DOROTHEA LA "CHON" ABRAHAM
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Associate Professor of Information Systems
Air Force Reserve Cyber Officer, TS/SCI Current

Education
- University of Georgia, Ph.D. in Management Information Systems, 2004
- Old Dominion University, Master in Business Administration, 2000
- US Military Academy at West Point, B.S. in Political Science and Systems Engineering,1995
- Air War College, 2017

Academic and Editorial Appointments
- Tenured Associate Professor of Information Systems, William & Mary, Williamsburg, VA (2010-present)
- Assistant Professor of Information Systems, William & Mary, Williamsburg, VA (2004-2010)
- Visiting Assistant Professor of Health Informatics, Keio University, Shonan Fujisawa, Japan (2008-2009)
- MIS Instructor, Teaching/ Research Assistant, University of Georgia Athens, GA (2001-2004)
- Associate Editor, *European Journal of Information Systems* (EJIS)

Primary Courses
- Business Intelligence (with Visualization, Data Analysis, and Cybersecurity Essentials) (Undergraduate)
- Information and Cybersecurity Essentials for Business and Law (Undergraduate/Graduate)
- Database Management (Undergraduate)
- Healthcare Sector Management and Informatics Seminar (Undergraduate/Graduate)

Selected Honors, Awards, and Fellowships
- *Abe Fellow* for research on Cyber Capabilities in the US, UK, and Japan, 2019. The research involved analyzing the capabilities that included use of the Cybersecurity and Infrastructure Security Agency/National Risk Management Center (CISA/NRMC) National Critical Functions Concept needed to provision the multi-layered attribution process that addresses legal challenges and barriers in international information sharing to build a stronger foundation for national cyber resilience in critical infrastructure sectors (e.g., academia, defense, and healthcare).
- IBM Faculty Fellowship to Develop Curricular Materials on Teaching with IBM Watson Analytics in the area of health and cybersecurity, 2016
- David and Carolyn Wakefield Distinguished Associate Professor of Business in Information Technology, college-level competitive award- teaching, research, service, 2013 - 2016
- Thomas and Teri Dungan BBA Teaching Fellowship for innovation and excellence in the undergraduate educational experience for innovation in teaching Healthcare Information Technology, 2010 - 2011
- *Fulbright Scholar* researching cyber and information technology governance issues in the healthcare critical infrastructure at the national level in Japan, 2008-2009

Selected 2018-2021 Publications, Book, and Presentations
- Abraham, C., Sims, R. (Mar 2021). "A Comprehensive Approach to Cyber Resilience." *MIT Sloan Management Review*. https://sloanreview.mit.edu/article/a-comprehensive-approach-to-cyber-resilience/
  - Selected to be part of the Harvard Business Publishing Course Explorer: Cybersecurity Collection
- Abraham, C., & Daultrey, S. (2020). "Considerations for NATO in Reconciling Challenges to Shared Cyber Threat Intelligence: A study of Japan, the US and the UK. *Cyber Threats and NATO 2030: Horizon Scanning and Analysis,* 194. https://ccdcoe.org/uploads/2020/12/Cyber-Threats-and-NATO-2030_Horizon-Scanning-and-Analysis.pdf
- Abraham, C. Sims, R., Gregorio, C. (June 2020). "Develop Your Cyber Resilience Plan: Understanding how cybersecurity and cyber resilience differ is key to effectively responding to cyber threats," *MIT Sloan Management Review*. https://sloanreview.mit.edu/article/develop-your-cyber-resilience-plan/
- Abraham, C. (Sept 2019). Presentation "Cyber Challenges: The Internet, Global Competition, and National

Security (comparing US, UK, and Japan cyber capabilities)," Hudson Institute (National Defense Think Tank), Washington D.C. https://www.hudson.org/events/1715-cyber-challenges-the-internet-global-competition-and-national-security92019

