masys, D. R., Hines, J. W., **Saleem, J. J.**, Roth, E. M., McFarlane, D. C., Agarwal, V. (2013). Diagnosis and Prognosis: Approaches to Problem Identification and Prediction in Healthcare and Nuclear Power. In M. B. Weinger, B. P. Hallbert, & M. K. Logan M. K. (Eds.), *Risk and Reliability in Healthcare and Nuclear Power: Learning from Each Other* (pp. 27-35). Arlington, VA: Association for the Advancement of Medical Instrumentation (AAMI).
2. Militello, L. G., Patterson, E. S. **Saleem, J. J.**, Anders, S., & Asch, S. (2008). Supporting Macrocognition in Health Care: Improving Clinical Reminders. In J.M. Schraagen, L.G. Militello, T. Omerod, & R. Lipshitz (Eds.), *Naturalistic Decision Making and Macrocognition* (pp. 203-220). Aldershot, England: Ashgate.

## REFEREED ABSTRACTS

(since joining University of Louisville)

1. **Saleem, J. J.**, & Weiler, D. T. (2017). Multiple screens and devices in an information-rich environment. [Abstract]. In *Proceedings of the Human Factors and Ergonomics Society 61st Annual Meeting*, 361.
2. Mahajan, P., Alpern, E., Baird-Cox, K., ... **Saleem, J. J.**, ... & Singh, H. (2017). Opportunities to Improve Diagnosis in Acute Care – Findings from a Multi-Disciplinary Expert Panel. [Abstract]. In *Diagnostic Error in Medicine 10th International Conference*.
3. Doggett A., Weiler, D. T., & **Saleem, J. J.** (2016). A comparative usability study of independent web-based personal health records. [Abstract]. In *Proceedings of the Human Factors and Ergonomics Society 60th Annual Meeting*, 576-577.
4. **Saleem, J. J.**, Militello, L. G., Russ, A. L., & Wilck, N. R. (2015). The divide between applied research and operations in health information technology advancement: Reducing the gap. [Abstract]. In *Proceedings of the Human Factors and Ergonomics Society 59th Annual Meeting*, 460.
5. Militello, L., Borders, M., Sushereba, C., DiIulio, J., Doebbeling, B., Imperiale, T, **Saleem, J.** (2015). Employing decision-centered design to develop decision support for colorectal cancer screening [Abstract]. In *Proceedings of the Human Factors and Ergonomics Society 59th Annual Meeting*, 486-487.
6. Russ, A. L., Melton, B. L., Daggy, J. K., & **Saleem, J. J.** (2015). Evaluation of cognitive encoding across different medication alert designs. [Abstract]. In *Proceedings of the Human Factors and Ergonomics Society 59th Annual Meeting*, 580.
7. Russ, A. L., Chen, S., Melton, B. L., **Saleem, J. J.**, Spina, J., Weiner, M., Daggy, J. K., & Zillich, A. J. (2015). Design and evaluation of an override mechanism to enhance medication safety for veterans. [Abstract]. *2015 VA Health Services Research and Development (HSR&D) National Meeting*, abstract # 1117.

