

MARTHA R. GRABOWSKI

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EDUCATION

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

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

TEACHING AND RESEARCH INTERESTS

Information systems, embedded intelligent real-time systems, transportation systems, human factors in systems design, the impact of technology in safety-critical systems, risk analysis and risk mitigation in large-scale systems, the role of human and organizational error in high consequence settings, data and risk analytics in complex, heterogeneous data environments, high reliability virtual organizations, decision support systems, organizational impact of information technology, use of information systems for competitive advantage, IT strategy, future digital systems.

ACADEMIC EXPERIENCE

LE MOYNE COLLEGE Syracuse, New York

1987 to present

Madden School of Business, Information Systems Program

McDevitt Distinguished Chair in Information System
McDevitt Chair, Associate Chair in Information Systems
Chair, Business Administration Department
Director, Information Systems Program
Coordinator, Le Moyne College SAP, IBM, Oracle University Alliances
Director, Le Moyne – Zogby Center for Contemporary Catholic Trends
Acting Chair, Accounting Department
Joseph C. Georg Endowed Professor
Assistant, Associate Professor, Professor

September 2014 - present
September 2010 - 2014
September 2009 – August 2012
September 2001 - present
July 2006 – present
January 2007 - 2010
September 2003 – May 2004
September 1994 - August 1997
September 1987-92, 1992- 98, 1998 - present

Information Systems (Undergraduate) Program, MS Information Systems Program 2001 – present

Founded (2001) and led a now-#18 *US News and World Report*-ranked undergraduate Information Systems major (2019-20) and an MS Information Systems program (2014). Hired and mentored junior faculty and forged partnerships with Madden School and other Le Moyne College departments and programs, including a joint major with Computer Science; and cross-listed and dual major programs and courses with Accounting, Business Analytics, Finance, Human Resource Management, Management and Leadership, Marketing and Nursing. Managed 30-member Industry Advisory Board and liaison with 20+ industrial partners, creating internships and full-time roles for students, graduates and industry partners. Inaugurated alliances with technology leaders and vendors, including IBM, SAP and Oracle. Increased graduate enrollment from program inception (0) to 25 students within 5 years. Teach undergraduate and graduate courses in information systems, systems analysis and design, database systems, project management, enterprise resource planning (ERP) and distributed systems, distributed and network systems, research methods, artificial intelligence, decision support systems, risk management, and information technology strategy.

RENSELAER POLYTECHNIC INSTITUTE Troy, New York

1988 to present

Department of Industrial and Systems Engineering (name change)

February 2010 to present

Department of Decision Sciences & Engineering Systems

June 1989 to February 2010

Research Faculty/Senior Research Scientist (Research Professors eliminated)
Research Professor, Associate, Assistant, Visiting Professor

July 2014 to present
2001-2014, 1995-2001, 1989-1995, 1988-89

Lead various research teams examining the impact of technology in safety-critical systems, risk analysis and risk mitigation in large-scale systems, the role of human and organizational error in high consequence settings, financial cybersecurity in complex, heterogeneous data environments and high reliability virtual organizations(see Research Projects, below).

INDUSTRIAL EXPERIENCE

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

HONORS AND AWARDS

American Bureau of Shipping , Member	2001-2003
National Academy of Sciences, National Research Council Lifetime National Associate award	2003
Navy Achievement Medal	1988
General Electric Management Award	1987, 1984
Industry/Professional Society Awards	
Upstate Venture Ecosystem 'Community Catalyst' (<i>Entrepreneurship</i>) Award	2017
Collegiate Science Technology Entry Program (CSTEP) Mentor Award	2013
Technical Alliances Council (NY) – ACM/IEEE Educator of Year	2011
Le Moyne College	
Inaugural McDevitt Chair in Information Systems	2012-present
Ignatian Service (Honorary Alumnus) Award	2010
Bene Merenti Service Award	2007
MBA Teacher of the Year	1999
Joseph C. Georg Endowed Professor	1994 - 1997
Rensselaer Polytechnic Institute	
Edith and Del Karger Dissertation award (Advisor to Zhuyu You)	2011
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
U.S. Dept of Transportation, Academic Advisory Board	2019-present

