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OBJECTIVE

Provide leadership for the design and implementation of patient centric information systems using agile developer teams. Assess risks associated with developing information systems using modern methods and INCOSE recommended system development methods. Serve as a coach, professor and mentor to younger system engineers, managers and developers of information systems.

EXPERIENCE

- Oct. 2011 – present President, Mukherji Consulting, Centreville, VA. Provides subject matter expertise for architecting and implementing information systems using model based systems engineering, cyber security architecture and advanced risk reduction methods for government and private sector in northern Virginia. Used a utility patented evidence based decision support system for risk management.
- April 2016- present Adjunct Teaching Professor, Systems Engineering, Worcester Polytechnic Institute, Mitre Campus, McLean, VA. Taught SYS511 (system integration, verification and validation to Master's level students).
- Sept. 2015 – present Chairman, Health Care Integrated Product Team, Network Centric Operations Industry Consortium (NCOIC). Provided thought leadership for developing network centric applications in healthcare.
- Oct.08 – Sept. 2011 Director of Strategic Planning and Systems Integration Office, Walter Reed Army Medical Center, Directorate of Information Management, Washington, DC and Program Manager, SRM Group Inc., 101 Marietta St., Suite 3330, Atlanta, GA 30303. Responsible for developing and implementing systems integration across 20 Army hospitals for software based electronic health records. Used agile SCRUM methods for developing and maintaining healthcare automation systems using.NET framework, Visual Basic and SharePoint.
- 2002 – Sept.08** Subject Matter Expert/Consultant, Military Health Systems (MHS), Office of the Assistant Secretary for Defense, DOD, Falls Church, VA. Responsible for ensuring 50 programmers, systems analysts and architects using Agile and CMMI based processes demonstrate fully integrated third generation electronic healthcare

system (AHLTA) for the TRICARE systems of the US Armed Forces. Managed engineers developing healthcare systems using agile teams for web applications in Visual Basic, Java, and C#. Instituted CMMI-DEV based processes for requirements development and management.

Subject Matter Expert in the Program Executive Office of DOD's Military Health Systems, Falls Church, VA. Responsible for developing and deploying CMMI processes for a \$1 Billion enterprise. Assisted with developing operational architecture using agile methods for DOD's AHLTA electronic healthcare system. Developed and instituted CMMI-ACQ processes at Level II/III. Reduced risks associated with cost, schedule and technical quality failures for complex information systems. Developed and implemented new business processes to transform the enterprise from a Level 1 to a Level II CMMI enterprise.

2000-2002

Chief Scientist, Batelle Memorial Research Institute, DOD Military Health Systems, Falls Church, VA. Responsible for developing technical solutions for the DOD's Composite Health Care System (CHCS II). Development included managing staff of engineers developing healthcare systems using agile teams of web application developers using Visual Basic, MUMPS and Java.

1998-2001

Adjunct Full Professor, Computer Science Dept. George Mason University, Fairfax, Virginia. Taught Java, Programming Language Design and Software Engineering for undergraduate computer science students..

1999-2000

Chief Technologist, Integic Inc., Avion Parkway, Chantilly, VA. Developed, documented and implemented using Visual Basic, Java and C++ the architecture for DOD's billion dollar AHLTA, an electronic medical record system deployed worldwide at 454 hospitals during 2000-2015. Generated \$3 million dollar cost savings through implementation of streamlined management processes and advanced software and hardware technologies for AHLTA. Managed engineers developing DoD healthcare systems using agile teams of web application developers using Visual Basic, Java, and SCRUM. Achieved significant cost savings by implementing CMMI-DEV processes for requirements development and management.

1991-1999

Assistant Director (GS-15), Information Management, Government Accountability Office, 4th & G Streets, Washington, DC.

Achieved cost avoidance and savings of multi million dollars by creating eleven technical reports to U.S. Senate and House of Representatives on risk associated with budget overruns associated with modernization of IM/IT systems.

Managed teams of 4-10 senior assessors in the GAO. Provided annual performance assessments of up to a dozen GS-14 level staff. Supervised career development plans and promotions for GS-14 level staff. Provided leadership to teams assessing engineering issues related to large government IM/IT system modernization efforts using agile and CMMI based systems development life cycle methods.

1985 – 1991

Director of South Jersey Extension of the New Jersey Institute of Technology, Cinnaminson Center, NJ., *and* Assistant Professor, Computer & Information Science, New Jersey Institute of Technology, Newark, NJ. Served as Research Guide for over 150 Master of Science (Computer Science) and three PhD students. Taught graduate level courses in Operating System Design, Programming Language Design and Data Management **Systems** Design. Responsible for operations at the NJIT Extension at Cinnaminson Center, NJ. Obtained \$19,500 in grants from NJIT to develop a computer communication system laboratory.

