

## MARTHA R. GRABOWSKI

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### EDUCATION

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Ph.D.	Management/Information Systems, Expert Systems Rensselaer Polytechnic Institute Troy, NY	May 1987
M.S.	Industrial and Management Engineering Rensselaer Polytechnic Institute Troy, NY	August 1983
M.B.A.	Management Information Systems Rensselaer Polytechnic Institute Troy, NY	August 1982
B.S.	Nautical Science and Marine Transportation U.S. Merchant Marine Academy Kings Point, NY	June 1979

### LICENSE

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- Second Mate, Unlimited Tonnage, Any Oceans, Radar Observer (US Coast Guard Merchant Marine license, inactive)
- Lieutenant Commander, US Naval Reserve (retired)

### TEACHING AND RESEARCH INTERESTS

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Information systems, embedded intelligent real-time systems, transportation systems, human and organizational error, safety-critical large-scale systems, decision support systems, telecommunications and networking, organizational impact of information technology, use of information systems for competitive advantage.

### ACADEMIC EXPERIENCE

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#### LE MOYNE COLLEGE Syracuse, New York

1987 to present

Business Department  
Information Systems Program

<i>Director, Le Moyne - Zogby Center for Contemporary Catholic Trends</i>	January 2007 - present
<i>Coordinator, Le Moyne College SAP University Alliance Program</i>	July 2006 – present
<i>Director, Information Systems program</i>	September 2001 – present
<i>Acting Chair, Accounting Department</i>	September 2003 – May 2004
<i>Professor</i>	September 1998 - present
<i>Joseph C. Georg Endowed Professor</i>	September 1994 - August 1997
<i>Associate Professor</i>	September 1992 - August 1998
<i>Assistant Professor</i>	September 1987 - August 1992

Taught undergraduate and graduate courses in information systems, systems analysis and design, human factors and ergonomic design, database systems, telecommunication and networking, artificial intelligence, virtual reality, decision support systems, risk management, and information technology strategy and structure.

#### RENSSELAER POLYTECHNIC INSTITUTE Troy, New York

1988 to present

Department of Decision Sciences & Engineering Systems

<i>Research Professor</i>	July 2001 to present
<i>Research Associate Professor</i>	September 1995 to June 2001
<i>Research Assistant Professor</i>	July 1989 to August 1995
<i>Visiting Assistant Professor</i>	January 1988 to June 1989

Conducted research on the impact of embedded intelligent real-time systems, safety-critical large-scale systems, human and organizational error, and the impact of technology on individuals and organizations (see Research Projects, below).

**INDUSTRIALEXPERIENCE**

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<b>Program Integration Manager</b> General Electric Company Corporate Research and Development Center Schenectady, New York	June 1991 to June 1992
<b>Manager, Expert Systems Applications</b> General Electric Company Tactical Systems Department Pittsfield, Massachusetts	March 1987 to June 1991
<b>Applications Manager, Navy Marketing</b> General Electric Company Defense Systems Division Pittsfield, Massachusetts	July 1985 - March 1987
<b>Field Change Analyst</b> General Electric Company Machinery Apparatus Operation Schenectady, NY	November 1982 - July 1985
<b>Third Officer, MV OxyProducer</b> Hvide Shipping Company Fort Lauderdale, FL	April 1981 - December 1981
<b>Third Officer, SS El Paso Arzen</b> SS El Paso Consolidated SS El Paso Paul Kayser El Paso Marine Company Solomons, Maryland	July 1979 - March 1981

**HONORS AND AWARDS**

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<b>American Bureau of Shipping</b> Member	2001-present
<b>Le Moyne College</b> Bene Merenti Service Award MBA Teacher of the Year Joseph C. Georg Endowed Professor	2007 1999 1994 - 1997
<b>National Academy of Sciences, National Research Council</b> Lifetime National Associate award Committee on Human Factors Member Ocean Studies Board Vice Chair, Tsunami Warning System Preparedness Committee	2003 1998-2005 2008 – present
<b>Transportation Research Board/Marine Board</b> Task Force on Marine Safety and Human Factors Chair, Marine Board Vice Chair, Chair-Elect, Marine Board Executive Board Member, Marine Board TRB Executive Committee Chair, Committee on the Future of Naval Engineering Education Chair, Committee on Evaluating Shipboard Display of Automated Identification Systems Chair, Committee on Advances in Piloting and Navigation  Committee on the Effect of Smaller Shipboard Crews on Maritime Safety Symposium on Risk Assessment Methodologies Applied to Accident Prevention in Congested Ports and Waterways Planning Committee Chair	1992-1999; 2001-2008 2008 - present 2006 – 2008 2004-2006 1994-1995; 2002-2008 2006 - 2008 2009 – present  2001-2003 1991-1994 (chair 1993-94)  1998-1990  1998 -1999
<b>U.S. Department of Transportation</b> U. S. Coast Guard Navigation Safety Advisory Council U. S. Coast Guard Prevention Through People Champion	1994 - 1998 1995-2000
<b>1988 Navy Achievement Medal</b>	1988
<b>1987 General Electric Management Award</b>	1987
<b>1984 General Electric Management Award</b>	1984

**HONORS AND AWARDS, continued**

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***Rensselaer Polytechnic Institute***

Edith and Del Karger Dissertation prize	1987
Rensselaer Polytechnic Institute doctoral fellowship	1984-1987
IBM Fellowship in Information Systems (won, not accepted)	1985
Rensselaer Topper Management Fellowship	1984-1985
W. Franklin Spaffard prize in Management	1982

***United States Merchant Marine Academy***

Outstanding Professional Achievement Award	1999, 2004
American Institute of Marine Underwriters Award	1979
Matthew Fontaine Maury Navigation Award	1979
US Merchant Marine Academy Officer's Club Award	1979
Rhodes Scholarship candidate	1979

**RESEARCH PROJECTS AND GRANTS**

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*Integrated Electronic Navigation (ENav) Systems Technology Acceptance and Use* September 2009 – December 2012  
Three-year project for U.S. Coast Guard Navigation Systems Center to evaluate impact of integrated electronic navigation (ENav) system technology on shipboard and shoreside navigational decision makers. Study assessed technology acceptance and use, particularly whether the technologies hindered or enhanced safety, human performance, decision-making, communication and technology trust. Survey assessment was coupled with MITAGS ship simulator assessment for cascading and catastrophic failures and on-board vessel analysis of navigation decision performance (situation awareness, threat and collision avoidance, situation monitoring and voyage plan monitoring) and decision processes (confidence, satisfaction, workload, fatigue and vigilance). User intent to use technology was contrasted with actual performance with the technology; study also addressed unintended consequences of technology introduction, along with issues associated with denial of technology.

*Bank of New York Mellon – Le Moyne College Technology Partnership* August 2008 – present  
Coordinator of Le Moyne College- Bank of New York Mellon partnership to establish new curriculum and undergraduate technology pipeline in enterprise and large-scale systems design, development, security and program management.

*Enterprise Resource Planning (Curriculum Development) with SAP* July 2006 – June 2011  
5 year, \$300k grant from SAP to introduce enterprise resource planning, curriculum and software to Le Moyne College. Coordinator of Le Moyne College SAP University Alliance program.

*Tsunami Warning and Forecast Systems and Tsunami Preparedness* July 2008 – December 2009  
Vice Chair for an 18-month National Research Council/Ocean Studies Board study for the U.S. Congress and National Oceanographic and Atmospheric Administration (NOAA) to review NOAA's Tsunami Program; assess existing U.S. tsunami detection, forecast, and warning systems; provide an overview of national preparedness; highlight opportunities to improve the nation's tsunami preparedness in the future and identify novel, promising approaches to risk assessment and instrumental warning systems.