BOARDS

1. National Research Boards

National Academies of Science, Engineering and Medicine Washington, DC

- a. Transportation Research Board/Marine Board, *Member* 1992-1999; 2001-2008, 2015-present
Vice Chair and Chair, Marine Board 2004 – 2008, 2018-present, 2020-2022
Marine Board Executive Board; TRB Executive Committee 1994-1995, 2002-2008; 2006-2008, 2018-2014-2015
- b. Planning Committee, Workshop on Passenger Vessel Safety 2014-2015
- c. Planning Committee, Workshop on Navigation in the Arctic 2011-2012
- d. Committee on Marine Safety & Human Factors 2011 – present (inactive)
- e. Task Force on Marine Safety and Human Factors 2008 – 2011

2. National Policy Committees

National Academies of Science, Engineering & Medicine Washington, DC

- a. Member, Committee to Review US Coast Guard Stability Regulations 2018-present
- b. Member, Committee to Review Impediments to US Flag Registry 2015 - 2016
- c. *Chair*, Oil Spill Response in the Arctic, policy study 2012 – 2014
- d. *Chair*, Naval Engineering in the 21st Century policy study 2009 - 2011
- e. *Vice Chair*, Tsunami Readiness Assessment committee 2008 – 2011
- f. *Chair*, Committee on Evaluating Shipboard Display of Automated ID Sys 2001-2003
- g. *Chair*, Committee on Advances in Piloting and Navigation 1991-1994 (chair 1993-94)
- h. Committee on Effect of Smaller Shipboard Crews on Maritime Safety 1998-1990

3. Corporate, Technical, Academic and Safety Boards

U.S. Department of Transportation, Maritime Administration, Academic Advisory Board 2019-present

St. Aloysius/Mangalore, India School of Information Tech & Bioinformatics Advisory Board 2015-present

MS, Computational Science Board of Studies 2019-present

U.S. Department of Homeland Security, Center of Excellence for Secure and Resilient Maritime Commerce

Stevens Institute, Hoboken, New Jersey Advisory Board 2010- present

U.S. Coast Guard Prevention through People Advisory Board 1995-2000

U.S. Coast Guard Navigation Safety Advisory Council 1994-1998

4. Editorial Boards:

European Journal of Pure and Applied Mathematics 2007 – present

International Journal of Mobile Learning and Organization 2007 – 2017

TransNav, International Journal of Navigation and Transportation Safety 2015-present

RESEARCH PROJECTS AND GRANTS

Augmented Reality and Unmanned Aerial Systems: Municipal Firefighting

July 2019 – December 2020

2-year McDevitt Information Systems Research project with the City of Syracuse and the Syracuse Firefighters to develop, test and integrate unmanned aerial systems (UAS), augmented reality and commercial building GIS data to provide Syracuse firefighters with visualizations and decision support prior to fighting municipal building fires. Research explores the impact of wearable augmented reality displays on operator mobility, performance, situation awareness and communication in safety-critical settings.

Navigating the New Arctic—Emergency Response in the Arctic: Investments for Global Capabilities, Local Benefits Sept 2018 – Aug 2021

3-year NSF CMMI Collaborative Research project with University of Alaska/Anchorage and North Carolina State University, creating new Operations Research (OR) models that identify where and when to make critical infrastructure investments to improve Emergency Response in the Arctic (ERA), integrating those investments into local communities. This project explores an innovative methodology linking social science research in local Arctic communities that informs the creation of the OR models and, in later stages of the work, validates the results of the models, linking economic, social, cultural, and technical feasibility and desirability with local knowledge. The results of this research will transform our knowledge on how to design ERA systems that have positive impacts in the local communities where the supporting infrastructure is built and maintained.

RESEARCH PROJECTS AND GRANTS, continued

Marine Transportation Risk Data Analytics and Visualization

September 2017 – August 2018

1 year research project for U.S. Department of Homeland Security, U.S. Coast Guard Headquarters/Marine Safety Center and Sector New Orleans/District 8 (DHS USCG Task Order HSCG23-17-J-MSR065) to develop new data analytics methods and visualizations to assist port and U.S. Coast Guard decision makers in managing the growing risks in global marine transportation systems and supply chains. This research project applied machine learning, classification, clustering and text mining techniques to identify, repair and report inaccurate and inconsistent marine casualty and incident data in the Coast Guard's Marine Information for Safety and Law Enforcement (MISLE) database. The project also developed a prototype data analytics and visualization architecture and decision support system for U.S. Coast Guard risk and safety managers in New Orleans and the Lower Mississippi River.

