

**Theresa Jefferson**

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**Research Interests**

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- Information and communication technologies (ICT) with a focus in Crisis and Disaster Management
- Decision Support Systems and Collaborative Decision Making

**Education**

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1996 - D.Sc., Engineering Management, The George Washington University  
1988 - M.S., Operations Research, The George Washington University  
1986 - B.S., Operations Research, The George Washington University

**Honors**

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Member, Omega Rho International Honor Society, Operations Research and Management Science

**Experience**

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September 2000 to Present: Assistant Professor, Engineering Management and Systems Engineering Department, The George Washington University, Washington, D.C.

September 2004 to September 2005: Visiting Research Scientist, The National Science Foundation, Arlington, VA

September 1998 to September 2000: Visiting Assistant Professor, Engineering Management and Systems Engineering Department, The George Washington University, Washington, D.C.

January 1999 to September 2000: Deputy Director, Declassification Productivity Research Center, The George Washington University, Washington, D.C.

March 1994 to September 1998: Senior Information Systems Analyst, Planning & Technical Support Division, Science Applications International Corporation, Washington, D.C.

December 1998 to March 1994: Data Management Specialist, Space Physics Support Division, Science Applications International Corporation, Washington, D.C.

August 1986 to December 1988: Systems Analyst, Military Operations Analysis Division, Science Applications International Corporation, Mclean, VA

**Research Contracts and Grants**

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2006 to 2008: "Supporting the Development and Interpretation of Catastrophic Event Planning Scenarios for New Madrid Seismic Zone Earthquake," The Mid American Earthquake Center, University of Illinois, Urbana-Champaign, \$312,500 (PI)

2006 to 2007: "Supporting the Development and Interpretation of Catastrophic Event Planning Scenarios for New Madrid Seismic Zone Earthquake," The Mid American Earthquake Center, University of Illinois, Urbana-Champaign, \$168,661 (PI)

2002 to 2003: "Cooperative Agreement on Long-Term Environmental Sustainability." National Park Service (NPS), \$24,849 (Co-PI with J. Deason)

2002 to 2005: "Grant-in-kind for 100 licenses/year of Rational Rose Enterprise Edition Software." Rational Corporation, \$355,616. (PI)

**Refereed Journal Publications**

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1. Song, I.K., T. Jefferson, and J. Harrald (2007). "The Sequential Effects of E-business Activity on Business Performance: A Study of Manufacturing Organizations." *International Journal of Agile Systems and Management, Special Issue "E-business and Manufacturing Performance: Impacts and Relationships."* Forthcoming (accepted June 2007).
2. Jefferson, T. and J. Harrald (2007). "Collaborative Technology: providing agility in response to extreme events." *International Journal of Electronic Governance*, vol. 1 (1), pp. 79-93, August 2007.
3. Al-Kahtani N., J.J.C.H. Ryan, and T.I. Jefferson (2007). "How Saudi female faculty perceive internet technology usage and potential." *Information Knowledge Systems Management*, vol. 5 (4), pp. 227-243, April 2007.
4. Harrald, J.R., and T. Jefferson (2007). "Supporting Critical Multi-Organization Collaboration during Response to Catastrophic Events." *Organization: Journal of Management, Informatics, and Human Resources*, vol. 40 (2), pp. 109-114, April 2007.
5. Mendonca, D., T. Jefferson and J. Harrald (2007). "Emergent Interoperability: Collaborative Adhocracies and Mix and Match Technologies in Emergency Management." *Communications of the ACM*, vol. 50 (3), pp. 44-49, March 2007.
6. Jefferson, T. and T.J. Nagy (2002) "A Domain-Driven Approach for Improving End-User Search Effectiveness in Traditional Online Catalogs." *Information and Management: The International Journal of Information Systems Applications*, vol. 39 (7), pp. 559 – 570, July 2002.

**Referred Journal Publications Submitted**

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1. Jefferson T. and J. Harrald. "Situational Awareness and Collaborative Decision Making in Emergency Management Planning and Response." *Journal of the Association for Information Systems, Special Issue on Collaboration Engineering*.
2. Rabanal, F. and T. Jefferson. "Quantitatively Measuring White-Collar Public Sector Telecommuter Productivity." *International Journal of Public Sector Management*.