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8. Melton, B. L., Spina, J. R., Zillich, A. J., **Saleem, J. J.**, Weiner, M., Russell, S. A., Chen, S., & Russ, A. L. (2013). Development of standardized patient scenarios for usability testing of medication alerts. [Abstract]. In *Proceedings of the American Medical Informatics Association 2013 Annual Symposium*, 995.
9. Choi, K., Psenka, C., Ellis, R. D., Curtis, V., Russell, S., **Saleem, J.**, Agha, Z., & Calvitti, A. (2013). Usability measure selection for an automated usability analytics platform in healthcare. [Abstract]. *The Institute of Operations Research and Management Science (INFORMS) Healthcare 2013*.
10. Chen, S., Zillich, A. J., Melton, B.L., **Saleem, J. J.**, Johnson, E., Weiner, M., Russell, S. A., McManus, M. S., Doebbeling, B. N., & Russ, A. L. (2013). The effect of redesigned computerized drug-drug interaction alerts on medication errors and prescribing efficiency. [Abstract]. *International Society of Pharmacoeconomics and Outcomes Research (ISPOR) 18th Annual International Meeting, Value in Health, 16*, A13.
11. Russ, A. L., Zillich, A. J., Melton, B., Spina, J., Weiner, M., Russell, S. A., McManus, M. S., Kobylnski, A., Doebbeling, B. N., Hawsey, J., Puleo, A., Johnson, E., & **Saleem, J. J.** (2012) Applying human factors principles to improve medication alerts. [Abstract]. In *Proceedings of the American Medical Informatics Association 2012 Annual Symposium*, 1651.
12. Russ, A. L., Zillich, A. J., McManus, M. S., Doebbeling, B. N., & **Saleem, J. J.** (2012). 9 Factors that Influence Prescribers' Response to VA Medication Safety Checks at the Point-of-Care. [Abstract]. *2012 VA Health Services Research and Development (HSR&D) National Meeting*.
13. Melton, B. L., Zillich, A.J., **Saleem, J. J.**, Russ, A. L., Tisdale, J. E., Overholser, B. R. (2012) Clinical Impacts of Design Features in a Pharmacogenomic-guided Warfarin Clinical Decision Support System Prototype. [Abstract]. *Midwest Social and Administrative Pharmacy Conference*.
14. Rajput, Z. A., Mbugua, S., Amadi, D., Chepng'eno, V., **Saleem, J. J.**, Anokwa, Y., Hartung, C., Borriello, G., Mamlin, B. W., Ndege, S. K., & Were, M. C. (2011). Evaluation of an Android-based mHealth system for population surveillance in developing countries [Abstract]. In *Proceedings of the American Medical Informatics Association 2011 Annual Symposium*, 1153.
15. Melton, B. L., Zillich, A. J., **Saleem, J. J.**, Russ, A. L., Tisdale, J. E., & Overholser, B. R. (2011). Usability testing to refine a pharmacogenomic-guided warfarin clinical decision support system.

- [Abstract]. In *Proceedings of the American Medical Informatics Association 2011 Annual Symposium*, 1888.
16. **Saleem, J. J.**, Haggstrom, D. A., Militello, L. G., Flanagan, M., Kiess, C. L., Arbuckle, N., & Doebbeling, B. N. (2011). Impact of a Redesign for Colorectal Cancer Screening Computerized Decision Support. [Abstract]. *2011 VA Health Services Research and Development (HSR&D) National Meeting*.
  17. Doebbeling, B. N., **Saleem, J. J.**, Haggstrom, D. A., Militello, L. G., Flanagan, M., Kiess, C. L., & Arbuckle N. Investigating Integration of Computerized Decision Support into Workflow at Three Benchmark Institutions. [Abstract]. *2011 VA Health Services Research and Development (HSR&D) National Meeting*.
  18. Turechek, Z., Wright, A., Middleton, B., **Saleem, J.**, Simonaitis, L., Fraser, G., Krall, M., Sonnenberg, F., & Maviglia, S. (2010). Sharing is caring: Why collaboration is the key to overcoming decision support content management and development barriers. [Abstract]. In *Proceedings of the American Medical Informatics Association 2010 Annual Symposium*, 1283.
  19. Zillich, A. J., **Saleem, J. J.**, McManus M. S., & Russ, A. L. (2010). A qualitative study of medication alerts and computerized prescriber order entry (CPOE): Opportunities for pharmacist consultation at the point of prescribing. [Abstract]. *Journal of the American Pharmacists Association*, 50(2):284-285.
  20. Russ, A. L., **Saleem, J. J.**, Justice, C. F., Hagg, H., Woodbridge, P. A., & Doebbeling, B. N. (2009). Health Information Technology: Characteristics that Support VA Clinical Workflow. [Abstract]. *AcademyHealth Annual Research Meeting*.
  21. **Saleem, J.J.**, Russ, A.L., Justice, C.F., Hagg, H., Woodbridge, P.A., & Doebbeling, B.N. (2009). Paper-based Workarounds to the VA's Electronic Health Record: Implications for Optimal Healthcare Delivery. [Abstract]. *2009 VA Health Services Research and Development (HSR&D) National Meeting*.
  22. Ebright, P., Patterson, E., & **Saleem J.** (2009). RN Stacking: Implications for Basic RN Curricula. [Abstract]. *2009 National League for Nursing's Education Summit*.
  23. Ebright, P., Patterson, E., & **Saleem J.** (2009). RN Stacking: Cognitive Workflow Management Process With Implications for Patient Safety and Quality Care. [Abstract]. *2009 Annual National Patient Safety Foundation Patient Safety Congress*.
  24. Ebright, P., Patterson, E., & **Saleem, J.** (2009). RN Stacking: Cognitive Workflow Management Process with Implications for Patient Safety and Quality Care. [Abstract]. *33rd Annual Research Conference of the Midwest Nursing Research Society*.
  25. Ebright, P., **Saleem, J.**, & Patterson, E. (2009). Decision Making and Management of Workflow: What CNSs Need to Know About Registered Nurse Stacking. [Abstract]. *Clinical Nurse Specialist*, 23(2), 99.
  26. Wu, S., Lehto, M., Yih, Y., **Saleem, J. J.**, & Doebbeling, B.N. (2009). Impact of Computerized Clinical Reminder Design on Clinical Decision Making. [Abstract]. *The 2009 The Industrial Engineering Research Conference (IERC)*.
  27. **Saleem, J. J.**, Doebbeling, B. N., Flanagan, M. E., Haggstrom, D. A., Woodward-Hagg, H. & Yano, E. M. (2008). Approaches to design and implementation of clinical decision support in the VA; relationship to staff sufficiency. [Abstract]. *2008 VA Health Services Research and Development (HSR&D) National Meeting*.
  28. Doebbeling, B. N., **Saleem, J. J.**, Flanagan, M., & Yano, E. M. (2008). Extent of Implementation of Clinical Decision Support in VHA: Results of a National Survey. [Abstract]. *2008 VA Health Services Research and Development (HSR&D) National Meeting*.
  29. Bowman, C., Hoang, T., **Saleem, J.**, Gifford, A., Goetz, M., & Asch, S. (2006). Evaluating sustained use of quality improvement interventions in VHA HIV care. [Abstract]. *AcademyHealth Annual Research Meeting*.
  30. Wess, M. L., **Saleem, J. J.**, Luckhaupt, S. E, Johnston, J. A., Shaull, R. W., Kopke, J. E., et al. (2005). Usability of a Web-based, decision support tool for patient-specific anticoagulation recommendations [Abstract]. *27th Annual Meeting of the Society for Medical Decision Making*.
  31. Wess, M. L., **Saleem, J. J.**, Luckhaupt, S. E, Johnston, J. A., Shaull, R. W., Kopke, J. E., et al. (2005). Value of usability testing of decision support tools prior to clinical use: Example using anticoagulation for atrial fibrillation [Abstract]. *27th Annual Meeting of the Society for Medical Decision Making*.

