JENNIFER M. BOOKER, PH.D.

Jenbooker.com Waipahu, HI 96797 docjennifer2000@gmail.com

OVERALL EXPERIENCE SUMMARY

Systems Engineering	14 years. Plan, conduct, and report on system test and evaluation. Conduct system preliminary design trade studies for vehicles and ordnance subsystems. Perform computational modeling of anything, system requirements analysis, low level design, system architecture, long term maintenance, and performance analysis.
Project Management	18 years. Project measurement, earned value WBS, task estimation and progress tracking, life cycle selection, risk management, configuration management, financial measurement.
Quality Management and Process Improvement	10 years. Trained in multiple process improvement models based on the SEI Capability Maturity Model and its derivatives and ISO 9000. Conducted assessments of government contractors. Taught statistical methods for continuous process improvement. Expert at process definition.
Computing Professor	20 years, taught Information Technology, cybersecurity, Information Systems analysis and design, Internet protocols, Software Engineering, project measurement and statistics. Develop and refine course syllabus and materials, collaborate across university units, assess faculty candidates, provide ABET accreditation evidence.
Registered Nurse	1.5 years in long term care, both nursing home and correctional settings. Used many EMR systems.
R&D	6 years of study and research in biomedical engineering. Developed novel computational simulations of healthy human aging. Two years of research on gender and race issues in technology and co-authored several peer-reviewed papers.
Oral and written presentation skills	20+ years. Co-author proposals for government contracts, both technical and management sections. Give presentations to any level of audience. Wrote a Master's Thesis, PhD dissertation, two books, and dozens of technical papers.
Emergency Preparedness	30+ years of volunteering. EMS command and control, mass casualty triage, fire suppression, urban search and rescue, marine emergency preparedness, mass vaccination, hospital decontamination.

EDUCATION

THOMAS JEFFERSON UNIVERSITY, Philadelphia, PA 05/19-05/20
Accelerated Bachelor of Science Degree in Nursing (BSN). Graduated *cum laude*.

DREXEL UNIVERSITY, Philadelphia, PA 08/05-12/11
Doctor of Philosophy in Biomedical Engineering. Dissertation on computational biology of healthy human aging. Also completed 27 undergraduate courses in social sciences, especially psychology and gender studies.

UNIVERSITY OF CALIFORNIA, Berkeley, CA 09/89-12/90
Master of Science in Mechanical Engineering. Emphasis on fluid mechanics and heat transfer.

UNIVERSITY OF MINNESOTA, Minneapolis, MN 09/81-06/85
Bachelor of Science in Aerospace Engineering and Mechanics. Emphasis on system design and fluid mechanics. Minor in German.

LICENSES AND CERTIFICATIONS

HEALTHCARE: Hawaii RN license RN-100913, valid to 06/2027. AHA BLS certification valid to 08/2027. EMR systems: Epic, PointClickCare, Allscripts, eCorr, eClinicalWorks and Centricity.

DEFENSE: Trained in handling explosives by Navy EOD. Held a Secret clearance.

AVIATION: Private Pilot SEL license. Class A skydiving license.

SEA: PADI Open Water Diver and NITROX certifications. ASA 101 Basic Keelboat Sailing. BoatU.S. Foundation's Online Boating Safety Course.

PROFESSIONAL EXPERIENCE

LTC FACILITIES, Honolulu, HI (FT, 40 hr/wk) 11/21-03/23

Registered Nurse

Provide licensed nursing care for 27 to 100 Long Term Care (LTC) patients. Administer, order, reorder, or destroy medications as appropriate. Provide wound care. Monitor patients' physical and mental wellbeing. Administer IV medication and G or J tube feeding per orders. Consult providers and EMS as needed. Educate patients and their families on treatment choices. Document care in EMR systems. Worked for Lunalilo Home (11/21-02/22), Halawa Correctional Facility (02/22-06/22), and Hale Nani Nursing Center (07/22-03/23).