Evaluating Wearable Immersive Augmented Reality (WJAR) Technology in Safety-Critical Systems

August 2016 – December 2020

4.5 year research project with Maritime Institute of Training and Graduate Studies-Pacific Maritime Institute (MITAGS-PMI), Linthicum Heights, MD, an operational ship simulator, and the New York City Department of Transportation/Staten Island Ferry to evaluate the impacts of wearable, immersive augmented reality technology, minimal and mobile technology, and varying levels of automation on operator performance and situation awareness in safety-critical systems. Multimedia data collection and analysis from ship's masters, mates and pilots in simple and complex navigational scenarios over time under varying conditions of stress, fatigue and vigilance.

Autonomy in Unmanned Aerial Systems (UAS)

May 2016 – May 2020

A 4-year McDevitt Information Systems research project with University of Alaska, Fairbanks and U.S. Department of Homeland Security/U.S. Coast Guard to examine the perceptions and processes of autonomous unmanned aerial systems (UAS) and their pilots in remote and infrastructure-poor settings such as Arctic oil spill response and search and rescue.

Linking Team Fluidity to Organizational Performance in Team-Centric Organizations

August 2014 – June 2019

5-year NSF Infrastructure Management and Extreme Events project CMMI/ IMEE 10-1638 to extend and test theories that link performance processes and outcomes within and across levels of team-centric organizations. The project develops and evaluates new theory and methodologies to investigate multi-level linkages that are potentially dynamic and reciprocal, considering both endogenous and exogenous emergent processes in post-disaster debris removal operations. This setting is characterized by highly distributed, interlocking teamwork within a hierarchical organization that employs hundreds of teams and thousands of individuals within the teams in the loading and unloading of debris. The study contributes to team-based, fluid organization and process-oriented perspectives on teamwork following large-scale disasters.

Immersive, Wearable Ubiquitous Computing in Extreme Environments

November 2013 - December 2017

4-year research project as a Google Glass Explorer to examine use of immersive, wearable, location-based ubiquitous computing in extreme settings, including vessel navigation; remote locations; oil spill response; Arctic search and rescue; emergency medicine; and virtualization.

Dynamic Network Modeling for Arctic Resource Allocation (DMARA)

May 2013 – June 2018

5-year research project for U.S. Department of Homeland Security Center of Excellence Command, Control and Interoperability Center for Advanced Data Analysis (CCICADA) (<http://ccicada.rutgers.edu/>) and U.S. Coast Guard District 17/Alaska to analyze role of dynamic networks, scheduling and resource optimization/allocation in support of Coast Guard Arctic missions for oil spill response, search and rescue, marine transportation and resource deployment in large-scale, mission critical systems.

Responding to Oil Spills in Arctic Marine Environments

November 2012 – June 2014

Chair of 2-year National Academies policy study for 8 sponsors – the American Petroleum Institute, U.S. Arctic Research Commission, Bureau of Ocean Energy Management, Bureau of Safety and Environmental Enforcement, Marine Mammal Commission, National Oceanic and Atmospheric Administration, Oil Spill Recovery Institute and the U.S. Coast Guard -- to assess the current state of science regarding oil spill response and environmental assessment in the Arctic region. The project reviewed new and on-going research activities in the public and private sector to identify opportunities and constraints for advancing oil spill research, described promising new concepts and technologies for improving oil spill response, and recommended strategies to advance research and address information gaps.

M. Grabowski

RESEARCH PROJECTS AND GRANTS, continued

McDevitt Chair in Information Systems; Distinguished Chair (2014 – present) September 2012 – present
Developed interdisciplinary undergraduate research program supporting 32 undergraduate and MSIS McDevitt Information Systems (IS) Scholars. Developed undergraduate peer-reviewed research publication program resulting in 3 peer-reviewed publications, 2017-2019. McDevitt IS research focused on the use of social media in extreme settings; resource allocation models and environmental impacts in the Arctic; shipping trends in the Bering Strait, Big Data challenges in financial services and distributed logistics supply chains; health information systems interoperability; use of immersive, hands free Google Glass technology in emergency medicine and remote and infrastructure-poor settings; integration of Eastern and Western medicine; and human systems integration and operator performance challenges in swarm unmanned aerial systems (UAS) operations in remote settings. Mentored 8 McDevitt IS Scholars who participated in National Academies' workshops in October 2012, 2015 and 2016; and National Academies Board meetings in 2016, 2017 and 2018; 2 McDevitt IS Scholars who participated in National Academies committee meeting in Fairbanks, Alaska in March 2013; 1 McDevitt IS Scholar who participated in working meetings with Alaska industry and CG D17 representatives, Anchorage, Juneau, Alaska, November 2013. McDevitt IS Scholars presented their research and presented their Honors Research, 2013-2019.