32. Lulejian, A., Patterson, E., **Saleem, J.**, Militello, L., & Asch, S. (2005). Using qualitative observations to inform a quantitative survey design in human factors research [Abstract]. *AcademyHealth Annual Research Meeting*.

## TUTORIALS

Militello, L., Fallon, C., Dominguez, C., & **Saleem, J.** (2009). The Road to Cognitive Systems Engineering. *American Medical Informatics Association 2009 Annual Symposium*.

## TEACHING (at the University of Louisville)

Semester	Course #	Course Title	Evaluation (maximum = 5)
Spring 2015	IE 580	Principles of Occupational Ergonomics	4.37
Fall 2015	IE 380	Work Design	3.86
Spring 2016	IE 580	Introduction to Human Factors and Ergonomics	4.36
Spring 2016	IE 581	Advanced Topics in Human Factors Engr	4.42
Fall 2016	IE 380	Work Design	4.32
Fall 2016	IE 580	Introduction to Human Factors and Ergonomics	4.40
Spring 2017	IE 581	Advanced Topics in Human Factors Engr	4.58
Spring 2017	IE 590	Usability Engineering (Special Topics in IE)	4.45
Fall 2017	IE 380	Work Design	4.56
Fall 2017	IE 580	Introduction to Human Factors and Ergonomics	4.62
Spring 2018	IE 581	Advanced Topics in Human Factors Engr	4.67
Spring 2018	IE 590	Usability Engineering (Special Topics in IE)	4.29
Fall 2018	IE 380	Work Design	4.17
Fall 2018	IE 580	Introduction to Human Factors and Ergonomics	3.82
Spring 2019	IE 581	Advanced Topics in Human Factors Engr	4.55
Fall 2019	IE 380	Work Design	4.34
Fall 2019	IE 580	Introduction to Human Factors and Ergonomics	4.28
Spring 2020	IE 581	Advanced Topics in Human Factors Engr	4.43
Spring 2020	IE 585	Usability Engineering	4.46
Fall 2020	IE 380	Work Design	4.88
Fall 2020	IE 580	Introduction to Human Factors and Ergonomics	4.50
Spring 2021	IE 581	Advanced Topics in Human Factors Engr	4.60
Spring 2021	IE 585	Usability Engineering	4.70
Fall 2021	IE 380	Work Design	4.08
Spring 2022	IE 581-01	Advanced Topics in Human Factors Engr	4.44
Spring 2022	IE 581-03	Advanced Topics in Human Factors Engr	4.67
Spring 2022	IE 585-01	Usability Engineering	4.63
Spring 2022	IE 585-03	Usability Engineering	4.52