- Wallace, C. and T. Jefferson. "Impact of Object Oriented Methodology on Software Reuse." *JCBS – Software Reuse: Methods, Processes, Tools and Experiences*.

**Refereed Conference Proceedings**

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- Harrald, J.R., T.I. Jefferson, F. Fiedrich, S. Sener, and C. Mexted-Freeman (2007). "A First Step in Decision Support Tools for Humanitarian Assistance during Catastrophic Disasters: Modeling Hazard Generated Needs." *Proceedings of Intelligent Human Computer Systems for Crisis Response and Management (ISCRAM) 2007*, May 13-15 2007, pp. 51-56.
- Jefferson, T. and J.R. Harrald (2006). "Shared Situation Awareness in Emergency Management Mitigation and Response." *Proceedings of the 40th Hawaii International Conference on System Sciences*, January 3-6, 2006, IEEE 2007, p. 23b.
- Jefferson, T. and M.G. Lee (2005). "An empirical study of software maintenance of a Web-based Java application," in *Software Maintenance, 2005. ICSM'05. Proceedings of the 21<sup>st</sup> IEEE International Conference on 26-29 Sept. 2005*, pp 571-576.
- Jefferson, T. and G.C. Arnold (2005). "Legacy System Reengineering: Essential Process Steps." *Proceedings of the 2005 International Conference on Software Engineering Research and Practice, Las Vegas, Nevada, June 27-30, 2005*, pp. 748-753.
- Jefferson, T. and J. Ryan (2003). "A Comparative Analysis of Privacy and Terms of Use Policies of Popular E-business." *Proceedings of the 23<sup>rd</sup> ASEM National Conference*, ASEM 15-18 October 2003, pp. 29-34.
- Rabanal, F. and T. Jefferson (2003). "Developing a Novel Approach to Measuring White Collar Productivity in a Public Sector Telecommuting Environment." *Proceedings of the 23<sup>rd</sup> ASEM National Conference*, ASEM 15-18 October 2003, pp. 35-44.
- Ryan, J.J.C.H. and T. Jefferson (2003). "The Use, Misuse, and Abuse of Statistics in Information Security Research". *Proceedings of the 23<sup>rd</sup> ASEM National Conference*, ASEM 15-18 October 2003, pp. 644-653.
- Jefferson, T. (2002). "Effective Database Design: An Investigation of the Relationship Between Education and Experience." *Proceedings of the 23<sup>st</sup> ASEM National Conference*, ASEM, 2-5 October 2002, pp. 96-100.
- Giffin, S. D. and T. Jefferson (2000). "Doing Project Management Over the Internet: how managers are using the Internet to improve effectiveness and efficiency." *Proceedings of the 21<sup>st</sup> ASEM National Conference*, ASEM, 5-7 October 2000, pp.220-227.
- Jefferson, T. (2000). "Virtual Project Teams in an Academic Setting." *Proceedings of the 21<sup>st</sup> ASEM National Conference*, ASEM, 5-7 October 2000, pp. 469-472.
- Jefferson, T. and R. Scotti (1999). "Information Visualization for Document Classification." *Proceedings of the 20<sup>th</sup> ASEM National Conference*, ASEM, 21-23 October 1999, pp. 57-60.

12. Jefferson, T. (1999). "The Gap Between Promise and Reality: ERP Systems in Academic Institutions." *Proceedings of the 20<sup>th</sup> ASEM National Conference*, ASEM, 21-23 October 1999.

**Other Journal Publications**

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1. Jefferson, T.L. (2006). "The use of ICTs in regional conflicts, war, and terrorism." *VINE*, vol. 37 (1), pp. 14-17.
2. Jefferson, T.L. (2006). "Evaluating the role of information technology in crisis and emergency management." *VINE*, vol. 36 (3), pp. 261-264.
3. Jefferson, T.L. (2006). "Using the Internet to communicate during a crisis." *VINE*, vol. 36 (2), pp. 139-142.
4. Jefferson, T.L. (2006). "Taking it personally: personal knowledge management." *VINE*, vol. 36 (1), pp. 35-37.
5. Jefferson, T. (2001). Book Review: "Computer-Aided Project Management." *Engineering Management Journal*, vol. 13 (2), p. 41.