Joint Appointments: Assistant Professor, Business Management Program, Rutgers University, Newark, NJ, and Assistant Fellow, Computer Integrated Manufacturing Center, NJIT, Newark, NJ.

1983-1985

Adjunct Assistant Professor, Computer & Information Science, NJIT, Newark, NJ. Taught graduate courses on Data Communications, Operating System Design and Data Management Systems, Programming Languages Design, and Simulation and Modeling.

President, Data Concepts Inc., Yardley, PA. Provided consulting services in process control, software engineering at AT&T's Bell Labs in Hopewell, NJ (Manufacturing Development Center), NJ DOT and NJ DHE, and the Center for Information Age Technology (CIAT), NJIT.

1982-1985

Scientific Applications Programmer, Princeton Plasma Physics Lab., Princeton University, Princeton, NJ. Managed team of three programmers in designing software for nuclear reactor command and control. Designed FORTRAN-77 software for accelerating and controlling neutral beams of helium atoms.

1981-1982

Research Scientist/System Administrator, Revere Research Inc., Edison, NJ. Responsible for analysis and interpretation of chemical analyses on metals and alloys developed by Revere Research Inc. Developed, operated and maintained the laboratory automation systems using a PDP 11/44 mini-computer and the RSX-11 operation system.

1976-1981

Marine Research Scientist, Graduate School of Oceanography, University of Rhode Island, RI. Obtained research grants of >\$100,000 from NOAA and ONR for developing techniques for analysis of waste materials in the ocean.
Research scientist on seven different expeditions to the North Atlantic Ocean to collect and analyze seawater samples from specific locations.

1969-1970

Instructor, Loyola College Chemistry Department, Univ. of Madras, India.

EDUCATION

1976

Doctor of Philosophy, Physical Chemistry, Univ. of Rhode Island, Kingston, RI.

1969

Master of Science, Chemistry, Univ. of Madras, India.

1967

Bachelor of Science, Chemistry, Univ. of Madras, India.

PUBLICATIONS

Book Chapters

1. Mukherji P. & D.R. Kester "Acid-Iron Disposal Experiments in Summer and Winter at DWD 106"; Wastes in the Ocean; Editors: I. Duedall, B.H. Ketchum, P.K. Park, D.R. Kester, Wiley-Interscience, 1983.
2. Kester, D.R., R.L. Hittinger, and P.Mukherji, Effect of Acid-Waste Disposal on Transition and Heavy Metals at Deep Water Dumpsite 106"; Ocean Dumping of Industrial Wastes, Editors: B.H. Ketchum, P.K. Park, and D.R. Kester, Plenum Press, 1981.

Published Articles

1. Prithviraj Mukherji, Cybersecurity for Medical Devices, in Proceedings of the International Consortium of System Engineers International Workshop 2016, Jan.29 - Feb.2, 2016, Torrance, California.
2. Ajay Thukral, Prithviraj Mukherji, Vijay Thukral, Model Based System Engineering for Cyber Security for Medical Devices in the Emergency Department, No Magic World Symposium 2016, May 22-25, Allen, Texas,
3. Prithviraj Mukherji, Lessons Learned in Managing Complexity, Journal of Enterprise Transformation, 2016, in preparation.
4. Prithviraj Mukherji, Ajay Thukral and Vijay Thukral, Model Based Systems Engineering for Medical Devices in the Emergency Department of a Hospital, Journal of Enterprise Transformation, 2016, in preparation.
5. Raj Mukherji et al., "Military Health System Information Management Information Technology (MHS IM/IT): Assessment Findings", Software Engineering Institute Special Report CMU/SEI-2004-SR-001, January 2004.
6. C.Egyhazy and Raj Mukherji, "Interoperability Architecture Using RMODP", Communications of the ACM, pages 93-97, volume 47, #2, February 2004.
7. Raj Mukherji, C.Egyhazy and M. Johnson, System: "Healthcare System: Case Study", pages 19-27, IT Professional, November 2002.
8. Raj Mukherji & Csaba Egyhazy, "The Architecture of a Third Generation Electronic Healthcare Record" Perspectives in Health Information Management, June 2004.
9. Whitescarver, J., P.Mukherji, M.Turoff, R.DeBlock, R.Czech and B.Paul, "A Network Environment for Computer Supported Cooperative Work", Proc. ACM SIGCOMM Workshop on "Frontiers in Computer Communications Technology", Stowe, Vermont, August 11-13, 1987.
10. McEnerney, J.F., P.Mukherji, et al., Computer Control of Neutral Beams Systems", Proc. 10th National Symposium on Fusion Technology, Dallas, Texas, November 1985.
11. Mukherji P., & D.R. Kester, "Mercury Distribution in the Gulf Stream", **Science**, 204 (4388), pp.64-66, 1979.
12. Mukherji, P., K Gadgil & R.D. Gonzalez, "Deuterium-Hydroxyl Exchange on Supported Metal Catalysts, Journal of Indian Chemical Society, LV, pp.91-94, 1987.
13. Mukherji, P. & D.R. Kester, Mercury in Gulf Stream Ring Franklin", Trans.American Geophysical Union, 59, (12), 1099, 1978.
14. Mukherji, P. D.R. Kester, L.M. Petrie & R.M. Hittinger, "Cadmium and Mercury in Gulf Stream Rings", Trans.American Geophysical Union, (18) 296, 1979.
15. Over a dozen abstracts on chemical oceanography in EOS, an American Geophysical Union publication, 1977-1981