*Leading Safety Indicators of Risk in Marine Transportation* October 2003 – December 2009  
6-year project for American Bureau of Shipping, Exxon/Mobil-SeaRiver Maritime, Overseas Shipholding Group, Maersk Lines, LLC, and A.P. Moeller, LLC to investigate potential predictive safety indicators that could lead to human errors, near misses, incidents, and accidents. Developed models, and administered and analyzed longitudinal safety culture perception surveys from 1600 domestic and international shoreside and shipboard personnel to three industry partners. Results identified leading indicators of safety for maritime energy transportation, container and supply chain disruption operations.

*Puget Sound Vessel Traffic Risk Assessment, Washington State* May 2006 – February 2009  
2 1/2-year research project for US Coast Guard, US Army Corps of Engineers, British Petroleum (BP) and Ocean Advocates, as a result of a settlement between BP and Ocean Advocates. Project developed a 20-year vessel traffic and environmental simulation to evaluate the risk of increased tanker traffic over the next twenty years at the BP Cherry Point, Puget Sound refinery. Research focuses on evaluating the impact of technology on maritime risk, accident and incident history analysis, and the role of human and organizational error in this large safety-critical system.

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**RESEARCH PROJECTS, continued**

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*Risk Analysis of Tanker Tug Escorts* July 2004 – June 2005  
1-year project for State of Washington, Department of Ecology, Spill Prevention, Preparedness and Response Program to evaluate risk of tug escorts for laden tankers in Puget Sound, Washington State.

*St. Lawrence Seaway AIS Performance Impact Study* April 2002 – December 2005  
3-year project for U.S. Department of Transportation, Transportation Security Administration, and St. Lawrence Seaway Development Corporation to evaluate technical, economic, logistical and safety impact of carriage requirements for automatic identification systems (AIS) aboard domestic and international vessels on St. Lawrence Seaway and the Great Lakes.

*Distributed Mobile Collaborative Networks* October 2002 - August 2003  
10-month joint research project between LeMoyne College and Warsaw University, Warsaw, Poland, investigating cognitive and perceived learning outcomes associated with faculty and student use of distributed mobile collaboration networks facilitated by a variety of electronic collaboration technologies: face-to-face, audio, low resolution audio/video conferencing, high resolution audio-video conferencing, and mobile hand-held audio/video, wireless Internet networks. Project jointly funded by LeMoyne College and Warsaw University.

*Shipboard Display of Automatic Identification Systems Information* May 2001 – May 2003  
Chaired an 18-month National Research Council study for the U.S. Coast Guard, Transportation Security Administration to evaluate technical and human factors aspects of shipboard display of automatic identification systems information. Committee recommendations to provide basis for U.S. Coast Guard regulations on AIS as well as U.S. position on AIS at International Maritime Organization (IMO) meetings.

*Risk Analysis of California-Federal Water Quality and Reliability* March – September 2002  
6-month project for State of California-Federal Water Quality (CALFED) program to recommend risk analysis process for levee integrity and water quality reliability.

*Failure Not An Option: High Reliability Financial Telecommunications* October 2000 – May 2001  
8-month contract from the Society for Worldwide Interbank Financial Telecommunications (SWIFT) to study and recommend best practices for a high reliability financial telecommunications network and a distributed virtual organization.

*Design of Embedded Intelligent Real-Time Navigation & Piloting System* January - December 2000  
1 year contract from Lockheed Martin, Ocean, Radar & Sensor Systems Department to develop an object-oriented design for an embedded intelligent real-time navigation and piloting system for next generation naval vessels.

*Design and Evaluation of an Improved Continuous Operational Real Time Monitoring System* May 1999 – December 2000  
18-month contract from the National Oceanographic and Atmospheric Administration (NOAA) to develop the requirements for and to evaluate a national real-time oceanographic network.

*Risk Evaluation of Passenger Vessel Operations* June 1998 – June 1999  
1 year contract from the Washington State Department of Transportation, Washington State Ferries to evaluate the adequacy of safety provisions for passengers and crew on Washington State Ferries utilizing vessel accident and incident data analysis coupled to vessel traffic and environmental simulation. Research centered on human and organizational error in large-scale systems.

*Surface Ship of the Future Automation System Development* January 1998 - December 1999  
2 year contract from Lockheed Martin Ocean, Radar & Sensor System Department to develop the requirements and design for an object-oriented information architecture for next generation U.S. Navy surface ships (SC 21, DD21).

*Evaluation of Maritime Risk: Port of Houston* January – September 1997  
8-month contract from the Port of Houston Authority to evaluate the risks of passenger vessel traffic to the port of Houston.

*Development, Test and Evaluation of SMARTBRIDGE* August 1995 to July 1998  
3 year contract from Department of Defense Advanced Research Projects Agency (ARPA) to develop, test and evaluate with Lockheed Martin, NOAA, and Chevron Shipping Company an integrated ship's bridge for Chevron tankers.

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**RESEARCH PROJECTS, continued**

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- Evaluating and Monitoring Maritime Risk: Prince William Sound, Alaska* April 1995 to June 1997  
2 year contract from ARCO Marine Inc., BP Oil Shipping Company, Chevron, SeaRiver Maritime, Inc., Tesoro, Prince William Sound Regional Citizens Advisory Council, State of Alaska Department of Environmental Conservation, and U.S. Coast Guard to conduct risk assessment of oil transportation system in Prince William Sound, Alaska (with Det Norske Veritas and J. Harrald, T. Mazzuchi/GWU) using vessel traffic and environmental simulation coupled with accident and incident data analysis. Research investigated role of human and organizational error in large-scale systems.
- Shipboard Manning Model Evaluation* February 1994 to June 1997  
3 year contract from U.S. Coast Guard Research and Development Center, Avery Point, CT (as part of Coast Guard Research, Development, Test and Evaluation of Human Factors contract) to develop, evaluate and test a decision support system for determining shipboard manning levels.
- Research, Development, Test and Evaluation of Human Factors* September 1994 to August 1999  
5 year task order contract from the U.S. Coast Guard Research and Development Center, Avery Point, CT (with Battelle Human Factors Research Group).
- Oil Pollution Research Grant* August 1994 to August 1995  
1 year grant from U.S. Department of Transportation, Volpe National Transportation Systems Center, Cambridge, Massachusetts to develop St. Lawrence Seaway piloting expert system prototype.
- Human Factors in Maritime Shipping* March 1994 to October 1994  
7-month contract from Prince William Sound Regional Citizens Advisory Committee and Cook Inlet Regional Citizens Advisory Committee to assess the role of human and organizational error in maritime operations in Alaska (with Battelle Human Factors Research Group).
- Evaluating and Monitoring Maritime Risk: Port of New Orleans* March 1994 to May 1995  
1 year contract from State of Louisiana to evaluate maritime risk of gaming boat operations in Port of New Orleans (with J. Harrald, T. Mazucchi/George Washington University) using vessel traffic simulation coupled to accident analyses.
- Shipboard Evaluation of Embedded Piloting Expert System* December 1993 to May 1995  
1 year contract from U.S. Coast Guard R&D Center to evaluate an embedded real-time knowledge based system embedded within a real-time integrated bridge system.
- Oil Spill Prevention Plan Review* December 1993 to March 1994  
3-month contract from State of Washington, Office of Marine Safety, to develop a methodology for oil spill prevention plan reviews (with J. Harrald, T. Mazucchi/GWU).
- Oil Spill Response Information System Design* July 1993 to March 1994  
9-month contract from US Coast Guard R&D Center, (with Marine Safety International).
- Evaluating and Monitoring Maritime Risk: Puget Sound* April 1993 to March 1994  
1 year contract from State of Washington, Office of Marine Safety to conduct risk assessment and develop vessel screening decision support system (with J. Harrald, T. Mazucchi/GWU).
- On Scene Coordinators' Decision Making Training Objectives* December 1992 to July 1993  
8-month contract from US Coast Guard R&D Center, (with J. Harrald/GWU, T. Hammel, Marine Safety International).
- Decision Support through Three Dimensional Imaging in a Tactical Command and Control Environment* November 1991 to November 1993  
Two year contract from Rome Laboratories/Air Force Systems Command (with W.A. Wallace) to investigate three dimensional and virtual imaging for command and control.
- Development, Evaluation and Test of a Shipboard Piloting Expert System* October 1989 to August 1993  
Four year contract from US Department Transportation, Maritime Administration.
- Development and Evaluation of a Piloting Expert System* January 1986 - December 1987  
2 year contract from US Department of Transportation, Maritime Administration (MARAD).
- Development of a Case-Based Management Information Systems Curriculum* May 1990 - December 1992  
2 year contract from GE Foundation for MIS curriculum development.