**Courses Taught**

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## Lead Professor

EMSE 219 - Object-Oriented Analysis and Design  
EMSE 250 - Information and Software Engineering  
EMSE 256 - Information Management and Information Systems  
EMSE 295 - Database Design and Database Management Systems  
EMSE 296 - Software Project Development with CASE  
EMSE 320 - Managing E-Commerce Technologies  
EMSE 322 - A Strategic Approach to Information Systems

## Course Instructor

EMSE 170- Basic Quantitative Methods for Engineering Management  
EMSE 204 - Management of Engineering Contracts  
EMSE 211 - Organizational Behavior for the Engineering Manager  
EMSE 217 - Fundamentals of Artificial Intelligence  
EMSE 235 - Systems Thinking and Policy Modeling I  
EMSE 236 - Systems Thinking and Policy Modeling II  
EMSE 260 - Survey of Finance and Engineering Economics  
EMSE 269 - Elements of Problem Solving and Decision Making for Managers  
EMSE 287 - Decision Support Systems and Models  
EMSE 297 - Problems in Engineering Management

**Dissertations Supervised**

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Graduated: **Florence Rabanal**, Quantitatively Measuring The Productivity Of Telecommuters In A White Collar Public Sector Environment, May 2007.  
**Cynthia Wallace**, The Impact of Object Oriented Methodology on Software Reuse, May 2006.

**Nouf Al-Khatani**, (co-advisor with J. Ryan and J.Harrald) The Internet technology and its potential contribution to research in Saudi Arabia: Possible factors influencing its utilization, May 2006

**In-Kuk Song** (co-advisor with J. Harrald) Impacts of E-business Activity on Information Capabilities and Business Performance: A Study of Manufacturing Organizations, May 2004

- In-Progress **Mark Andress**, Perceptions of risk in IT project management: how perceptions vary between differing stakeholders over the life of a project and the impact to success
- Min-Gu Lee**, The Validation and Refinement of A Formal Approach to Eclectic Software Development
- Catherine Liu**, Best Practices of COTS implementation for the Federal Government Software Acquisition model
- Wilson Rosa**, Impact of Object-Oriented Methods on Software Productivity Gain
- Roshawna Scales**, VASE: Vessel Anticipatory Situation Awareness Engine

### **Professional Activities**

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Local Organizing Chair, ISCRAM 2008, 5th International Conference on Information Systems for Crisis Response and Management

Associate Editor, VINE: The Journal of Information and Knowledge Systems

Member: ALADIN (ALpe ADria Initiative Universities' eNetwork), Omega Rho, American Society for Engineering Management (ASEM), IEEE, IEEE Women in Engineering, Association of Information Systems (AIS)

Proposal Referee, The 5<sup>th</sup> Call of the IST-priority (Information Society Technologies) of the 6<sup>th</sup> Framework Programme (FP6), European Commission

Book Referee:

McGraw-Hill Publishing: Software Engineering 7<sup>th</sup> ed. by Pressman

Jones and Bartlett Publishing: Software Engineering by Frank Tsui and Orlando Karam

Journal Referee:

Computers & Education: An International Journal

IEEE Transactions on Engineering Management

JMIS, Journal of Management Information Systems

Journal of Homeland Security and Emergency Management

Conference Referee:

Hawaii International Conference on System Sciences (HICSS-41). Big Island, Hawaii, January 7-10, 2008

20<sup>th</sup> Bled Electronic Commerce Conference: eMergence: Merging and Emerging Technologies, Processes, and Institutions. Bled, Slovenia, June 3-6, 2007

12th Americas Conference on Information Systems. Connecting the Americas. Acapulco, México, August 4-6, 2006

## **Curriculum Vitae**

**Theresa Jefferson**

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- 18<sup>th</sup> Bled Electronic Commerce Conference: eIntegration in Action, Bled, Slovenia, June 6 – 8, 2005
- 16th Bled Electronic Commerce Conference: eTransformation, Bled, Slovenia, June 9-11, 2003
- 21<sup>st</sup> ASEM National Conference, Washington, DC, October 4-7, 2000
- 20<sup>th</sup> ASEM National Conference, Virginia Beach, VA, October ASEM, 21-23 October 1999