## THESES AND DISSERTATIONS DIRECTED

(since joining University of Louisville)

### Doctoral Dissertations

1. Chair, Jacob Read, Ph.D., “Virtual Engagement: Can Law Enforcement Benefit from Utilizing Virtual Reality in Their Training Systems?”, expected completion date: 05/2021
2. Chair, Sima Shafaei, Ph.D., title TBD, in progress
3. Chair, Prameet Jha, Ph.D., title TBD, in progress

### **Master Theses**

1. Chair, Alexandra Doggett, MEngIE, “A Comparative Usability Study of Web-based Personal Health Records”, 05/2016
2. Chair, Jamal McFarland, MEngIE, “Mental Workload Measurement for Competitive Video Games”, 05/2016
3. Chair, Paige Miller, MEngIE, “Investigation of Influential Factors on Selecting an Engineering Major”, 05/2017
4. Chair, Dustin Weiler, M.S., “The Effect of Role Assignment and Personality Subtypes in Simulation on Critical Thinking Development, Situation Awareness, and Perceived Self-Efficacy of Nursing Baccalaureate Students”, 05/2017
5. Chair, Antonio Coriano, MEngIE, “Effects of Design Autonomy on the Flow Experience”, 05/2020
6. Chair, Rachel Crenshaw, MEngIE, “An Investigation of Barriers and Facilitators to Living Kidney Donation”, 05/2021

### **Master Projects**

1. Advisor, Audrey Dorris, MEngIE, “Effects of Vocal and Instrumental Music on Running”, completed 05/2015
2. Advisor, Alex Reid, MEngIE, “Investigation of Lifting Techniques Employed by Warehouse Employees”, completed 05/2015
3. Advisor, Chris Hellmann, MEngIE, “American Printing House for the Blind, Inc.: Job Hazard Analysis Form”, completed 05/2015
4. Advisor, Nathan Brown, MEngIE, “American Printing House for the Blind: An Ergonomics Project”, 08/2015
5. Advisor, Jacob Read, MEngIE, “A Comparison of Task Performance and Situational Awareness with Virtual Reality Technologies”, 05/2016
6. Advisor, Jordan Adams, MEngIE, “A Human Factors Analysis: Kosair Children’s Medical Center (KCMC) – Brownsboro”, 05/2016
7. Advisor, Daniel Williams, MEngIE, “Comparative Study of Visual versus Written Training Materials”, 08/2016
8. Advisor, Amanda Pate, MEngIE, “Training Effectiveness: A Design Challenge”, 12/2016
9. Advisor, Ashish Kakadiya, MSIE “Manual Work Design Evaluation”, 12/2016
10. Advisor, Eric Thompson, MEngIE, “Situation Awareness of Army Cadets during Assessment of Enemy Forces”, 05/2017
11. Advisor, Tyler Satterly, MEngIE, “Exam Room Design with Respect to Computing Devices to Enhance Patient Centeredness”, 05/2017
12. Advisor, Hunter Williams, MEngIE, “Nursing System Improvement 5East Baptist Health Louisville”, 07/2018
13. Advisor, Meredith Price, MEngIE, “Investigating Contributors of Physician Burnout with University of Louisville Outpatient Physicians”, 12/2018
14. Advisor, Haley Pitakis, MEngIE, “Baptist Health Nurse Managers Time Study and Best Practice Analysis”, 05/2019
15. Advisor, Jacob Lamping, MEngIE, “Usability Assessment and User Interface Improvements for Taping”, 05/2019
16. Advisor, Akhil Jampana, M.S., “Comparison of Three Standardized Computer System Usability Satisfaction Surveys”, 05/2019
17. Advisor, Syed Khadri, M.S., “Ergonomic Assessment of an Animal Research Facility”, 05/2019
18. Advisor, Brooke Skidmore, MEngIE, “Shoulder Tool Evaluation”, 12/2020

19. Advisor, Emery Fritz, MEngIE, “Neuro/Stroke Unit Process Improvement at 5Park Baptist Health”, 12/2020
20. Advisor, Chelsea Anderson, MEngIE, “Usability Assessment of COVID 19 Mobile Health Apps”, 12/2020
21. Catarina Soares, MEngIE, “Provider Preference for Documentation and Work Habits with the Electronic Health Record (EHR)”, 05/2021
22. Alexander Strickland, MEngIE “Usability Investigation of Independent Personal Health Record Mobile Applications”, 07/2022