## **PUBLICATIONS**

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### **BOOKS--AUTHORED OR EDITED**

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*Shipboard Automatic Identification System Displays: Meeting the Needs of Mariners.* Washington, D.C.: National Academy Press, 2003. (committee chair). [Http://books.nap.edu/html/SR273/SR273.pdf](http://books.nap.edu/html/SR273/SR273.pdf)

*Advances in Expert Systems for Management: Evaluation and Value in Knowledge-based Systems, Volume 2* (co-editor with W.A. Wallace), Greenwich, Connecticut: JAI Press, 1997.

*Advances in Expert Systems for Management, Volume 1*, (co-editor with W.A. Wallace), Greenwich, Connecticut: JAI Press, 1993.

*Cases in Systems Analysis and Design*, Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1993.

### **REGULAR LENGTH ARTICLES: PUBLISHED OR ACCEPTED**

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1. Grabowski, M.R., You, Z., Zhou, Z., Song, H., Steward, M. & Steward, B. "Human and Organizational Error Data Challenges in Complex, Large-Scale Systems," *Safety Science*, 47:9, October 2009, 1185-1194, doi:10.1016/j.ssci.2009.01.008.
2. Grabowski, M.R., Ayyalasomayajula, P., Merrick, J.R., Harrald, J.H. & Roberts, K.H. "Leading Indicators of Safety in Virtual Organizations," *Safety Science*. 45:10, December 2007, 1013-1043. DOI [doi:10.1016/j.ssci.2006.09.007](https://doi.org/10.1016/j.ssci.2006.09.007).
3. Grabowski, M.R., Ayyalasomayajula, P. Merrick, J., & McCafferty, D. "Accident Precursors and Safety Nets: Leading Indicators of Tanker Operations Safety," *Maritime Policy and Management*, 34:5, October 2007, 405-425.
4. Hanumantharao, S. & Grabowski, M.R. "Effects of Introducing Collaborative Technology on Communications in a Distributed Safety-Critical System," *International Journal of Human-Computer Studies*, 64:8, August 2006, 714-726.
5. Bayrak, T. & Grabowski, M.R. "Network Performance Impacts on Operators in Safety-Critical Systems," *International Journal of Information Technology and Decision Making*, 5:1, March 2006, 173-194. <http://www.worldscinet.com/cgi-bin/details.cgi?id=pii:S0219622006001836&type=html> , DOI:10.1142/S0219622006001836
6. Merrick, J.R.W., Grabowski, M.R., Ayyalasomayajula, P., & Harrald, J.R., "Understanding Organizational Safety Using Value-Focused Thinking," *Risk Analysis*, 25:4, August 2005, 1029-1041. [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=943140](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=943140), <http://www.people.vcu.edu/~jrmerric/Papers/UnderstandingOrganizationalSafety.pdf>, Sept 2005.
7. Coskun, E. & Grabowski, M.R. "Software Complexity and Its Impacts in Embedded Intelligent Real-Time Systems," *Journal of Systems and Software*, June 2005.
8. Coskun, E. & Grabowski, M.R. "Impacts of User Interface Complexity on User Acceptance and Performance in Safety-Critical Systems," *Journal of Homeland Security and Emergency Management*, 2:1, February 2005. <http://www.bepress.com/jhsem/vol2/iss1/3/>, posted 2 March 2005.
9. Grabowski, M.R. & Dhimi, H. "Early Adoption of Technology Performance Impacts: AIS on the St. Lawrence Seaway," *Journal of Navigation*, 58:1, 2005, 17-30. <http://journals.cambridge.org/bin/bladerunner?30REQEVENT=&REQAUTH=0&500005REQSUB=&REQSTR1=JournalofNavigation/Vol58No01>, January 2005.
10. Bayrak, T. & Grabowski, M.R., "Safety-Critical Wide Area Network Performance Evaluation," *International Journal of Information Technology and Decision-Making*, 2:4, December 2003. <http://www.informatik.uni-trier.de/~ley/db/journals/ijitdm/ijitdm2.html>, December 2003.
11. Grabowski, M.R. and Sanborn, S.D. "Human Performance and Embedded Intelligent Technology in Safety-Critical Systems," *International Journal of Human-Computer Studies*, 58:6, June 2003, 637-660. <http://portal.acm.org/citation.cfm?id=941179>.

**REGULAR LENGTH ARTICLES: PUBLISHED OR ACCEPTED, continued**

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12. Merrick, J.R.W., van Dorp, J.R., Mazzuchi, T.A., Harrald, J.R., Spahn, J.E., & Grabowski, M.R., "The Prince William Sound Risk Assessment," *Interfaces*, 32:6, November/December 2002, 25-40. <http://www.seas.gwu.edu/~dorpjr/Publications/JournalPapers/Interfaces2002.pdf>, December 2002.
13. Grabowski, M.R., & Sanborn, S.D. "Evaluation of Embedded Intelligent Real-Time Systems," *Decision Sciences*, 32:1, Winter 2001, 95-123. [http://www.decisionsciences.org/dsi/Vol32\\_1/32\\_1\\_95.htm](http://www.decisionsciences.org/dsi/Vol32_1/32_1_95.htm).
14. Coskun, E. & Grabowski, M.R., "An Interdisciplinary Model of Complexity in Embedded Intelligent Real-Time Systems," *Information and Software Technology*, 43:9, September 2001, 527-537. <http://www.informatik.uni-trier.de/~lev/db/journals/infof/infof43.html>.
15. Van Dorp, J.R., Merrick, J.R.W., Harrald, J.R., Mazzuchi, T.A., and Grabowski, M.R. "A Risk Management Procedure for the Washington State Ferries," *Risk Analysis*, 21:1, 2001. <http://www.people.vcu.edu/~jrmerrick/Papers/WSFRiskAnalysis.pdf>
16. Merrick, J.R.W., van Dorp, J.R., Harrald, J., Mazzuchi, T.A., Spahn, J.E., & Grabowski, M.R., "A Systems Approach to Managing Oil Transportation Risk in Prince William Sound," *Systems Engineering*, 3:3, 2000, 128-142.
17. Grabowski, M.R., Merrick, J., Harrald, J.R., Mazzuchi, T.A., & van Dorp, J.R., "Risk Modeling in Distributed, Large-Scale Systems," *IEEE Transactions on Systems, Man & Cybernetics, Part A: Systems and Humans*, 30:6, November 2000, 651-660. <http://www.seas.gwu.edu/~dorpjr/Publications/JournalPapers/IEEESMC2000.pdf>
18. Grabowski, M. and Roberts, K.H., "Risk Mitigation in Virtual Organizations," *Organization Science*, 10:6, November/December 1999, 704-721. Also in *Journal of Computer Mediated Communication*, 3:4, June 1998 and <http://www.ascusc.org/jcmc/vol/issue4/grabowski.html>.
19. Grabowski, M.R. "Distributed Intelligent Navigation Systems," *Marine Technology*, 36:3, July 1999, 175-182. [http://www.sname.org/mtonline\\_363.htm](http://www.sname.org/mtonline_363.htm)
20. Harrald, J.R., Mazzuchi, T.A., Spahn, J., Van Dorp, R., Merrick, J., Shrestha, S., & Grabowski, M.R. "Using System Simulation to Model the Impact of Human Error in a Maritime System," *Safety Science*, 30, 1998, 235-247. <http://www.people.vcu.edu/~jrmerrick/Papers/HumanErrorSafetyScience.pdf>
21. Litynski, D.M., Grabowski, M.R., and Wallace, W.A. "The Relationship between Three Dimensional Imaging and Group Decision Making: An Exploratory Study," *IEEE Transactions on Systems, Man and Cybernetics*, 27:4, July 1997, 402-411. <http://ieeexplore.ieee.org/iel/3468/13025/00594908.pdf?arnumber=594908>,
22. Grabowski, M.R. and Roberts, K.H. "Risk Mitigation in Large Scale Systems: Lessons from High Reliability Organizations," *California Management Review*, 39:4, Summer 1997, 152-162.
23. H. Sudhendar, and Grabowski, M.R., "Evolution of Intelligent Shipboard Piloting Systems: A Distributed System for the St. Lawrence Seaway," *Journal of Navigation* (U.K.), 49:3, September 1996, 362-376.
24. Grabowski, M. R. and Roberts, K., "Human and Organizational Error in Large Scale Systems," *IEEE Transactions on Systems, Man and Cybernetics*, 26:1, January 1996, 1-16.
25. Grabowski, M.R. and Sanborn, S., "Integration and Preliminary Shipboard Observations of an Embedded Piloting Expert System," *Marine Technology*, 32:3, July 1995, 216-223.
26. Grabowski, M.R. and Sanborn, S. "Smart Charts, Smart Bridge: Observations of the Shipboard Piloting Expert System (SPES)." *International Hydrographic Review*, March 1995, 72:1, 125-139.
27. Grabowski, M.R. and Wallace, W.A., "An Expert System for Maritime Pilots: Its Design and Assessment Using Gaming," *Management Science*, 39:12, December 1993, 1506-1520.

