

## DANIEL O. RICE

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### **SUMMARY**

I am a business innovator and experienced educator with decades of hands-on business leadership, academic, and program director experience. As faculty at Loyola University and full-time lecturer at other universities, I have taught undergraduate, masters, and professional program students developing their knowledge, insight, and ability to impact business in finance, operations, and information technologies. As the director of Graduate Studies at the University of North Carolina, Greensborough, I led the restructuring and development of a new Mater of Science curriculum and professional programs in operations research, information technology, and cyber security, designing and implementing traditional and online courses and successfully presenting the curriculum for approval by graduate school council leading to full implementation in the business school curriculum. In my other professional careers, I have led cross-functional professional teams on research, engineering, information systems, software development and quantitative analysis; having successfully delivered results on projects totally over \$28 million. I have significant experience capturing and delivering on government grants and contracts, have led projects as program manager (PM), principal investigator (PI), and integrated product team (IPT) lead on multiple programs including multiple DoD SBIR programs totally over \$6 million in awards and \$1.3 million non-SBIR funding as PI. Also, I have extensive international experience leading International Business seminars as faculty at Loyola University and while on temporary assigned duty for the U.S. Coast Guard including work in the UK, Spain, Netherlands, Nigeria, Egypt, UAE, Singapore, Hong Kong, and Japan. I have a top secret security clearance.

### **EDUCATION**

- 1998-2004 Ph.D., Business, School of Business, University of Connecticut  
Dissertation “*Advanced Models for the Protection of Numerical Information in Databases: Providing Security and Flexibility in Markets for Private Information*”,  
2004, advisors Robert Garfinkel, Ram Gopal, and Michael Willenborg
- 1996-1998 M.B.A., Finance, School of Business, University of Connecticut, 1998
- 1986-1990 B.S., Marine Engineering and Naval Architecture, United States Coast Guard Academy,  
1990

### **PROFESSIONAL EMPLOYMENT**

- 2018-present Senior Principal Scientist II, BAE Systems FAST Labs; Autonomy, Control, and Estimation, Burlington, MA
- 2010-present Program Chair, Institute for Operations Research and Management Science (INFORMS) Boston Chapter (volunteer)
- 2017-2018 Director of Graduate Programs, University of North Carolina Greensboro, Bryan School of Business & Economics, full-time Lecturer, Department of Information Systems & Supply Chain Management, Greensboro, NC

- 2008-2017 Senior Vice President and Director of Research & Development, Technology Solutions Experts, Inc. (TSE), Natick, MA
- 2016-2017 Lecturer, University of Massachusetts Boston, College of Management, Department of Management Science and Information Systems (MSIS), Boston, MA
- 2002-2008 Assistant Professor, Department of Information Systems and Operations Management (ISOM), Sellinger School of Business, Loyola University in Maryland, Baltimore, MD
- 1990-1996 U.S. Coast Guard, Officer, shipboard engineer, marine inspector, law enforcement team leader, New Bedford, MA, New York, NY, and Honolulu, HI

## **TEACHING EXPERIENCE**

### **Graduate Courses (MBA Program):**

Quantitative Analysis for Decision Making, Business Analytics (University of North Carolina Greensboro)

Information Technology Strategy and Execution (Boston College)

Information Systems and Technology for Managers (Loyola University Maryland)

Database Design and Implementation (Loyola University Maryland)

Information Systems Strategy (Loyola University Maryland)

Information Systems and Computer Security (Loyola University Maryland)

Negotiations Strategy (teaching assistant, University of Connecticut)

### **Undergraduate Courses (Business School):**

Operations Management (University of Massachusetts Boston, Loyola University Maryland, UConn)

Database Systems Design and Development (Loyola University Maryland, UConn)

Foundations of Electronic Business (Loyola University Maryland)

Introduction to Management Information Systems (Loyola University Maryland, UConn)

International Business Seminar (Loyola University Maryland)

## **PROFESSIONAL HIGHLIGHTS**

8 years Director of R&D at TSE, Inc. leading all research, business development, and commercialization activities including writing winning proposals and executing multiple federally sponsored research projects.

Principal Investigator (PI), Small Business Innovative Research (SBIR) grants working with the Defense Logistics Agency (DLA), US Air Force, and US Army (six Phase I, four Phase II, and three Phase II enhancements) totally over \$5.3M in SBIR contract awards and over \$1.2M non-SBIR investment

Program Manager on multiple DoD contracts (Department of State (DoS), US Army) including *Advanced Tools, Technologies, and 3D Models for Digital Anthropometry and Human Engineering*, Natick Research Labs, Anthropometry Team, \$2.29M.