Web-based Interactive Technologies in Extreme and the Response to Warnings for Extreme Events June 2011 – June 2014
3-year NSF project CMMI-1162409 to study the role of social media in warning response for extreme events, including data from #SuperStorm Sandy in October 2012 and from the March 11, 2011 magnitude 9.0 earthquake and tsunami in Sendai, Japan. Using on-site data collected at two tsunami warning centers (TWCs) in Alaska and Hawaii, as well as 12 million instances of social media data (Twitter tweets), the project mapped the data collected to the social processes of warning decision making using graphic theoretic models to extract emergency-relevant information from the data.

Team Fluidity and Organizational Performance in Virtual Organizations: Large Scale Debris Removal September 2011 – August 2014
3-year project for U.S. Army Corps of Engineers investigating the role of team fluidity and organizational performance in loosely structured virtual organizations. Project investigates the role of team interdependence, complexity and external volatility in virtual organizational performance, within the context of large-scale, post-disaster debris removal, in the wake of a burst of 64 tornadoes in the state of Alabama in 2011. Comparative data from a series of U.S. East Coast storms, including that from #SuperStorm Sandy in October 2012, were assessed to develop multilevel analyses of organizational, team and individual performance to benchmark and predict performance.

Business Process Analysis Template for Next Generation Short-Haul Trucking October 2010 – May 2011
9-month project for Riccelli Enterprises to develop an information architecture and business process template for next generation short-haul trucking, including a vendor analysis of new real-time monitoring and control technology. Recommendations and a roadmap to improve the firm's business processes, information architecture, business standards and practice were developed. The project also examined the ethical questions associated with disruptive new technology introduction that spurs exponential market growth with controversial environmental impacts. An inaugural case study in the Le Moyne College Business Case series was developed from this project.

Financial Cybersecurity in Complex, Heterogeneous Data Environments June 2010 – June 2012
2-year project with the Bank of New York Mellon, Morgan Stanley and the Financial Services Sector Coordinating Council's R&D Committee to integrate design and operations knowledge of secure financial networks, and then assess the observed patterns using a variety of analytical methods. The approach utilizes three techniques: 1) connecting historical data, real-time monitoring data and other data sources to population knowledge and industrial databases of known security risks through data cleansing, data mining and integration; 2) employing time series and statistical estimates, along with baseline behavioral models developed using Geometric Brownian Motion and probabilistic methods to establish baseline use of the cyber systems; 3) fusing the results and simulating the cyber systems concerned using software agents to detect structural risks such as load-related weaknesses and behaviorally-based disruptions, based on the population and behaviorally-based models.

Naval Engineering in the 21st Century February 2009 – June 2011
Chaired a 2-year policy study by the National Academies/National Research Council committee to review the future of naval engineering in the 21st century for the U.S. Navy's Office of Naval Research (ONR). The study evaluated the current state of U.S. naval engineering science and technology (S&T) activities and proposed improvements in innovation, research and educational capabilities for future needs of the Navy.

M. Grabowski

RESEARCH PROJECTS AND GRANTS, continued

Tsunami Warning and Forecast Systems and Tsunami Preparedness July 2008 – June 2011
Vice Chair for a 3-year National Academies/Ocean Studies Board study for the U.S. Congress and the National Oceanic 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 2011
8-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 – June 2009
3-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; the role of human and organizational error in this large safety-critical system; and the generalizability of the safety culture-safety performance models and results developed.

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.

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RESEARCH PROJECTS AND GRANTS

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.

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).

M. Grabowski

RESEARCH PROJECTS AND GRANTS

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 -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.

M. Grabowski

PUBLICATIONS

https://www.researchgate.net/scientific-contributions/12161068_Martha_Grabowski

BOOKS—AUTHORED, EDITED, NATIONAL ACADEMIES COMMITTEE REPORTS/LEADERSHIP

Updating U.S. Coast Guard Vessel Stability Regulations and Guidance, 2019. Washington, D.C.: National Academies of Science, Engineering & Medicine, Transportation Research Board Special Report 335, August. (committee member).

Improvements to U.S. Coast Guard Stability Regulations. 2018. Washington, D.C.: National Academies of Science, Engineering & Medicine. Transportation Research Board Special Report 328, August, report to U.S. Coast Guard (committee member).

Impediments to U.S. Flag Ship Registry. 2016. Washington, D.C.: National Academies of Science, Engineering & Medicine. Letter report to U.S. Coast Guard (committee member).