- Abraham, C. (Sept 2019). Presentation "Comparing National Capabilities of Japan, the United States, and the United Kingdom for Accountability and Resiliency in Cyberspace," East West Institute Roundtable on Global Cooperation in Cyberspace (International Conflict Resolution), Palo Alto, CA, https://www.eastwest.ngo/idea/global-cooperation-cyberspace-progress-roundtable-palo-alto-2019
- Abraham, C., Sims, R., Daultrey, S., Buff, A. & Fealey, A. (Mar 2019). "How Digital Trust Drives Culture Change." *MIT Sloan Management Review.* 60(3), https://sloanreview.mit.edu/article/how-digital-trust-drives-culture-change/
- Abraham, C., Chatterjee, D., & R. Sims (2019). "Muddling Through Cybersecurity: Insights from the U.S. Healthcare Industry," *Business Horizons,* 62, pp. 539-548. https://e-tarjome.com/storage/panel/fileuploads/2019-09-22/1569154858_E13549-e-tarjome.pdf
- Abraham, C., Gomez, J., Konshack, C., and B. Reese. (2018) *Hacking Healthcare: Understanding Real World Threats.* Convergent Publishing LLC: Virginia Beach, VA. https://www.amazon.com/Hacking-Healthcare-Understanding-World-Threats/dp/1983897124

Other Publications

- Akiyama, M. and Abraham, C. (2017) "Cost Benefit Analysis of Telemedicine in Community Dwelling Elders," *International Journal of Medical Informatics* (IJMI), 104, pp 1-9.
- Abraham, C., Junglas, I., Watson, R. and M.C .Boudreau (2016) "Explaining Unexpected and Continued Use of an Information System" *Journal of the Association for Information Science and Technology* (JASIST), 67(1), pp. 212–231.
- Abraham, C., Kim, C., Lee, Y., and S. E. Madnick (2015) "Social Networking Business Continuum: Customer Information Drivers Meet Technology Enablers," *Journal of Emerging Technology and Computer Information Systems* (JETCIS) 6(12), pp. 668-676.
- Abraham, C. and M. Poston (2015). "Assessing Real-world Applications of Data Mining with SAS Enterprise Miner: A Technical Report for Teaching the Big Data Generation," *Journal of Emerging Trends in Computing and Information Sciences* (JETCIS) 6 (9), pp. 488-505.
- Ojokoh, B., Adeola, O, Isinkaye, F. and C. Abraham (2014) "Career Choices in Information Communication Technology: A Case Study of Southwestern Nigerian Women," *Journal of Global Information Management* (JGIM), 22(2), pp. 48-77.
- Sakurai, M., Watson, R., Abraham, C. and J. Kokuryo (2014) "Sustaining Life During the Early Stages of Disaster Relief: Learning from the Great East Japan Earthquake," feature article and best paper award for IEEE Communications Magazine (IEEE CM) 52 (1), pp. 176-185.
- Junglas, I., Goel, L., Abraham, C. and B. Ives (2013) "Homo Socialis – Or the Social Component of Information Systems," *Journal of the Association of Information Systems* (JAIS), 14(10), pp. 585-616.
- Abraham, C., Boudreau, M-C., Junglas, I., and R.T. Watson (2013) "Enriching the IS Theoretical Repertoire," *European Journal of Information Systems* (EJIS), 22, pp. 56–75.
- Abraham, C. and I. Junglas (2011) "From Cacophony to Harmony: A Case Study about the IS Implementation Process as an Opportunity for Organizational Transformation at Sentara Healthcare," *Journal of Strategic Information Systems* (JSIS), 20(2), pp. 177-197.
- Abraham, C., E. Nishihara, and M. Akiyama (2011) "Transforming Healthcare with Information Technology in Japan: A Study of Policy, People, and Progress," *International Journal of Medical Informatics* (IJMI), 80(3), pp. 157-70.
- Abraham, C., Junglas, I., and M. Willis (2011) "Systems Analysis and Design, Service Oriented Architecture (SOA), Web Services and XBRL (an Emerging Technology) at the Federal Financial Institutions Examinations Council (FFIEC)," *Journal of Emerging Trends in Computer Information Systems* (JETCIS), 2(1), pp. 1-15.
- Abraham, C. (2010) "Encouraging the Inclusion of EP into IS Theoretical Repertoire," *Journal of Emerging Trends in Computing and Information Sciences* (JETCIS), 1(1), pp. 69-79.
- Abraham, C. and B. Reese (2010) "Making Music Out of Noise: The Sentara Healthcare Experience Implementing e-Care," feature case study in *Journal of Healthcare Information Management* (JHIM), 24(1), pp. 44-50.
- Junglas, I., Abraham, C., and B. Ives (2009) "Mobile Technology at the Frontlines of Patient Care: Understanding Fit and Human Drives in Utilization Decisions and Performance," *Decision Support Systems* (DSS), 46(3), pp. 634-647.
- Junglas, I., Abraham, C. and R.T. Watson (2008) "Task-Technology Fit for Mobile Locatable Information Systems," *Decision Support Systems* (DSS), 45(4), pp. 1046-1057.