## **SERVICE**

(since joining University of Louisville)

### **Thesis and Dissertation Committees**

1. Philip Mountain, M.Eng. thesis (05/2016), Department of Mechanical Engineering
2. Guangyang Xu, Ph.D. (12/2016), Department of Industrial Engineering
3. William Harrington, Ph.D. (05/2017), Department of Industrial Engineering
4. Arnab Roy, Ph.D. (07/2020), Department of Industrial Engineering
5. Uttam Karki, Ph.D. (expected ?), Department of Industrial Engineering
6. Lin Lin, Ph.D. (expected ?), Department of Industrial Engineering

### **Independent Study**

1. Alexandra Doggett, “IE 693 - An Introduction to Usability Engineering” (Fall 2015)
2. Jamal McFarland, “IE 693 - An Introduction to Usability Engineering” (Spring 2016)
3. Melissa Liao Chen, “IE 393 - Work Design Application” (Spring 2017)
4. Rachel Blanton, “IE 393 – Usability Engineering” (Fall 2019)
5. Rae Mills, “IE 393 – Usability Engineering” (Fall 2019)
6. Catarina Soares, “IE 693 – Introduction to UX Design” (Spring 2022)

### **Administrative Committees at University of Louisville**

- ◆ Faculty Search Committee for Assistant Professor of Industrial Engineering (open to all areas of IE specialization), committee member, (July 2021-present)
- ◆ Faculty Search Committee for tenure-track/tenured Assistant/Associate Professor of Industrial Engineering (Director of Engineering Management Online Master’s program), committee member (June 2021-present)
- ◆ Faculty Search Committee for tenure-track Assistant Professor of Industrial Engineering (human factors and ergonomics), Chair (Oct 2020-May 2021)
- ◆ Faculty Search Committee for Assistant Professor of Industrial Engineering (logistics), committee member, (Oct 2020-May 2021)
- ◆ Speed School Task Force for Faculty Integration (Sept 2018-March 2019)
- ◆ Department of Industrial Engineering, Undergraduate Curriculum Committee (Sept 2017-present)
- ◆ Department of Industrial Engineering, Graduate Curriculum Committee (Sept 2017-present)
- ◆ Speed School Faculty Council committee member (Jan 2015-present)
- ◆ Speed School Engineering Human Health committee member (Feb 2015-Dec 2016)

### **Other Institutional Service at University of Louisville**

- ◆ Judge for the 2019 Speed School Research Exposition (March, 2019)
- ◆ Faculty Advisor, Alpha Pi Mu (Industrial Engineering honor society) student chapter (Jan 2015-present)
- ◆ Faculty Advisor, Human Factors and Ergonomics Society (HFES) student chapter (May 2016-present)

### **Professional Service (Extramural)**

- ◆ Member, Technical Advisory Board for Dr. Megha Kalsy's Veterans Affairs (VA) Career Development Award application, 2022-present.
- ◆ NSF Panel Reviewer, Smart Health and Biomedical Research in the Era of Artificial Intelligence and Advanced Data Science (SCH) program, 2022
- ◆ External Evaluator for candidate's promotion & tenure review (University of Arizona), 2021
- ◆ Co-Chair for the Jerome H. Ely Human Factors Award Selection Committee, for the best paper published in the previous year's volume of the journal *Human Factors*, Human Factors and Ergonomics Society (HFES), 2021.
- ◆ Co-Chair for the Jerome H. Ely Human Factors Award Selection Committee, for the best paper published in the previous year's volume of the journal *Human Factors*, Human Factors and Ergonomics Society (HFES), 2020.
- ◆ Program Track Co-Chair for Consumer and Clinical Health-Care IT track, Human Factors and Ergonomics in Health Care Symposium, Chicago, IL, March 24<sup>th</sup>-27<sup>th</sup>, 2019
- ◆ Member, Mentorship Panel for Dr. April Savoy's Veterans Affairs (VA) Career Development Award application, 2018-present.
- ◆ Scientific mentor for DuPont Manual High School student's Science Fair project, Camella Korner, "An Ergonomic Approach on how the Handle Grip Span of a Handheld Tool affects the Accuracy of the Work", 2018
- ◆ Member, Human Factors and Ergonomics Society (HFES) Bentzi Karsh Early-Career Service Award Selection Committee, 2018, 2019
- ◆ Member, Expert Panel on "Missed Opportunities for Improving Diagnosis", Emergency Medicine Research, University of Michigan, Ann Arbor, MI, May 2<sup>nd</sup>-3<sup>rd</sup>, 2017
- ◆ Member, Scientific Merit Review Panel, VistA Evolution Program research projects, U.S. Department of Veterans Affairs, July 13<sup>th</sup>, 2016
- ◆ Peer Reviewer (*since joining University of Louisville*):
  - *American Medical Informatics Association (AMIA) Annual Symposium*
  - *Applied Clinical Informatics*
  - *Applied Ergonomics*
  - *BMJ Quality & Safety*
  - *Health Informatics Journal*
  - *Human Factors*
  - *Human Factors and Ergonomics Society (HFES) Annual Meeting*
  - *IISE Transactions of Healthcare Systems Engineering*
  - *IISE Transactions on Occupational Ergonomics and Human Factors*
  - *International Journal of Human-Computer Interaction*
  - *International Journal of Medical Informatics*
  - *Journal of the American Medical Informatics Association (JAMIA)*
  - *JAMIA Open*
  - *Journal of Biomedical Informatics*
  - *Journal of Medical Internet Research*
  - *Journal of Medical Internet Research – Human Factors*