Expert in government contracting, product development, program management, information and knowledge systems, modeling and simulation, automated systems, cybersecurity, data privacy, operations management, optimization, machine learning, statistics and economics.

Assistant Professor at Loyola University's Sellinger School of Business, designed and taught undergraduate and graduate business courses including information technology strategy, management information systems, computer security, database design and implementation, and operations management.

Officer, U.S. Coast Guard, stationed in New Bedford, MA; New York, NY; and Honolulu, HI. Served underway in USCG Tahoma during the Gulf War, international experience through extensive temporary assigned duty travel to Asia, Africa, Europe and the Middle East while at Marine Inspection Office in New York and Marine Safety Office in Honolulu. Honorable Discharge in 1996.

### **RESEARCH AWARDS AND COMPETITIVE GRANTS**

\$500,000 "*SnapTrack: A Mobile App for Managing Property Reuse and Disposition*", SBIR Grant DLA162-003, Principal Investigator (PI), awarded Phase II, Defense Logistics Agency, 2018

\$100,000 "*DLA Disposition Services Mobile Solutions for Property Photographs and Automatic Uploads to an Automated Information System (AIS)*", SBIR Phase I, Principal Investigator (PI), Department of Defense (DoD) Small Business Innovation Research (SBIR) Grant DLA162-003, Defense Logistics Agency, awarded December 2016

\$100,000 "*Soldier and Small Unit (SSU) Performance and Cognitive Models for Behavior and Decision Making in Constructive Simulation*", SBIR Phase I, Principal Investigator (PI), Department of Defense (DoD) Small Business Innovation Research (SBIR) Grant A15-067, U.S. Army Natick Soldier Research, Development, & Engineering Center, September 2015-April 2016

\$150,000 "*Distributed Mission Operations Gateway*", SBIR Phase I, Principal Investigator (PI), Department of Defense (DoD) Small Business Innovation Research (SBIR) Grant AF141-026, U.S. Air Force, The Human Effectiveness Directorate, Warfighter Readiness Research Division, grant period September 2014 -April 2015

\$1,100,000, "*Anthropometric Casualty Estimation Methodologies*", SBIR Phase I and Phase II, Co-Principal Investigator (co-PI), Department of Defense (DoD) Small Business Innovation Research (SBIR) Grant A12-096, U.S. Army Natick Soldier Research, Development, & Engineering Center, September 2012-September 2016

\$1,300,000, "*Shareable Game-Based Objects Gateway for DIS and HLA Integration*", SBIR Phase II and Enhancement, Principal Investigator (PI), Department of Defense (DoD) Small Business Innovation Research (SBIR) Grant A103-030, U.S. Air Force, The Human Effectiveness Directorate, Warfighter Readiness Research Division, grant period June 2012-June 2014

\$1,250,000 "*Algorithms for Ground Soldier Based Simulations and Decision Support Applications*", SBIR Phase II and Enhancement, Principal Investigator (PI), Department of Defense (DoD) Small

Business Innovation Research (SBIR) Grant A10-167, U.S. Army Natick Soldier Research, Development, & Engineering Center, grant period March 2012 – March 2014

\$500,000 “*Task-related Effects of Encumbrance Methodology*”, SBIR Phase II Enhancement, Principal Investigator (PI), Department of Defense (DoD) Small Business Innovation Research (SBIR) Grant A07-159, U.S. Army Natick Soldier Research, Development, & Engineering Center, grant period April 2011-November 2012

\$100,000 “*Shareable Game-Based Objects Gateway for DIS and HLA Integration*”, SBIR Phase I, Principal Investigator (PI), Department of Defense (DoD) Small Business Innovation Research (SBIR) Grant AF103-030, U.S. Air Force, The Human Effectiveness Directorate, Warfighter Readiness Research Division, grant period January 2011-September 2011

\$70,000 “*Algorithms for Ground Soldier Based Simulations and Decision Support Applications*”, SBIR Phase I, Principal Investigator (PI), Department of Defense (DoD) Small Business Innovation Research (SBIR) Grant A10-167, U.S. Army Natick Soldier Research, Development, & Engineering Center, grant period January 2011-July 2011

\$750,000 “*TEEM – The Task-related Effects of Encumbrance Methodology: Modeling Encumbrance Effects of Ground Soldier Systems on Soldier Performance*”, SBIR Phase II Principal Investigator (PI), Department of Defense (DoD) Small Business Innovation Research (SBIR) Grant A07-159, U.S. Army Natick Soldier Research, Development, & Engineering Center, grant period November 2008-May 2011