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**REGULAR LENGTH ARTICLES: PUBLISHED OR ACCEPTED, continued**

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28. Grabowski, M.R. and H. Hendrick, "How Low Can We Go?: Validation and Verification of a Decision Support System for Safe Shipboard Manning," *IEEE Transactions on Engineering Management*, 40:1, February 1993, 41-53.
29. Grabowski, M. and Sanborn, S., "Knowledge Representation and Reasoning in a Real-Time Operational Control System: The Shipboard Piloting Expert System (SPES)," *Decision Sciences*, November/December 1992, 1277-1296.
30. Grabowski, M.R., Massey, A.P., and Wallace, W.A., "Focus Groups as a Group Knowledge Acquisition Technique," *Knowledge Acquisition*, 4:4, 1992, 407-425.
31. Grabowski, M.R., "Decision Support to Masters, Mates on Watch and Pilots: The Piloting Expert System," *Journal of Navigation* (UK), 43:3, Fall 1990, 364-384.
32. Grabowski, M.R., "The Piloting Expert System: Transition from Off-Line Prototype to On-Line Decision Support," *Journal of the Institute of Navigation*, 37:1, Spring 1990, 1-16.

**CHAPTERS IN BOOKS**

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1. Grabowski, M.R., Lepak, G. and Kulick, G. "Collaborative Technology Impacts in Distributed Learning Environments," in H. Ryu and D. Parsons (editors), *Innovative Mobile Learning*, New York: Idea Group Publishing, 2009.
2. Roberts, K.H. & Grabowski, M.R. "Risk Mitigation in Health Care Systems of Organizations: Lessons from High Reliability Organizations," in M.S. Bogner (ed.), *Human Error in Medicine, 2<sup>nd</sup> edition*. New York: Lawrence Erlbaum Press, 2008.
3. Grabowski, M.R. "Marine Navigation," in *McGraw-Hill Yearbook of Science and Technology*. New York: McGraw-Hill Publishing, 2001, 252-254.
4. Roberts, K.H. and Grabowski, M.R. "Organizations, Technology and Structuring," in S. R. Clegg, C. Hardy, and W. Nord (eds.), *Handbook of Organization Studies*. London: Sage Publications Ltd., 1996, 409-423.
5. Grabowski, M.R. and Lee, S., "Linking Information Systems Application Portfolios and Organizational Strategy," in M.A. Mahmood, R. Banker, and R.J. Kauffman (eds.), *Strategic Information Technology Management: Perspectives on Organizational Growth and Competitive Advantage*, Harrisburg, Pennsylvania: Idea Group Publishing, 1993, 33-54.
6. Grabowski, M.R., "A Methodological Approach to Knowledge Acquisition Problems," in M. R. Grabowski and W.A. Wallace (eds.), *Advances in Expert Systems for Management*, Greenwich, Connecticut: JAI Press, 1993, 33-58.
7. Grabowski, M.R., "Towards Next Generation Expert Systems: Technology, Applications, and Strategic Planning," in M. R. Grabowski and W.A. Wallace (eds.), *Advances in Expert Systems for Management*, Greenwich, Connecticut: JAI Press, 1993, 231-255.
8. Hendrick, H.W. and M.R. Grabowski, "Development, Validation, and Macroergonomic Dimensions of a Model for Determining Crew Size on Maritime Vessels," in K. Noro and O. Brown (eds.), *Human Factors in Organizational Design and Management III*, Amsterdam: North-Holland Press, 1990, 323-326.

**REFEREED CONFERENCE PROCEEDINGS**

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1. Grabowski, M.R., Ayyalasomayahula, P., Wang, H., McCafferty, D., Merrick, J.R., Meador, M. & Kinney, C. "Accident Precursors and Safety Nets: Initial Results from the Leading Indicators of Maritime Safety Project," *Proceedings of the Annual Meeting of the Society of Naval Architects and Marine Engineers*, Fort Lauderdale, Florida, 13-17 November 2007.
2. Bayrak, T. & Grabowski, M.R. "Network Performance Impacts on Operators in Safety-Critical Systems," *Proceedings of the Annual Meeting of the Decision Sciences Institute*, Boston, 20-23 November 2004. <http://www.bus.ucf.edu/dsi2004/>.
3. Grabowski, M.R. & Bayrak, T. "Holistic Evaluation of Real-Time Safety-Critical Large-Scale Networks," *Proceedings of the Americas Conference on Information Systems*, Association for Information Systems (AIS), Tampa, Florida, 3-5 August 2003.
4. Coskun, E. & Grabowski, M.R., "User Interface Complexity in Safety-Critical Systems," *Proceedings of the 10<sup>th</sup> International Conference on Human-Computer Interaction, HCI International 2003*, Crete, Greece, 22-27 June 2003.