### **CONFERENCE PRESENTATIONS**

(since joining University of Louisville)

- ◆ 10/6/21 Supporting patient centeredness with EHR screen sharing. (Panelist Presentation for panel entitled 'Research and design trends for exam room computing to enhance patient centeredness'). Human Factors and Ergonomics Society (HFES) 2021 International Annual Meeting, Baltimore, MD.
- ◆ 10/5/21 Parallel assessment tracks for human-centered design (PATH): A framework for transitioning to a new health information technology system. (Paper Podium Presentation).



- Human Factors and Ergonomics Society (HFES) 2021 International Annual Meeting, Baltimore, MD.
- ◆ 10/9/20 Provider burnout as it relates to the electronic health record and clinical workflow. (Paper Podium Presentation). Human Factors and Ergonomics Society (HFES) 2020 International Annual Meeting, virtual conference.
  - ◆ 10/9/20 Understanding veteran attitudes, interests, and needs for virtual care applications. (Paper Podium Presentation). Human Factors and Ergonomics Society (HFES) 2020 International Annual Meeting, virtual conference.
  - ◆ 03/26/19 Evaluation of Mobile Tablet Computers for Use in the Veterans Health Administration. (Paper Podium Presentation). 2019 International Symposium on Human Factors and Ergonomics in Health Care, Chicago, IL.
  - ◆ 10/3/18 Lessons Learned from Healthcare Organizations that have replaced one EHR with Another. (Panelist Presentation for panel entitled ‘EHR to EHR Transitions: Establishing and Growing a Knowledge Base’). Human Factors and Ergonomics Society (HFES) 2018 International Annual Meeting, Philadelphia, PA.
  - ◆ 10/3/18 Field Investigation of Ambulatory Clinic Exam Room Design with Respect to Computing Devices: A Pilot Study. (Paper Podium Presentation). Human Factors and Ergonomics Society (HFES) 2018 International Annual Meeting, Philadelphia, PA.
  - ◆ 10/2/18 Transitioning from one Electronic Health Record (EHR) to Another: A Narrative Literature Review (Paper Podium Presentation). Human Factors and Ergonomics Society (HFES) 2018 International Annual Meeting, Philadelphia, PA.
  - ◆ 10/10/17 Multiple Screens and Devices in an Information-rich Environment (Paper Podium Presentation). Human Factors and Ergonomics Society (HFES) 2017 International Annual Meeting, Austin, TX.
  - ◆ 09/23/16 Effective Design Practices for Medication Reconciliation. (Panelist Presentation for panel entitled ‘Promoting patient safety with human factors methods: Practical approaches to current medication management issues’). Human Factors and Ergonomics Society (HFES) 2016 International Annual Meeting, Washington, DC.
  - ◆ 09/22/16 Function-specific Design Principles for the Electronic Health Record (Paper Podium Presentation). Human Factors and Ergonomics Society (HFES) 2016 International Annual Meeting, Washington, DC.
  - ◆ 09/22/16 Effects of Vocal and Instrumental Music on Running (Paper Podium Presentation). Human Factors and Ergonomics Society (HFES) 2016 International Annual Meeting, Washington, DC.
  - ◆ 10/27/15 The Divide between Applied Research and Operations in Health Information Technology Advancement: Reducing the Gap (Paper Podium Presentation). Human Factors and Ergonomics Society (HFES) 2015 International Annual Meeting, Los Angeles, CA.
  - ◆ 10/29/15 Human Factors Research and Design Trends for the Modern Exam and Hospital Room. (Panel Presentation, Chair). Human Factors and Ergonomics Society (HFES) 2015 International Annual Meeting, Los Angeles, CA.