“Best Paper” Award for research paper “*Task-related encumbrance methodology in force-on-force agent-based simulation,*” proceedings of the Military Modeling and Simulation Conference, Spring Simulation Conference, March 2012

“Best Paper” Award for research paper “*Ground Soldier Materiel Task Related Encumbrance (MATRE) Model Creation through the Use of Ontology Building and Analysis Tools,*” proceedings of the Military Modeling and Simulation Conference, Spring Simulation Conference, March 2009

“Best Paper” Award for research paper “*Electronic Markets for Private Information: Economic and Security Considerations,*” at the 39<sup>th</sup> Hawaii International Conference on System Sciences (HICSS), January 2006

Nominated for “Best Paper” Award for research paper “*New Approaches to Disclosure Limitation While Answering Queries to a Database: Protecting Numerical Confidential Data Against Insider Threat Based on Data or Algorithms,*” at the 39<sup>th</sup> Hawaii International Conference on System Sciences (HICSS), January 2006

The Sellinger School of Business and Management Summer Research Grant (competitive), \$2,750, principal investigator for project “*A Peer-to-Peer (P2P) Network Security Pricing Model to Increase Network Resistance to the Propagation of Malicious Code,*” Loyola College in Maryland, 2007

Recipient of the Loyola College Summer Research Grant (competitive), \$4,000, principal investigator for the project “*Electronic Markets for Private Information and the Development of Secure E-Data Marts*,” Loyola College in Maryland, 2005

Recipient of The Sellinger School of Business and Management Summer Research Grant (noncompetitive), \$8,000 each, 2005, 2004, 2003

University of Connecticut Pre-doctoral and Triebek Fellowships, Summer Grants in 2001, 2000, 1999

### **PUBLICATIONS (REFEREED JOURNALS AND BOOK CHAPTERS)**

“*Predicting Respirator Size and Fit from 2D Images*”, International Journal of Human Factors Modeling and Simulation, Inderscience, in press, 2019 (with E. Biagiatti, M. Korna, and D. Barker)

“*The Economics and Management of Nuclear Energy Industry: Supply Chain Reliability and Safety*,” Reliability: Theory & Applications, Vol. 11, No. 5(41), 2017, pages 82-88 (with E. Gnedenko)

“*CVC-STAR - Protecting Data Confidentiality While Increasing Flexibility and Quality of Responses*,” International Journal of Information and Computer Security, Vol. 2, No. 2, 2008, pages 175-196 (with R. Garfinkel, R. Gopal)

“*Information Systems Security and Statistical Databases: Preserving Confidentiality through Camouflage*,” Handbooks in Information Systems, Volume 3, Business Computing, 2008 (with R. Garfinkel, R. Gopal, and M. Nunez)

“*Secure Electronic Markets for Private Information*,” IEEE Transactions on Systems, Man, and Cybernetics, Part A - special issue on Secure Knowledge Management, Vol. 36, Issue 3, May 2006, pages 461-472 (with R. Garfinkel, R. Gopal, and M. Nunez)

“*Protecting Online Information Sharing in Peer-to-Peer (P2P) Networks*,” Online Information Review, Vol. 31, No. 5, 2007, pages 682-693

“*AdPalette: An Algorithm for Customizing Online Advertisements on the Fly*,” Decision Support Systems Vol. 32, Number 2, December 2001, pages, 85-106 (with S. Nair, G. Karuga, and A. Khraban)

### **PUBLICATIONS (PEER REVIEWED BOOK CHAPTERS AND CONFERENCE PROCEEDINGS)**

“*Protecting Numerical Confidential Data against Insider Threat Based on Data or Process*” 2019, completed manuscript, revising and resubmitting to another journal, previously submitted to Operations Research (with R. Garfinkel and R. Gopal)

“*Anthropometric Casualty Estimation Methodologies*,” Chapter 9, Digital Human Modeling. Applications in Health, Safety, Ergonomics and Risk Management: Ergonomics and Health, 6th International Conference, DHM Proceedings, Lecture Notes in Computer Science (LNCS), Series on Information Systems and Applications, Vol. 9185, Springer International Publishing Switzerland, August 2015 (with M. Korna)

*“Reasoning, Planning, and Goal Seeking: A Cognitive Modeling Approach to Agent Behavior for Constructive Simulation,”* Proceedings of the Human Factors and Ergonomics (HFES) Society Annual Meeting, September 2013 (with P. Amstutz and M. Statkus)