**REFEREED CONFERENCE PROCEEDINGS, continued**

5. Coskun, E. & Grabowski, M.R. "User Interface Complexity Assessment in Large-Scale Safety-Critical Environments," *Proceedings of the 5<sup>th</sup> International Conference on Enterprise Information Systems*, Angers, France: Ecole Supérieure d'Electronique de l'Ouest, 23-26 April 2003.
6. Roberts, K.H. & Grabowski, M.R. "Coordinating at the Interstices: Improving Reliability in Health Care." *Symposium on Coordination of Expertise in High Reliability Work Environments*. Academy of Management Meetings, Denver, Colorado, 9-12 August 2002.
7. Bayrak, T. & Grabowski, M.R., "Real-time Safety-Critical Wide Area Networks," *Proceedings of the Americas Conference on Information Systems*, Dallas, Texas, 9-11 August 2002.
8. Coskun, E. & Grabowski, M.R., "Assessment of Intelligence Complexity in Embedded Intelligent Real-Time Systems," *Proceedings of the European Conference on Information Systems, ECIS 2002*, Gdansk, Poland, 6-8 June 2002.
9. Bayrak, T. & Grabowski, M.R., "Safety-Critical Wide Area Network Performance Evaluation," *Proceedings of the European Conference on Information Systems, ECIS 2002*, Gdansk, Poland, 6-8 June 2002.
10. Coskun, E. & Grabowski, M.R., "Two Perspectives of Intelligence Complexity in Embedded Intelligent Real-Time Systems," *Proceedings of the International Conference on Fuzzy Sets and Soft Computational Intelligence in Management and Industrial Engineering (FSSCIMIE 2002)*, Istanbul, Turkey, 29-31 May 2002.
11. Harrald, J.R., Mazzuchi, T.A., van Dorp, J. R., Merrick, J.R., and Grabowski, M. "A Collaborative Risk Management Procedure for the Washington State Ferries." *Proceedings of the Society for Risk Analysis Annual Meeting*, 2-5 December 2001.
12. Bayrak, T. & Grabowski, M.R. "Evaluation of Safety-Critical Wide Area Networks," *Proceedings of the Americas Conference on Information Systems 2001*, Boston, Massachusetts, 3-5 August 2001.
13. Coskun, E. & Grabowski, M.R., "An Application of Relative Complexity Metrics to Study Software Complexity to Study Software Complexity in Embedded Intelligent Real-Time Systems," *Proceedings of the International Conference on Intelligent Systems in Manufacturing*, 24-25 May 2001, Sakarya University, Adapazari, Turkey.
14. Coskun, E. & Grabowski, M.R., "Complexity in Embedded Intelligent Real Time Systems," *International Conference on Complexity and Complex Systems*, Warwick, U.K., 19-20 September 2000.
15. Coskun, E. and Grabowski, M.R., "Complexity in Embedded Intelligent Real Time Systems," Research in Progress paper, *International Conference on Information Systems*, Charlotte, North Carolina, December 1999.
16. Hanamantharao, S. and Grabowski, M.R., "Impact of a Distributed Intelligent System in a Large Scale Safety Critical System," Research in Progress paper, *International Conference on Information Systems*, Cleveland, Ohio, December 1996.
17. Grabowski, M.R., "Decision Aiding Technology and Integrated Bridge Design," *Proceedings of the Society of Naval Architects and Marine Engineers Ship Technology and Research Symposium*, New Orleans, 12-15 April 1989, S5-3-1 to S5-3-11.
18. Grabowski, M.R., "Knowledge Acquisition Methodologies: Survey and Assessment," *Proceedings of the Ninth International Conference on Information Systems*, Minneapolis, 30 November – 3 December 1988.

**EDITORIALY REVIEWED CONFERENCE PROCEEDINGS**

1. Grabowski, M.R. "Impacts of Next Generation Ship Navigation and Communication Systems," *Proceedings of the 4<sup>th</sup> International Conference on Computer Application and Information Technology in the Maritime Industries (COMPIT '05)*. Hamburg, Germany, 8-11 May 2005.
2. Grabowski, M.R. "The Future of Bridge and Navigation Systems," *Proceedings of the Nautical Institute Workshop on Integrated Bridges*. London, United Kingdom: The Nautical Institute, 13-14 November 2002, pp. 10-1 to 10-8.

M. Grabowski

**EDITORIALLY REVIEWED CONFERENCE PROCEEDINGS, continued**

3. Grabowski, M.R. "Navigational Aids and the Human Element: The Intelligent Bridge," *Proceedings of the Safer Seas: Marine Safety and Environmental Protection Conference*, 11-12 March 2002, Brest, France.
4. Harrald, J.R., Mazzuchi, T.A., Merrick, J., Spahn, J., Van Dorp, R., and Grabowski, M.R. "Waterway Risk Assessment Using System Simulation and Expert Judgment." *Proceedings of the 29<sup>th</sup> International Association of Navigation Congresses*. The Hague, Netherlands, July 1998.
5. Fowler, T., Harrald, J. and Grabowski, M., "Overview of the Prince William Sound Risk Assessment Project," *Proceedings of the Institute of Marine Engineers Conference*. London: 17-18 May 1997.
6. Grabowski, M.R. and Roberts, K.H., "Risk Mitigation and Risk Migration in Large Scale Systems," *Academy of Management Annual Meeting*, Vancouver, B.C., 9 August 1995.
7. Moore, W.H., Bea, R.G., Grabowski, M.R. and Roberts, K.H., "Managing Human and Organizational Error Through the Life Cycle of Offshore Marine Systems," *Proceedings of the Offshore Mechanics and Arctic Engineering Conference 1995*, Copenhagen, Denmark, 18-22 June 1995.
8. Roberts, K.H. and Grabowski, M.R., "Some Requirements for Designing and Managing Reliable Complex Systems," *Proceedings of PSAM II, International Conference on the Advancement of System-based Methods for the Design and Operation of Technological Systems*, San Diego, 20-24 March 1994.
9. Lee, J.D., Sanquist, T.F., and Grabowski, M.R., "Development of a Computer-Based Model to Estimate the Staffing Needs of Commercial Ships," *Proceedings of the Prevention, Response, and Oversight: Five Years after the Exxon Valdez Oil Spill Conference*, Anchorage, Alaska, 23-25 March 1994, 101-110.
10. Hendrick, H.W. and Grabowski, M.R., "Cross Cultural Validation of a Function Analysis Model for Determining Minimal Safe Crew Size on Maritime Vessels," *Proceedings of the 36th Annual Meeting of the Human Factors Society*, Atlanta, Georgia, 12-16 October 1992.
11. Hendrick, H.W. and Grabowski, M.R., "A Process for Developing Functional Generic Models for Determining Personnel Requirements," *Proceedings of the 36th Annual Meeting of the Human Factors Society*, Atlanta, Georgia, 12-16 October 1992.
12. Jessen, D., Grabowski, M.R., Triscari, T., and Wallace, W.A., "A Test of Stereoscopic Imaging in a Tactical Command and Control Decision Situation," *Proceedings of the 1992 Symposium on Command and Control Research*, Naval Postgraduate School, Monterey, California, 10-11 June 1992. McLean, Virginia: Science Applications International Corporation, Information Systems Division, 85-99.
13. Hendrick, H.W. and Grabowski, M.R., "Macroergonomic Considerations in Determining Minimum Safe Crew Size on Maritime Vessels," *Proceedings of the 34th Annual Meeting of the Human Factors Society*, Orlando, Florida, 8-12 October 1990.
14. Grabowski, M.R., "Smart Charts: The Next Step for Piloting Expert Systems?" *Proceedings of the US Hydrographic Conference '88*, Baltimore, 12-15 April 1988, 194-203.

**REPORTS, ARTICLES, AND NON-REFEREED CONFERENCE PROCEEDINGS**

1. Van Dorp, J.R., Harrald, J.R., Merrick, J.R.W. & Grabowski, M.R. "Assessment of Oil Spill Risk due to Potential Increased Vessel Traffic at Cherry Point, Washington." Washington, D.C.: The George Washington University, February 2009. Report submitted to U.S. Army Corps of Engineers and BP Shipping, Puget Sound, Washington.
2. Grabowski, M.R. & You, Z. "ABS Leading Indicators of Safety: SeaRiver, OSG and Maersk Project Report." Houston, Texas: American Bureau of Shipping, August 2008.
3. You, Z., Zhou, Z., Steward, M., Grabowski, M.R. and Song, H. "Puget Sound Vessel Traffic Risk Assessment Database: Description, Analysis and Human and Organizational Error." United States Army Corps of Engineers, United States Coast Guard, BP Technical Report 2008, July 2008.
4. Grabowski, M.R. & Wang, H. "ABS Leading Indicators of Safety: Maersk Project Report," Houston, Texas: American Bureau of Shipping, Risk and Human Factors Division, June 2008.