## **INVITED PRESENTATIONS**

(since joining University of Louisville)

- ◆ 2/11/22 Unit Level Teaching Strategies: Scaffolding. Invited presentation, 2022 UofL Celebration of Teaching and Learning Conference, Louisville, KY.
- ◆ 4/16/20 Ambulatory Clinic Exam Room Design with respect to Computing Devices. Invited presentation, Webinar for the Partnership in Resilience for Medication Safety Learning Lab (PROMIS) consortium, led by University of Texas at Arlington.
- ◆ 9/27/19 Veterans Crisis Line (VCL) Customer Relationship Management (CRM) System Modernization. Invited presentation, Cyberseminar series for the Field Health Informatics Council (FHIC), Veterans Health Administration.

- ◆ 3/26/19 Evaluation of Mobile Tablet Computers for use in the Veterans Health Administration. Invited presentation, 2019 International Symposium on Human Factors and Ergonomics in Health Care, Human Factors and Ergonomics Society (HFES), Chicago, IL.
- ◆ 2/6/18 Human Factors Engineering (HFE): An Overview of the Discipline of Science and Practice. Invited presentation, Cyberseminar series for Human Factors Engineering, Office of Health Informatics, Veterans Health Administration.
- ◆ 9/6/17 NASA Task Load Index (TLX) Methodology Overview. Invited presentation, Cyberseminar series for Human Factors Engineering, Office of Informatics and Information Governance, Veterans Health Administration.
- ◆ 4/18/17 Sociotechnical Systems and Practice Improvement. Invited presentation, Veterans Health Administration, Arlington, VA.
- ◆ 10/28/16 Managing Cognitive Complexity and Workload in Integrated Systems. Invited presentation, Crane Division, Naval Surface Warfare Center, Crane, IN.
- ◆ 4/6/16 Ergonomics and Back Safety. Invited presentation, University of Louisville Research Resources Facilities (RRF) animal care and use groups, University of Louisville, Louisville, KY.

(before joining University of Louisville)

- ◆ 3/17/14 Patterns in patient safety with computerized consult management and clinical documentation. Invited presentation, 2014 International Symposium on Human Factors and Ergonomics in Health Care: Leading the Way, Human Factors and Ergonomics Society (HFES), Chicago, IL.
- ◆ 2/18/13 Integration of human factors engineering with development of clinical information systems. Invited presentation, Department of Industrial Engineering, University of Louisville, Louisville, KY.
- ◆ 12/10/12 An evolving electronic health record: Paper persistence, workarounds, and communication breakdowns. Invited presentation, Department of Biomedical Informatics, School of Medicine, The Ohio State University, Columbus, OH.
- ◆ 10/11/12 Evaluating the usability of a system. Invited presentation (guest lecture) for the Seminar in Health Informatics I at the Indiana University School of Informatics, Indianapolis, IN.
- ◆ 7/20/12 Diagnostic computerized clinical decision support. Invited presentation for the 'Risk, Reliability and Human Performance in Healthcare and Nuclear Power: Learning from Each Other' Workshop, co-hosted by the Association for the Advancement of Medical Instrumentation (AAMI) and the Idaho National Laboratory (INL), San Diego, CA.
- ◆ 10/20/10 Human factors overview and usability testing. Invited presentation with Dr. Alissa Russ for VA Clinical Application Coordinators (CAC), Clinical Reminders Session II, Indianapolis, IN.
- ◆ 12/15/09 Effect of computers at point of care. Invited presentation with Dr. Richard Frankel for the VA Information Resource Center (VIREC), National Cyberseminar series in Clinical Informatics.
- ◆ 7/15/08 Research in human-computer Interaction for VA clinical decision support. Invited presentation for the VA Information Resource Center (VIREC), National Cyberseminar series in Clinical Informatics.
- ◆ 6/5/08 Human factors engineering – The next frontier. Invited presentation at the VA Conference for Optimizing Clinical Performance Through Systems Management, New Orleans, LA.
- ◆ 11/08/07 Usability of health information systems: Biomedical HCI for improving patient care. Invited presentation for World Usability Day, hosted by the Usability Professionals' Association Indiana Chapter, (co-presentation with Anthony Faiola).
- ◆ 8/30/07 Human factors overview and applications in healthcare. Invited presentation for the VA National Center for Patient Safety (NCPS), Patient Safety Fellowship Program, national video conference.
- ◆ 6/7/05 Clinical reminders: Explaining variability in adoption by clinicians and improving system design. Invited presentation at the Human Factors and Ergonomics Society Tri-State Chapter Dinner Meeting, Cincinnati, OH, and
- ◆ 3/18/05, Department of Systems and Information Engineering, University of Virginia, Charlottesville, VA.