*“Shareable Game-Based Objects Gateway for DIS and HLA Integration,”* proceedings of the Simulation Interoperability Workshop (SIW), March 2013 (with J. Falkinburg, E. Biagiotti, E. Elliott & P. Amstutz)

*“Task-related Encumbrance Methodology in Force-on-Force Agent-Based Simulation,”* proceedings of the Spring Simulation Multi-conference, The Society for Modeling & Simulation International (SCS), “Best Paper” award recipient, March 2012 (with C. Eldridge, M. Andra, A. Kennedy, A. Peloquin, & S. Yuhaski Jr.)

*“Army Situational Awareness for Safety Information Network (ASASIN),”* proceedings of the 5<sup>th</sup> INFORMS Workshop on Data Mining and Health Informatics (DM-HI), INFORMS 2010

*“A Preliminary Investigation into the Modeling & Simulation of Engagement Decision-making Processes & Encumbrance,”* proceedings of the Spring Simulation Multi-conference, Military Modeling and Simulation, Spring Simulation Conference, 2010 (with M. Andra and A. Kennedy)

*“Behavior Targeting and the Modeling of Economic Compensation for Accessing Private User Behavior Information,”* proceedings of the 4th Annual Symposium on Information Assurance (ASIA), Academic Track of the 12th Annual NYS Cyber Security Conference, Albany, NY, 2009, pages 2-6

*“Improving Emergency Responder Situational Awareness for Incident Command Systems (ICS) by Using Critical Information Management, Simulation, and Analysis,”* IEEE International Conference on Technologies for Homeland Security, published in the IEEE Digital Library, 2009

*“Ground Soldier Materiel Task Related Encumbrance (MATRE) Model Creation through the Use of Ontology Building and Analysis Tools,”* proceedings of the Spring Simulation Multi-conference, Military Modeling and Simulation, Spring Simulation Conference, “Best Paper” award recipient, 2009 (with A. Borgman, A. Peloquin, and R. Auer)

*“Peer-to-peer (P2P) Simulation for Network Security,”* Proceedings of the 3rd Annual Symposium on Information Assurance, 11th Annual NYS Cyber Security Conference, Albany, NY, June 4, 2008 (with G. Wright)

*“A Pricing Model for the Protection of Distributed Transient Networks - Increasing Networks’ Resistance to the Spread of Malicious Code,”* Proceedings of the Workshop on Information Security and Privacy (WISP), at International Conference on Information Systems (ICIS), Montreal, Canada, December 2007 (with G. Wright)

*“A Personal Information Auction: Measuring the Differential Value of Privacy,”* the Proceedings of the Americas Conference on Information Systems (AMCIS), Keystone, Colorado, August 2007 (with J. D’Arcy)

*“Peer-to-Peer (P2P) Network Pricing for Increasing Resistance to Malicious Code Propagation,”* The 6th Information Security Conference Proceedings, Las Vegas, April 2007 (with G. Wright)

*“Classification of Statistical Database System (SDB) Security Measures,”* Northeast Decision Sciences Institute (NEDSI) Proceedings, March 2007

*“A Proposal for the Security of Peer-to-Peer (P2P) Networks: a pricing model inspired by the theory of complex networks,”* 41st Annual Conference on Information Sciences and Systems (CISS) Proceedings, The Johns Hopkins University, Baltimore, MD, March 2007

*“Electronic Markets for Private Information: Economic and Security Considerations,”* received the “Best Paper” Award at HICSS-39, published in the Proceedings of 39<sup>th</sup> Hawaii International Conference on System Sciences (HICSS)/IEEE Digital Library, January 2006

*“New Approaches to Disclosure Limitation While Answering Queries to a Database: Protecting Numerical Confidential Data Against Insider Threat Based on Data or Algorithms,”* nominated for the “Best Paper” at HICSS-39, published in the Proceedings of 39<sup>th</sup> Hawaii International Conference on System Sciences (HICSS)/IEEE Digital Library, January 2006

*“Barter’s Back! Internet Barter and the Resurgence of an Ancient Practice,”* Proceedings of the Americas Conference on Information Systems (AMCIS), Tampa, 2003

#### **SELECTED INVITED TALKS and CONFERENCE PRESENTATIONS**

MIT Center for Transportation and Logistics, *“Value Creation through Technology Innovation: Information Sharing and Analysis in Supply Networks”*, December 2017