16. Deuterium-Hydroxyl Exchange on Supported Metal Catalysts, PHD Thesis, Univ. of Rhode Island, Kingston, RI. 1977.

Technical Reports

1. Raj Mukherji et al., "Military Health System Information Management Information Technology (MHS IM/IT): Assessment Findings", Software Engineering Institute Special Report CMU/SEI-2004-SR-001, January 2004.
2. United States General Accounting Office, Report to the Chair, Subcommittee on Government Activities and Transportation, Committee on Government Operations, House of Representatives, AVIATION SAFETY, Progress on FM Safety Indicators Program Slow and Challenges Remain, August 1992, GAO/IMTC-92-57.
3. United States General Accounting Office, Report to the Chairman, Subcommittee on Transportation and Related Agencies, Committee on Appropriations, US. Senate, Air Traffic Control, Voice Communications System Challenges Continue, August 1991, GAO IMTC-91-49.
4. United States General Accounting Office, Report to the Chairman, Subcommittee on Transportation and Related Agencies, Committee on Appropriations, US. Senate, COMPUTER OPERATIONS, FAA Needs to Implement an Effective Capacity Management Program, November 1991, GAO/IMTEC-92-2.
5. United States General Accounting Office, Report to the Chairman, Activities and Transportation Subcommittee, Committee on Government Operations, House of Representatives, AIR TRAFFIC CONTROL, FAA Needs to Justify Further Investment in Its Oceanic Display System, September 1992, GAO/IMTEC-92-80.
6. United States General Accounting Office, Report to the Chairman, Subcommittee on District of Columbia, Committee on Appropriations, House of Representatives District of Columbia, SOFTWARE ACQUISITION PROCESS for a New Financial Management System, April 1998, GAO/AIMD-98-88.
7. United States General Accounting Office, Report to Undersecretary of Defense, Comptroller, DEFENSE FINANCIAL MANAGEMENT Immature Software Development Processes at Indianapolis Increase Risk, June 1997, GAO/AIMD-97-41.
8. United States General Accounting Office, Report to Congressional Requestors CUSTOMS SERVICE MODERNIZATION Ineffective Software development Processes Increase Customs Systems development Risk, February 1999, GAO/AIMD-99-35.
9. United States General Accounting Office, Report to Director, Federal Bureau of Investigation, ADP PROCUREMENT FBI Addresses Risk at its National Crime Information Center Acquisition, August 1991, GAO/IMTEC-91-60.
10. United States General Accounting Office Report to Committee on Governmental Affairs, US Senate, ENVIRONMENTAL ENFORCEMENT EPA Needs a Better Strategy to Manage Its Cross-Media Information, April 1992, GAO/IMTEC-92-14.

11. United States General Accounting Office, Fact Sheet for the Chairman, Subcommittee on Transportation and Related Agencies, Committee on Appropriations, U.S. Senate, September 1991, GAO/IMTEC-91-77FS.

Professional Societies

Member, International Consortium of System Engineers, System of Systems WG
Member, Network Centric Operations Industry Consortium (Chairman, Health Care Integrated Product Team)
Life Member, Institute for Electrical and Electronics Engineers

Awards

- Jan 2016 Invited Speaker at the International Workshop 2016, INCOSE, Jan. 29-Feb. 2, 2016, Torrance, California, USA.
- May 2016 Invited Speaker at the No Magic World Symposium, May 22-25 2016, Allen Texas, USA.
- March 2004 Commendation Letter from CIO, Military Health Systems, Office of the Assistant Secretary of Defense, Falls Church, VA.
- April 2002 Panel Member, Inaugural Panel on International Business, “Advancing Global Strategies in a Global Economy”, Johnson School of Mgmt., Cornell University, April 26, 2002.
- Sept. 1998 Commendation with cash award from Office of General Counsel, GAO, for leadership in evaluating technical architectures for Vibration Analysis Test System, and NOAA's Emergency Position Indicating Response Beacons.
- October 1996 Special Commendation from the GAO Asst. Controller General for Accounting & Information Management Division for automating the GAO standard operating procedure.
- Feb. 1992 Special Commendation for insightful leadership in addressing several complex technical issues at the FAA.
- Jan. 1992 Special commendation with gift for initiating the joint training program with the Software Engineering Institute, Carnegie Mellon University, for certification of technical specialists in software capability assessments