HARRISBURG UNIVERSITY, Philadelphia, PA (FT, 40 hr/wk) 01/18-04/19

Associate Professor of Computer Science

Taught Python computer programming, Cybersecurity and Cyberwarfare, and Research Methodology & Writing. Gave presentations for prospective students.

DREXEL UNIVERSITY, Philadelphia, PA 06/98-08/17

Associate Teaching Professor 2011-2017 (FT, 40 hr/wk)***, Assistant Teaching Professor 2004-2011*** (FT, 40 hr/wk)***, and Adjunct Assistant Professor 1998-2004*** (PT, 15 hrs/wk)

Taught 255 sections of 37 graduate and undergraduate courses about computer networking, information technology, statistics, project management, risk management, life cycle model selection, task estimation, process improvement, quality management, information systems. Courses were online or face-to-face. Revised or redeveloped course contents to keep up with industry and technology advances. Coordinated new course creation within the college and across other university units.

Led ABET engineering accreditation activities for undergraduate programs and documented the accreditation process to train new committee members. Provided feedback on faculty candidates.

Counseled students seeking readmission after inadequate academic standing.

Gave presentations at Open Houses to help recruit new students. Received Employee of the Term award for Summer 2009 for exceptional support of student recruitment efforts.

Co-lead the university-wide Faculty Senate.

COMPUTER SCIENCES CORPORATION, Moorestown, NJ (FT, 40 hr/wk) 07/99-07/04

Quality Manager

Quality Manager for the world's largest SAP implementation for the US Army.

Managed compliance with process improvement and quality control for the Army Logistics Modernization Program (LMP). Led process assessment using the integrated Capability Maturity Model (CMM).

Conducted process definition and verified processes were performed as documented for the Joint Computer-aided Acquisition and Logistics Support (JCALS) system. Led process assessment using the FAA's CMM.

FAA CONTRACTOR, Atlantic City International Airport, NJ (FT, 40 hr/wk) 03/94-07/99

Sr. Systems Engineer

Senior engineer who developed test plans, project management plans, and supervised contractors for aviation safety and security projects.

Wrote test plans and procedures to approve new baggage inspection systems, one of which premiered at the 1996 Olympics in Atlanta.

Performed system maintenance process definition and assessed CMM process compliance for the Display System Replacement (DSR) en route radar system.

Created and presented aviation safety information sharing concept for the Global Aviation Information Network.

Wrote technical and management sections of new business proposals, including creating WBS for tasks, project schedules, and earned value structures.

HUGHES AIRCRAFT COMPANY, Canoga Park, CA (FT, 40 hr/wk) 11/86-03/94

Senior Systems Engineer

Senior engineer for aircraft preliminary design studies. Developed, improved, and applied computer simulations for missile preliminary design studies to support Army, Navy, Marine, and Air Force systems.

Conducted preliminary design studies for anti-air and anti-armor ordnance systems. Developed new applications to model novel technologies.

Executed missile trajectory simulations using 3- and 6-degree of freedom models. Expanded a short-range models' capabilities to account for the curvature of the Earth.

Applied rocket motor simulation to analyze new designs. Yes, literally a rocket scientist.

Collected and analyzed test data for ordnance and radar cross-section analyses.

Developed new warhead designs, conducted trade studies, then planned and conducted live tests. Primarily involved in shaped charge and explosively formed projectile devices.

Defined requirements for ordnance testing and data collection.

Received Hughes Division Patent Award in 1991 for a reactive armor model.

Received Hughes Graduate Study Fellowship in 1990.

Held a Secret clearance with RD, NOFORN, WNINTEL and other clearances as needed.

NAVAL WEAPONS CENTER, China Lake, CA (FT, 40 hr/wk) 09/85-11/86

Member of the Technical Staff

Engineer who conducted and analyzed tests for aircraft gun systems, ordnance safety tests, and fuel-air ordnance. Position GS-7 equivalent.

Developed test plans, witnessed, analyzed, and reported on ordnance safety and performance tests.

Investigated state of the art fiber composite materials and construction techniques.