INFORMS Annual Meeting, invited speaker, Military Operations Research and Homeland Defense, Philadelphia, October 2015

Human-Computer Interaction International, Los Angeles, August 2013, August 2015

INFORMS Conference on Business Analytics and Operations Research, Chicago, April 2011

INFORMS Data Mining and Health Informatics Workshop (DM-HI), Austin, November 2010

INFORMS Annual Meeting, Military Applications Section (MAS), Austin, November 2010

Military Operations Research Society (MORS) Symposium, Quantico, June 2010

Military Modeling and Simulation, Spring Simulation Conference, Orlando, April 2010

4th Annual Symposium on Information Assurance (ASIA), the 12th Annual NYS Cyber Security Conference, Albany, June 2009

IEEE International Conference on Technologies for Homeland Security, Waltham, May 2009

INFORMS Conference on OR Practice, Phoenix, April 2009

Military Modeling and Simulation Conference, Spring Simulation Conference, San Diego, March 2009

3rd Annual Symposium on Information Assurance (ASIA), 11th Annual NYS Cyber Security Conference, Albany, June 2008

9<sup>th</sup> INFORMS Telecommunications Conference, College Park, March 2008

Conference on Information Science and Technology Management (CISTM), Hyderabad, India, July 2007

Third International Scientific Conference on Security and Counter Terrorism Issues, Seminar on Mathematics and Software for Security of Computer Systems, Institute for Information Security Issues, Lomonosov Moscow State University, Moscow, Russia, October 2007

Conference on Information Systems (AMCIS), Keystone, August 2007

41st Annual Conference on Information Sciences and Systems (CISS), Baltimore, March 2007

39<sup>th</sup> Hawaii International Conference on System Sciences (HICSS), January 2006

Americas Conference on Information Systems (AMCIS), Boston, August 2001

## **PROFESSIONAL SERVICE AND RESEARCH-RELATED ACTIVITIES**

### **Refereeing/Reviewing:**

MISQ (guest Associate Editor); Information Systems Research (ISR); The Journal of Information Systems Security (JISSec); Internet Research; Annual Symposium on Information Assurance (ASIA); International Conference on Information Systems (ICIS); Hawaii International Conference on System Sciences (HICSS); Americas Conference on Information Systems (AMCIS); Workshop on Information Security and Privacy (WISP); The Security Conference

### **Program/Session Chair:**

INFORMS Boston Chapter (Program Chair); Annual Symposium on Information Assurance (ASIA) 2005; Conference on Information Systems, Technology, and Management (CISTM) 2007; Hawaii International Conference on System Sciences (HICSS) 2006; Americas Conference on Information Systems (AMCIS) 2005; 4<sup>th</sup> Annual Security Conference 2004

## **PROFESSIONAL SERVICE AND REVIEWING**

### **Academic Service:**

Graduate Programs Council at University of North Carolina Greensboro, Bryan School of Business and Economics;

Supply Chain and Service Management Promotion Committee, co-chair at University of Massachusetts Boston;

Undergraduate Curriculum Committee, AACSB Review Committee, Technology Service Advisory Committee (TSAC) Chair Information Security Sub-committee (ISS) , liaison to Greater Baltimore



Technology Council (GBTC), Service-Learning (S-L) Faculty, Undergraduate Advisor at Loyola University Maryland;  
MSM's Information Systems Program Curriculum, external reviewer for Mount St. Mary's University

**Refereeing/Reviewing:**

Associate Editor (Guest) for MIS Quarterly  
Reviewer for Information Systems Research (ISR); The Journal of Information Systems Security (JISSec); Internet Research; Annual Symposium on Information Assurance (ASIA); International Conference on Information Systems (ICIS); Hawaii International Conference on System Sciences (HICSS); Americas Conference on Information Systems (AMCIS); Workshop on Information Security and Privacy (WISP); The Security Conference

**Program/Session Chair:**

INFORMS Boston Chapter (Program Chair); Annual Symposium on Information Assurance (ASIA); Conference on Information Systems, Technology, and Management (CISTM); Hawaii International Conference on System Sciences (HICSS); Americas Conference on Information Systems (AMCIS); 4th Annual Security Conference

**PERSONAL**

Married with a 13-year-old son, living in Medford, MA for 12 years.  
Varsity tennis at USCGA, NCAA Div III, #2 singles and #1 doubles (1986-1989)  
Ranked #5 Men's Open Singles Tennis, USTA Maryland in 2005, top 20 national Men's 35 doubles & New England Men's Open Singles in 2015  
PADI Advanced Open Water certified scuba diver