**REPORTS, ARTICLES, AND NON-REFEREED CONFERENCE PROCEEDINGS, continued**

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5. Grabowski, M.R., Vortmann, R., Cambridge, J. & Johnson, P. "The Marine Board." *Coast Guard Proceedings*. Summer 2007, 23-26. <http://www.uscg.mil/proceedings>, 25 July 2007.
6. Grabowski, M.R., Ayyalasomayahula, P. & Wang, H. *Leading Indicators of Tanker Safety*. Houston, Texas: American Bureau of Shipping, Guidance Note, August 2007
7. Gray, D.L, Michel, K. Eitken, D. & Grabowski, M.R. "Tug Escorts in Puget Sound," Washington State Department of Ecology, Olympia, Washington. 25 February 2005. <http://www.ecy.wa.gov/programs/spills/hottopics/tug/tugstudystuff/FinalReport.pdf>, 16 July 2005.
8. Grabowski, M.R. & Dhama, H. "St. Lawrence Seaway AIS Performance Impact Study," prepared for the St. Lawrence Seaway Development Corporation, March 2004.
9. Grabowski, M.R. "Risk in the 21<sup>st</sup> Century Marine Transportation System." *Transportation Research News*, July/August 1999.
10. Harrald, J.R., van Dorp, J.R., Mazzuchi, T.M., Grabowski, M.R., & Merrick, J. *Washington State Ferries Risk Assessment: Final Report*. Olympia, Washington: Blue Ribbon Panel of Washington State Ferries Safety, Washington State Department of Transportation, June 1999. <http://www.seas.gwu.edu/dorpir/Publications/TechnicalReports/WashingtonStateFerriesRiskAssessment/WSEFinalReport.pdf>, 16 July 2005.
11. Mohan, R., Lo, C., Kwong, C., Lo, M., Coskun, E., Hamzah, R., Lin, B., Bahsin, S., Yesiloglu, M. & Grabowski, M.R. *Washington State Ferries Risk Assessment Project, Puget Sound Accident-Incident Database Requirements and Design Document*. Olympia, Washington: Blue Ribbon Panel on Washington State Ferries Safety, Washington State Transportation Commission, December 1998.
12. Grabowski, M.R. *Risk Evaluation of Passenger Ship Traffic in the Port of Houston*. Houston, Texas: Port of Houston Authority. September 1997.
13. Grabowski, M.R. Safety Brokering: Seven Lessons Learned for Maritime Safety. *Proceedings of the Marine Safety Council*. Washington, D.C.: U.S. Coast Guard, 54:3, July 1997, 12-17.
14. Harrald, J.H., Mazucchi, T.M., Grabowski, M.R., Saebo, E., and Hutton, M. *Prince William Sound Risk Assessment Final Report*. Cleveland, Ohio: BP Oil Shipping Company, USA, December 1996.
15. Kelton, K. and Grabowski, M.R. *Navigation and Piloting Expert System Functional Requirements*. Department of Defense, Advanced Research Projects Agency/Lockheed Martin Technical Report, 15 April 1996.
16. Grabowski, M.R. *Prince William Sound Oil Transportation System Description*. Rensselaer Polytechnic Institute, Department of Decision Sciences and Engineering Systems Technical Report, 31 January 1996.
17. Grabowski, M.R., "Evolution of Intelligent U.S. Piloting Aids," *Proceedings of the 20th U.S.-Japan Marine Facilities Conference*, Washington, D.C., 25 September 1995.
18. Grabowski, M.R. "Prototype PC-Based Shipboard Piloting Expert System." In *U.S. Coast Guard 1994 Oil Pollution Research Grants*. U.S. Department of Transportation, Volpe National Transportation Systems Center. Report No. CG-D-27-96, DOT-VNTSC-USCG-96-2.1, September 1996, 321-345.
19. Grabowski, M.R., "Systems Can Mean Safety," *Proceedings of the Marine Safety Council*. Washington, D.C.: U.S. Coast Guard, 52:4, September/October 1995, 59-62.
20. Grabowski, M.R., "Minding the Helm." *Proceedings of the Marine Safety Council*. Washington, D.C.: U.S. Coast Guard, 52:3, May/June 1995, 10-11.
21. Harrald, J.R., Mazzuchi, T., and Grabowski, M.R. *Evaluating and Monitoring Maritime Risk: The Lower Mississippi River*. New Orleans, Louisiana: The Board of Commissioners of the Port of New Orleans. Final Report, May 1995.

**REPORTS, ARTICLES, AND NON-REFEREED CONFERENCE PROCEEDINGS, continued**

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22. Harrald, J.R., Mazzuchi, T., and Grabowski, M.R. *Evaluating and Monitoring Maritime Risk: The Development of a Vessel Risk Model for Puget Sound and the Straits of Juan de Fuca*. Olympia, Washington: State of Washington, Office of Marine Safety. Final Report, January 1994.
23. Sanquist, T.F. and Grabowski, M.R. *Alaska Maritime Human Factors Needs Assessment*. Anchorage, Alaska and Valdez, Alaska: Cook Inlet and Prince William Sound Regional Citizens Advisory Committees, 23 September 1994.
24. Seigel, S., Grabowski, M.R., and Case, J. *Conceptual Design for a USCG Multi-Agency Response Tactical Action Display (MARTAD) System*. Washington, D.C.: U.S. Coast Guard Research and Development Center, Report No. MSI/CAORF 60-9056-01, August 1994.
25. Grabowski, M. and Sanborn, S. *The Shipboard Piloting Expert System: Final Report, Volumes 1 (Final Report), 2 (Phase 1 Final Report) and 3 (SPES Shipboard Evaluation Plan)*, U.S. Department of Transportation, Maritime Administration, Report Nos. MA-RD-840-93003, 93004, and 93005, May 1994.
26. Seigel, S., Harrald, J. R., Grabowski, M.R., Hammel, T. *Final Report: Decision Making Training Alternatives for Marine Spill Response Command Post Personnel* Washington, D.C.: U.S. Department of Transportation, U.S. Coast Guard, Report No. MSI/CAORF 60-9051-01A, January 1994.
27. Grabowski, M. *U.S. Coast Guard Multi Agency Response Tactical Action Display (MARTAD) System, Task A: Prototype System Concepts*, Department of Decision Sciences and Engineering Systems Technical Report 37-93-333, December 1993.
28. Wilkinson, J., Ramaswamy, S., Grabowski, M., Harrald, J., and Mazzuchi, T. *Evaluating and Monitoring Maritime Risk: Causal Analysis of Oil Spills in State of Washington Waters*. Department of Decision Sciences and Engineering Systems, Technical Report 37-93-249, July 1993.
29. Grabowski, M. *Evaluating and Monitoring Maritime Risk: Literature Review and Analysis*. Department of Decision Sciences and Engineering Systems, Technical Report 37-93-248, 31 May 1993.
30. Grabowski, M., *On Scene Commander/Rapid Response Team Decision Making Training Objectives*. Avery Point, Connecticut: U.S. Department of Transportation, Coast Guard Research and Development Center, May 1993.
31. Ramaswamy, S., and Grabowski, M.R., *Summary of Responses to the Committee on Advances in Navigation and Piloting's Letter of Inquiry*, unpublished contract report to the Marine Board, National Research Council, Washington, DC, July 1992.
32. Grabowski, M., *The Shipboard Piloting Expert System: Simulator and Shipboard Evaluation Plan*, Department of Decision Sciences and Engineering Systems, Rensselaer Polytechnic Institute, Technical Report 37-92-380, July 1992.
33. Grabowski, M., *The Shipboard Piloting Expert System: Shipboard Implementation and Evaluation Plan*, Department of Decision Sciences and Engineering Systems, Rensselaer Polytechnic Institute, Technical Report 37-91-265, April 1991.
34. Grabowski, M., Sanborn, S., and M. Dowd, *The Shipboard Piloting Expert System: Phase 1 Interim Technical Report*, Department of Decision Sciences and Engineering Systems, Rensselaer Polytechnic Institute, Technical Report 37-91-279, August 1991.
35. Grabowski, M. and Sanborn, S., *The Shipboard Piloting Expert System: Design Report*, Department of Decision Sciences and Engineering Systems, Rensselaer Polytechnic Institute, Technical Report 37-90-245, June 1990.
36. Grabowski, M., Dowd, M., and Sanborn, S., *The Shipboard Piloting Expert System: Functional Requirements Document*, Department of Decision Sciences and Engineering Systems, Rensselaer Polytechnic Institute, Technical Report 37-90-229, March 1990.
37. Grabowski, M., *The Piloting Expert System: Decision Support to Masters, Pilots, and Mates on Watch at Sea and in Close Waters: Technical Report and User's Manual*, US Department of Transportation, Maritime Administration, Reports No. MA-RD-840-88008 and 88009, March 1988.