Responding to Oil Spills in U.S. Arctic Marine Environments. 2014. Washington, D.C.: National Academies Press (committee chair).

<http://www.nap.edu/catalog/18625/responding-to-oil-spills-in-the-us-arctic-marine-environment>, retrieved 23 May 2014.

Safe Navigation in the U.S. Arctic: Summary of a Conference. 2012. Washington, D.C.: Transportation Research Board, October. <http://onlinepubs.trb.org/onlinepubs/conf/CPW11.pdf>, retrieved 30 June 2013 (planning committee member)

Naval Engineering in the 21st Century: The Science and Technology Foundation for Future Naval Fleets. 2011. Washington, D.C.: National Academy Press (committee chair).

Tsunami Warning & Preparedness: An Assessment of the U.S. Tsunami Program and the Nation's Preparedness Efforts. 2011. Washington, D.C.: National Academy Press (committee vice chair).

Shipboard Automatic Identification System Displays: Meeting the Needs of Mariners. 2003. Washington, D.C.: National Academy Press (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. 1997.(co-editor with W.A. Wallace), Greenwich, Connecticut: JAI Press.

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

Minding the Helm: Marine Navigation & Piloting. 1994. Washington, D.C.: National Academy Press. (committee chair, 1993-1994) <https://www.nap.edu/read/2055>.

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

Crew Size and Maritime Safety. 1990. Washington, D.C.: National Academy Press. (Committee member). <https://www.nap.edu/catalog/1620/crew-size-and-maritime-safety>.

REGULAR LENGTH ARTICLES: PUBLISHED OR ACCEPTED

1. Rowen, A.T., Grabowski, M.R., Rancy, J.P., Crane, A.P. 2019. [Impacts of Wearable Augmented Reality Displays on Operator Performance, Situation Awareness and Communication in Safety-Critical Systems](#). *Applied Ergonomics*, 80, October, 17-27. Cabell's Impact Factor: 2.435
2. Grabowski, M. & Roberts, K.H. 2019. [Reliability-Seeking Virtual Organizations: Challenges for High Reliability Organizations and Resilience Engineering](#). *Safety Science*, 117, August, 512-522. Cabell's Impact Factor: 2.246; Cabell's Acceptance Rate 25% Management, 10% Psychology. <http://dx.doi.org/10.1016/j.ssci.2016.02.016>
3. Rowen, A.T., Grabowski, M.R. & Rancy, J-P. 2019. Through the Looking Glass(es): Impacts of Wearable Augmented Reality Displays on Operators in a Safety-Critical System. Forthcoming in *IEEE Transactions on Human-Machine Systems*, 20 May 2019. Cabell's Impact Factor: 2.563 Cabell's Acceptance Rate Computer Science, Management 24%
4. Choo, A. & Grabowski, M. 2018. [Linking Workplace Safety to Operational Disruptions: A Moderated Mediation Analysis in Commercial Vessels](#). *Journal of Business Logistics*, 39:4, December 292-328. DOI:10.1111/jbl.12195, Cabell's Impact Factor: 2.891; Cabell's Acceptance Rate Computer Science, Marketing 8%
5. Zoli, C., Steinberg, I.J., Grabowski, M. & Hermann, M. 2018. [Terrorist Critical Infrastructures, Organizational Capacity and Security Risk](#). *Safety Science*. 110, Part C, December, 121-130. Cabell's Impact Factor: 2.246; Cabell's Acceptance Rate 25% Management 10% Psychology
6. Grabowski, M.R., Rowen, A.T. & Rancy, J.P. 2018. [Evaluation of Wearable, Immersive Augmented Reality Technology in Safety-Critical Systems](#). *Safety Science*, 103, March. 23-32. Cabell's Impact Factor: 2.246; Cabell's Acceptance Rate 25% Management 10% Psychology
7. Garrett, R.A., Sharkey, T.C., Grabowski, M.R. & Wallace, W.A. 2017. [Dynamic Resource Allocation to Support Oil Spill Response Planning for Energy Exploration in the Arctic](#). *European Journal of Operational Research*, 257:1, February 2017, 272-286. Cabell's Impact Factor: 3.297; Cabell's Acceptance Rate 8-9%
8. Grabowski, M.R., Rizzo, C. & Graig, T. 2016. [Data Challenges in Dynamic, Large-Scale Resource Allocation and Logistics Systems for Oil Spill Response in Remote Regions](#). *Safety Science*, 87, August. 76-86. Cabell's Impact Factor: 2.246; Cabell's Acceptance Rate 25% Management 10% Psychology
9. Pecota, S.R., Grabowski, M.R. & Holder, E. 2015. Augmented Reality Navigation Displays: Maintaining Situational Awareness in the e-Navigation Era. *U.S. Coast Guard Proceedings*. Summer, 52-55. <http://uscgproceedings.epubxp.com/t/11313-proceedings-of-the-marine>
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9. 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.
10. Grabowski, M.R. & Dhimi, H. "St. Lawrence Seaway AIS Performance Impact Study," prepared for the St. Lawrence Seaway Development Corporation, March 2004.
11. Grabowski, M.R. "Risk in the 21st Century Marine Transport System." *Transportation Research News*, July/August 1999.
12. 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/dorpjr/Publications/TechnicalReports/WashingtonStateFerriesRiskAssessment/WSFFinalReport.pdf>, 16 July 2005.
13. 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.
14. Grabowski, M.R. *Risk Evaluation of Passenger Ship Traffic in the Port of Houston*. Houston, Texas: Port of Houston Authority. September 1997.