Obtained Confidential clearance and was trained in handling explosives.

SELECTED PUBLICATIONS

BOOK: Booker, J. (2025). Idiot-proofing Democracy: Reimagining the US Constitution: The Unbound Press.

BOOK: Booker, J. (2019). The New Normal: Coming Out as Transgender in Midlife: The Unbound Press.

Hankerson, D., Marshall, A.R., **Booker, J**., el Mimouni, H., Walker, I., Rode, J.A. (2016) Does Technology Have Race? Proceedings of the 2016 CHI Conference Extended Abstracts on Human Factors in Computing Systems, pp. 473-486. ISBN 978-1-4503-4082-3, doi>10.1145/2851581.2892578.

Rode, J.A., Weibert, A. Marshall, A., Aal, K., von Rekowski, T, el Mimoni, H., and **Booker, J**. (2015) From Computational Thinking to Computational Making, UbiComp '15, September 7-11, 2015, Osaka, Japan. Received the Best Paper award.

DISSERTATION: Booker, J. M. (2011). Modeling of Human Aging Using a Systems Approach (Order No. 3496887). From Dissertations & Theses @ Drexel Univ.; ProQuest Dissertations & Theses Global. (922286144).

Kriete A, Bosl WJ, and **Booker J**. (2010). Rule-Based Cell Systems Model of Aging using Feedback Loop Motifs Mediated by Stress Responses. PLoS Comput Biol 6(6): e1000820. doi:10.1371/journal.pcbi.1000820.

Booker, J, Bosl, W, and Kriete, A. (2009) Fuzzy Logic Modeling of Stress Responses in Cell Aging. Foundations of Systems Biology in Engineering (FOSBE) conference, Englewood, CO.

Booker, J, Yalamanchili, N, and Kriete, A. (2008) Fuzzy Logic Model of Cellular Stress in Response to Atypical Activation of NF-kB. Poster presented at Greater Philadelphia Bioinformatics Alliance (GPBA) Retreat, and at the Spirit of Entrepreneurship in Life Saving Solutions showcase, both in Philadelphia, PA.

Booker, J. (Aug 2007). Common Threads in Life. CrossTalk: The Journal of Defense Software Engineering.

Booker, J. (2002). Intersexuality Explored. Published on the WWW, later cited extensively in:
Holder, Taylor J., (2006) All Points in Between. New York: iUniverse, Inc. ISBN 0595399274.

Booker, J. (1992). A Study of 775 Midwife-Managed Births in California. California Association of Midwives.

August, H, and **Booker, JM**. (June 1992) Innovative Weapons Carriage (U). Presented at Have Forum '92 Symposium, Wright-Patterson AFB, OH.

THESIS: Booker, J.M. (1990). Design of a Stagnation Heater for the Rarefied Gas Wind Tunnel. Master's Thesis for the University of California at Berkeley. AD#A230689

Booker, JM, Lyons, RF, Caudle, DA. (1986) AV-8B 25-mm Gun System Ricochet Test. Naval Weapons Center Report NWC-TP-6757.

COMMUNITY SERVICE

EMERGENCY PREPAREDNESS, CA, NJ, and PA 1988-2021

Over 30 years of experience volunteering for civilian Emergency Preparedness organizations.

Hospital Emergency Response Team (HERT) for Jefferson Hospital (2019-2021). Learned emergency triage and decontamination procedures. Was on call during high-risk events in Philadelphia.

Medical Reserve Corps (MRC) in Philadelphia, PA (2008-2021). Trained in mass vaccination protocols and pilot tested them for flu vaccination of first responders.

Community Emergency Response Teams (CERT) in Los Angeles, CA (1988-1994) and CERT in Cherry Hill, NJ (1996-2007) Trained and used emergency command and control structures, mass casualty triage, fire suppression, and urban search and rescue. Used many of these skills after two major earthquakes. Trained in Maritime Security, Red Cross shelter operations, and Weapons of Mass Destruction Radiological/Nuclear Awareness.