- Kull, J. and C. Abraham (2008) "XBRL and Public Sector Financial Reporting," *Journal of Government Financial Management* (JGFM), 57(2), pp. 28-37.
- Abraham, C. and D. Rosenthal (2008) "Merging Home and Health via Contemporary Care Delivery: Program Management Insights of a Home Telehealth Project," *Computer Informatics Nursing* (CIN), 26(5), pp. 273-281.
- Abraham, C., Watson, R.T., and M-C. Boudreau (2008) "Ubiquitous Access: On the Frontlines of Patient Care and Safety," *Communications of the Association of Computing Machinery* (CACM), 51(6), pp. 95-99.
- Junglas, I., Johnson, N., Steel, D., Abraham, C., and P. Mac Loughlin (2007) "Identity Formation, Learning Styles and Trust in Virtual Worlds," *Data Base*, 38(4), pp. 90-96.
- Watson, H., Abraham, C., Preston, D., and D. Thomas (2004) "Data Warehousing ROI: Justifying and Assessing a Data Warehouse," *Business Intelligence Journal*, 9(2), pp. 6-17.

Training and Certificates

- Certified Public Sector Data Governance Professions (Masterly Level) – Institute for Certification of Computing Professionals, 2020
- Fair Institute Fundamentals Information and Cyber Risk Management – Training, 2020
- Advanced SQL and Database Managements kills updates – DBA Training Certificate – current
- CISSP Bootcamp – IT Enablers Certificate of Completion, 2017
- Cyber Risk Management and Critical Security Controls– SANS Certificate of Completion, 2017
- Data Governance in Enterprise Architecture – Cyber Staff Officer Training, 2012-2017
- IBM Watson Analytics – IBM Training Certificate of Completion, 2015
- IT Security Strategic Planning, Policy, and Leadership– SANS Certificate of Completion, 2016
- Health Informatics and Analytics – AHIMA Certificate of Completion, 2014, 2015
- SAS Enterprise Miner – SAS Training Certificate of Completion, 2008, 2011, 2014
- Tableau Data Visualization– Tableau Training Certificate of Completion, current

Other Employment History

Industry:

- 07/98 to 01/01 American Management Systems (now CACI), Norfolk, VA: Systems analysis
  - Lead systems analyst for re-platforming financial management database for US Army Cadet Command, Ft. Monroe, VA., assistant DBA for database/data warehousing development

Military

- 09/18 to present: Lt Col, Cyber Officer, Secretary of the Air Force, Chief Data Office (CDO), Reserve Liaison to Air Combat Command, Pentagon, Washington D.C.
  - Data Officer developing enterprise data strategy inclusive of asset inventory, governance, data sharing agreements risk management, data sharing, compliance, and cyber resilience plan
  - Data Management Branch Chief for intelligence and cyber data responsible for data standards assurance with the Office of the Director of National Intelligence
  - Align CDO responsibilities for management of various Joint All Domain Command and Control projects
  - Assess requirements for data migration of CDO assets to secure cloud environment
- 02/15 to 09/18: Lt Col, Cyber Integration , Reserve Deputy Division Chief, Secretary of the Air Force, Chief Information Officer, Pentagon, Washington D.C.
  - Led schema revision for AF Application Rationalization data sources
  - Established guidance on enterprise data management and creation of the Chief Data Office, developed data governance strategy documents (e.g. regarding identifying authoritative data sources and data stewardship requirements)
- 01/07 to 02/15: Lt Col, Information Systems and Cyber Warfare Staff Reserve Officer, Headquarters Air Combat Command A6 (with detail to A3), JT Base Langley-Eustis, VA
  - Developed knowledge management database assets
  - Conducted information security assurance tasks for national security initiatives
- 02/04 to 12/06: Information Systems and Communications Staff Reserve Officer J6, Headquarters Defense Logistics Agency, Fort Belvoir and Defense Logistics Agency, Richmond, VA
  - Developed database assets for Business Process Modernization
- 10/01to 01/04: Section Chief of Software Development Reserve Officer, Headquarters Air Force Reserve Command, Robins Air Force Base, GA
  - Led team of 20 for development of databases for IT asset management
- 06/98 to 10/01: Information Systems Reserve Officer, Army National Guard
- 12/96 to 06/98: Active Duty Officer, Ft Hood TX, Ft Monroe VA, Honduras (JTF-B)