**COMPLETED WORKING PAPERS--PAPERS UNDER REVIEW**

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1. Dhami, H. & Grabowski, M.R., "Technology Impacts over Time in a Safety-Critical System," revised for *Information and Management*, July 2009.
2. Merrick, J. & Grabowski, M.R. "Finding Leading Indicators of Safety in Marine Transportation with Value Focused Thinking," revised for *Risk Analysis*, July 2009.
2. You, Z., Song, H., Wang, H., Grabowski, M.R. & Merrick, J.R. "Sailing on Friday: Developing the Link between Organizational Safety Culture and Performance in Safety-Critical Systems," revised for *IEEE Transactions on Systems, Man & Cybernetics, Part A, Systems and Humans*, April 2009.

**PROFESSIONAL AND PUBLIC LECTURES**

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*Invited presentations*

1. "Highly Reliable Crisis and Disaster Systems." Keynote address to the 6<sup>th</sup> *International Conference on Information Systems for Crisis Response and Management, ISCRAM '09*, Gothenburg, Sweden, 8-13 May 2009.
2. "Leading Indicators of Safety in Virtual Organizations." Keynote address. SINTEF, Norwegian Scientific and Technical Foundation, Symposium on Human Factors and Control, Halden, Norway, 19-20 April 2006.
3. "Early Adoption of Technology Performance Impacts: AIS on the St. Lawrence Seaway," *Marine Transportation Systems Research and Development Technology Conference*, Washington, D.C., 15-17 November 2004.
4. "Display of AIS Information," *International Association of Lighthouse Authorities Workshop on Training the VTS Operator for the AIS World*, Rotterdam, the Netherlands, 3-7 February 2003.
5. "The Future of Integrated Bridge Systems," *Integrated Bridge and Navigation Systems—User Enhanced Designs*. Conference of the Nautical Institute. London, 13-14 November 2002.
6. "Navigation Aids and the Human Element: The Intelligent Bridge," *Safer Seas: Conference on Marine Safety and Environmental Protection*, University of West Brittany, Brest, France, 11-12 March 2002.
7. "Teaching Effectiveness: What Works? What Doesn't?" *Maine Maritime Academy Teaching Effectiveness Roundtable*, Castine, Maine, 26 February 2002.
8. "Risk Mitigation in Complex Systems," *21<sup>st</sup> Century Driver and Truck Alliance Roundtable on Risk Taking and Systems Accidents*, American Trucking Associations, Arlington, Virginia, 1 August 2000.
9. "Performance Evaluation of Embedded Intelligent Ship Control Systems," *U.S. Office of Naval Research Workshop on Intelligent Ships*, Navy Center for Applied Artificial Intelligence and U.S. Office of Naval Research, Washington, D.C., 6 March 2000.
10. "Distributed Intelligent Navigation Systems," *Forum Captain Computer II*, Hamburg, Germany; Workshop on Artificial Intelligence and Optimization for Marine Applications, Institute fur Schiffbau Hamburg, Germany, 29 January 1999.
11. "The Marine Information Highway: Intelligent Real Time Bridge Systems," *U.S.-Canadian Safe Marine Transportation (SMART) Forum*, Vancouver, British Columbia, 11-12 June 1998.

**PROFESSIONAL AND PUBLIC LECTURES**

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*Invited presentations, continued*

12. "Accidents, Incidents, and Lessons Learned for Maritime Safety." *American Petroleum Institute's Workshop on Enhancing Maritime Safety*. New Orleans, Louisiana, 26 June 1997.
13. "Hydrographic Charting for U.S. Ports and Waterways." Testimony before U.S. House of Representatives, Subcommittee on Fisheries Conservation, Wildlife, and Oceans. Washington, D.C., 24 April 1997.
14. "The Prince William Sound Risk Assessment Project." *Annual British Petroleum Safety Conference*. Skytop Lodge, Skytop, Pennsylvania, 23 April 1997.
15. "Mitigating Human and Organizational Risk," *Biannual Meeting of the American Petroleum Institute*, Washington, D.C., 8 October 1996.
16. "Development and Evolution of Intelligent Piloting Systems," National Transportation Safety Board Forum on Integrated Bridges, Reston, Virginia, 5-6 March 1996.
17. "Evolution of Intelligent U.S. Piloting Aids," *20th Meeting of the U.S.-Japan Marine Facilities Panel*, Washington, D.C., 25 September 1995.
18. "Minding the Helm: Advances in Marine Navigation and Piloting," *British Columbia/States Oil Spill Task Force Annual Meeting*, San Diego, California, 18 July 1995.
19. "Handling Oil in the Modern World: A Systems Approach," *Establishing Quality Spill Prevention Systems Conference*, U.S. Coast Guard/State of Washington Office of Marine Safety, Seattle, Washington, 3 November 1994.
20. "Evaluating Human and Organizational Error: What Can Be Done?" *Prevention First: California State Lands Commission Oil Spill Prevention Conference*, Long Beach, California, 22 September 1994.
21. "The State Maritime Academies: Where Should They Be Going?" Massachusetts Maritime Academy Board of Visitors, Boston, Massachusetts, 7 June 1994.
22. "Human Factors in the Maritime Industry--A Research Perspective," U.S. Coast Guard/State of Washington West Coast Conference on Human Factors, Seattle, Washington, 19 November 1993.
23. "Decision Support and Organizational Forms in High Velocity Environments," Hong Kong University of Science and Technology, 12 November 1993.
24. "Maritime Industry--Aerospace Technology Transfer Opportunities," US Department of Transportation, Maritime Administration, Ship Operations Cooperative Program conference, Baltimore, 8 October 1992.
25. "Shipboard Manning: How Low Can You Go?," MIT International Shipping Colloquium series, Boston, 24 September 1992.
26. "Human and Organizational Error in Maritime Systems: Piloting and Human Resource Allocation Modeling," presentation at Fourth BiAnnual Meeting of the Human and Organizational Error Program, University of California at Berkeley, 17-18 August 1992.
27. "An Application of Expert Systems Technology: The Shipboard Piloting Expert System," invited panel on Technological Advances in the Management of Hazardous Materials Transportation, Spring ORSA/TIMS meeting, Ft. Lauderdale, Florida, 29 April 1992.
28. "Shipboard Navigation and the Human Factor," US Coast Guard, Directorates of Merchant Vessel Personnel (M), Navigation (N) and Engineering, Research and Development (ERDA), 24 April 1992 and to National Transportation Safety Board, Washington, DC, 24 April 1992.
29. "Prevention of Maritime Casualties: The Role of Technology," Oil Pollution Act of 1990 (OPA-90) Research and Development Advisory panel meeting, Kings Point, New York, 3 March 1992.