- ◆ 4/14/05 Simulation study: Comparison of baseline and redesigned clinical reminder system for nursing personnel. Invited presentation at the Center for Clinical Effectiveness, University of Cincinnati, Cincinnati, OH.
- ◆ 6/24/04 Human factors analysis of computerized clinical reminders: Field observations. Invited presentation at the Center for Clinical Effectiveness, University of Cincinnati, Cincinnati, OH.
- ◆ 5/26/04 Usability based testing for Office of Information staff. Invited presentation at VHA eHealth University 2004, Grapevine, TX.
- ◆ 5/24/04 Usability testing: What is it? Why do field folks need to know about it? Invited presentation at VHA eHealth University 2004, Grapevine, TX.
- ◆ 10/21/03 Multi-method approach to understand pilot performance in a sociotechnical aviation system. Invited seminar presentation to the Industrial Engineering Department at the University of Washington. Seattle, WA.

## MEDIA OUTREACH

- ◆ The Naturalistic Decision Making Podcast. Jason Saleem. (October 23, 2020):  
<https://naturalisticdecisionmaking.org/2020/11/30/jason-saleem/>
- ◆ Pulliam, B. UofL researchers testing virtual COVID-19 care tool for veterans. *UofL News* (July 9, 2020):  
<https://www.uoflnews.com/post/uofltoday/uofl-researchers-testing-virtual-covid-19-care-tool-for-veterans/>
- ◆ Using Technology to Enhance Patient Communication During Clinic Visits. *AHRQ Health Information Technology Research 2018 Year in Review*:  
<https://healthit.ahrq.gov/2018-year-review/research-summary/using-technology-enhance-patient-communication-during-clinic>
- ◆ Pulliam, B. UofL research uses tech to improve doctor's visits. *UofL News* (July 13, 2018):  
<http://uoflnews.com/post/uofltoday/uofl-researcher-develops-exam-room-design-to-positively-impact-patient-care/>
- ◆ 'UofL Today with Mark Hebert' radio show 93.9 FM The Ville – Jason Saleem from the Center for Ergonomics discusses his study on integrating computers into doctor exam rooms. (July 9, 2018). Replay: <https://soundcloud.com/uofl/ult-7-9-saleemlovelyballard>
- ◆ The Veterans Health Administration (VHA): An Influential Health Care Leader in Human Factors Engineering – An Interview with Jason Saleem, PhD. *Human Factors Quarterly Newsletter* Winter 2016 (February 1, 2016):  
<http://content.govdelivery.com/accounts/USVHA/bulletins/132c6bc#article3>
- ◆ Are computers a third wheel in the exam room? VA research looks at clinicians' use of electronic health records. *VA Research Currents* (June 24, 2014):  
<http://www.research.va.gov/currents/summer2014/summer2014-2.cfm>
- ◆ Dolan, P. EHR design flaws causing doctors to revert to paper. *American Medical News* (April 8, 2013):  
<http://www.amednews.com/article/20130408/business/130409961/6/>
- ◆ Paper and Computer Workarounds Challenge but May Improve Health IT. *ScienceDaily* (June 3, 2011):  
<http://www.sciencedaily.com/releases/2011/06/110603111206.htm>
- ◆ Rudavsky, S. (2009, August 24). Indy out front of U.S. push for electronic health records. *The Indianapolis Star*, pp. A1, A5.
- ◆ Hoffmann, L. (2009). Implementing Electronic Medical Records. *Communications of the ACM*, 52(11), 18-20.
- ◆ Can Pen And Paper Help Make Electronic Medical Records Better? *ScienceDaily* (July 20, 2009):  
<http://www.sciencedaily.com/releases/2009/07/090720134509.htm>
- ◆ Crumbley, L. From the folks who brought us space travel – faster, safer, cheaper, air travel. *Virginia Tech Research Magazine*, Summer 2002, pp. 11-13.