*M. Grabowski*

## **PROFESSIONAL AND PUBLIC LECTURES**

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### ***Invited presentations, continued***

30. "The Advent of Second Generation Expert Systems," closing address, American Association of Librarians, Washington, DC, 17 October 1990.
31. "Who Should Build Expert Systems--Knowledge Engineers or Experts?" Association for Information Systems Technology dinner meeting, Syracuse, New York, 15 November 1989.
32. "Knowledge Acquisition for Management," Expert Systems for Management Conference, Syracuse University, 26 October 1989.
33. "Challenges for Second Generation Expert Systems," Northern Illinois University Graduate Colloquium Series, DeKalb, Illinois, 17-18 July 1989.
34. "Piloting and Navigation Expert Systems," presentation to the National Academy of Sciences, Marine Board, New Orleans, 15 June 1989.
35. "Methodological Issues in Expert Systems: Knowledge Acquisition," CORS/ORSA/TIMS, Vancouver, British Columbia, 8-10 May 1989.
36. "Artificial Intelligence and Expert Systems," Society of Logistics Engineers, Garden City chapter, Garden City, New Jersey, 19 April 1988.

## **MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS**

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Association for Information Systems (AIS)	September 2000 to present
The Institute of Management Science/Operations Research Society of America (INFORMS) <i>--Secretary/Treasurer TIMS College on IS</i>	January 1987 to present  September 1992 to September 1995
The Institute of Electrical and Electronic Engineers Decision Sciences Institute	February 1983 to present March 1989 to present
Society of Naval Architects and Marine Engineers American Association of Artificial Intelligence The Institute of Navigation	February 1977 to 1998 July 1985 to July 1989 June 1989 to 1995

## **COLLEGE, COMMUNITY, AND PROFESSIONAL SERVICE**

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### **COLLEGE SERVICE**

#### **1. College Service (Le Moyne College)**

Core Curriculum Task Force, Ex Officio Member	September 2009 - present
Director, Zogby Center for Contemporary Catholic Trends	January 2007 - present
Coordinator, Bank of New York Mellon – Le Moyne Technology Partnership	January 2008 - present
Coordinator, Le Moyne College SAP University Alliance Program	July 2006 - present
Director, Information Systems program	September 2001 - present
Coordinator, IS Program Industry Advisory Board	September 2001 - present
Information Systems program internship coordinator	September 1991 - present
Presidential Search Committee	September 2007 – 2008
Member, committee to develop Pastoral Ministry program	September 2007 - 2008
Strategic Planning Committee	June 2007 – June 2008
Coordinator, IS program with new Computer Science major, minor	September 2006 to 2008
MBA Advisory Committee	September 2003 – August 2006
Management Division Curriculum Committee	September 2004 - 2006
Acting Chair, Accounting Department	September 2003 – May 2004
College Reorganization Committee	May 1999 - March 2000
Faculty Senate Finance Committee	September 1997 - June 1999
Academic Vice President Search Committee	October 1996 - March 1997
Chair, Faculty Senate Academic Policies and Procedures subcommittee evaluating administrators (Academic Vice President)	Spring 1996
Heights Project Steering Committee (college self assessment)	Fall 1992 - Spring 1993

**COLLEGE, COMMUNITY, AND PROFESSIONAL SERVICE, *continued***

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**COLLEGE SERVICE**

***1. College Service (LeMoyne College), continued***

Faculty Senate, Professional Rights and Welfare Committee	Fall 1992 - Spring 1993
Enrollment Management Advisory Board	Spring 1993
Middle States Self Study Steering Committee	May 1990 - April 1992
Le Moyne College Judicial Board	Fall 1989 - Fall 1992
Student Life Advisory Board	Fall 1990 - Spring 1993
Biology department curriculum review committee	Summer 1990
Le Moyne College Elderhostel	Summer 1989 - 1994

***2. Business Department Service (Le Moyne College)***

Information Systems program director	Fall 2001 - present
Information Systems, Business student advisor (~45 students)	Fall 2001 – present
AACSB Instructional Resources team member	Fall 2003 – Spring 2004
MIS Concentration Coordinator	Spring 1993 - 2001
AACSB Candidacy Intellectual Contributions Team Leader	Spring 1998 to Spring 2000
Team Leader, Instructional Resources and Mission Accomplishment Team, AACSB Precandidacy Process	Fall 1996 - Spring 1998
Business Department Resource Committee	Fall 1994 -2000
Chair, Business Department Curriculum committee	Fall 1992 - Spring 1993
Business Department Curriculum committee member	Fall 1990 - Spring 1992

***3. Doctoral Committee Service (Rensselaer)***

Haochen Wang, Co-chair	August 2012
Zhuyu You, Co-chair	May 2010
Huawei Song, Co-chair	December 2009
Haiyuan Wang Co-chair	May 2008
Premnath Ayyalasomalajula Co-chair	May 2007
Hemil Dhami Co-chair	August 2005
Sudhendar Hanumantharao Co-chair	August 2003
Tuncay Bayrak Co-chair	May 2002
Erman Coskun Co-chair	August 2001
Diane Jessen Member	May 1998
Steven Sanborn Co-chair	May 1995
Sunro Lee Member	May 1993

***4. Master's Theses (Rensselaer)***

LTjg Michael Steward, USCG	May 2007
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**COMMUNITY SERVICE**

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1. **Cazenovia Youth Athletic Association** *September 2000 – present*
  - Board member (2003-2004)
  - Junior high/high school recreational basketball coach (2003)
  - Volunteer (2000 – present)
  
2. **Syracuse Rescue Mission** Volunteer *November 2003 – present*
  - Food Service, Mail Room volunteer
  - Thrifty Shopper retail store volunteer
  
3. **Cazenovia Youth Soccer Association**
  - Board member *January 2000 – June 2004*
  - Referee coordinator *April 2003 – 2006*
  - Registrar *April 2000 - 2002*
  
4. **Cazenovia Middle School-High School PTA**
  - Membership Chair *September 2001 - August 2005*
  - Treasurer *September 2005 - 2007*
  
5. **Central New York Girl Scouts**
  - Assistant Leader *September 1998 - 2000*
  
6. **Burton Street Elementary School Cazenovia, New York**
7. **Green Street Middle School Cazenovia, New York**
  - Volunteer, Elementary Education *September 1995 – 2000*
  
8. **St. James Church, Cazenovia, New York**
  - Parish Coordinator/Representative, *January 2001 - present*  
Pastoral Care Area committee  
(committee consolidating 4 parishes in region)
  - Lector, Eucharistic Minister *October 1989 – present*
  - Parish Council member *September 2005 - 2008*
  - Just Faith Social justice committee member *September 2003 – 2006*
  - Finance Committee member *December 1998 – June 2004*
  - Catechist *October 1995 – May 2000*
  - Liturgy Committee member *October 1992 – October 1996*

**PROFESSIONAL SERVICE**

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**Editorial Boards:**

*European Journal of Pure and Applied Mathematics* 2007 – present  
*International Journal of Mobile Learning and Organization* 2007 - present

**Journal Reviewer:**

*Decision Sciences*  
*International Journal of Human-Computer Studies*  
*IEEE Transactions on Systems, Man, and Cybernetics*  
*Risk Analysis*  
*Organization Studies*  
*International Journal of Intelligent Systems in Finance, Accounting, and Management*  
*Production and Operations Management*  
*Information Technology and Decision Making*

**Doctoral Committees (outside of Rensselaer):**

*Torkel Soma, Norwegian Technical University, Trondheim, Norway, February 2005*  
*Hala Annabi, School of Information Studies, Syracuse University, May 2005*

**2 August 2009**