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

15. 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.
16. Harrald, J.H., Mazucchi, T.M., Grabowski, M.R., Saebø, E., and Hutton, M. Prince William Sound Risk Assessment Final Report. Cleveland, Ohio: BP Oil Shipping Company, USA, December 1996.
17. 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.
18. 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.
19. 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.
20. 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.
21. 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.
22. 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.
23. 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.
24. 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.
25. 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.
26. 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.
27. 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.
28. 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.
29. 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.
30. 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.
31. 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.
32. 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.
33. 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.
34. 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.
35. 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.
36. 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.
37. 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.
38. 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.
39. 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.

M. Grabowski

COMPLETED WORKING PAPERS--PAPERS UNDER REVIEW

1. Rowen, A., Rancy, J.-P. & Grabowski, M.R. 2019. Moving and Improving in Safety-Critical Systems: Impacts of Wearable Augmented Reality Displays on Operator Mobility, Performance and Situation Awareness. Submitted to *International Journal of Human-Computer Systems*, July 2019. Cabell's Impact Factor: 2.3; Cabell's Acceptance Rate 25%
2. Dorsey, C., Wang, B., Grabowski, M.R., Merrick, J.R.W. & Harrald, J.R. 2019. Self-Healing Databases for Predictive Risk Analyses in Safety-Critical Systems. Submitted to *Safety Science*, July 2019. Cabell's Impact Factor: 2.246; Cabell's Acceptance Rate 25% Management, 10% Psychology.
3. Grabowski, M.R., Dorsey, C., Wang, B. & Merrick, J. 2019. Predicting Risk in Maritime Transportation. Submitted to *Decision Sciences*, 15 April 2019. Cabell's Impact Factor 1.641, Cabell's Acceptance Rate: Management 6%
4. Zhang, X., Mendonca, D., Brooks, J. & Grabowski, M. 2017. Efficacy of Incentive Structures for Boundedly Rational Dispatchers in Large-Scale Queuing Networks. Submitted to *Journal of Simulation*, 7 January 2017.

PROFESSIONAL AND PUBLIC LECTURES

Invited presentations

1. 'Augmented Reality, Risk and Navigation Safety,' invited presentation, National Academies/U.S. Coast Guard Maritime Risk and Security Conference, State University of New York Maritime College, Fort Schuyler, NY, 13-14 November 2019.
2. 'Safety Culture,' invited presentation, National Academies Transportation Research Board Ferry Transportation and Marine Safety & Human Factors Committees Joint Mid-Year Meeting, Whitehall Terminals, Staten Island Ferry, NY, 12 May 2017.
3. 'GlassNav: Wearable Immersive Augmented Reality for Ship Navigation,' invited presentation, *Ferry Safety & Technology Conference*, Pier A, Harbor House, New York, NY, 11 May 2017.
4. "The Role of Wearable Immersive Augmented Reality (WIAR) Systems in Ship Navigation," invited presentation, *E-Navigation Underway 2015 Conference*, State University of New York Maritime College, Ft. Schuyler, NY, 28-30 September 2015.
5. "Safety Culture in Marine Transportation," invited presentation, National Transportation Safety Board, September 11, 2013.
6. "High Reliability Virtual Organizations: Transformational Leadership and the Ignatian Pedagogical Paradigm," Invited presentation, Lockheed Martin Leadership Academy, Lockheed Martin Information Systems and Global Solutions, Baltimore, Maryland, 25 January 2012.
7. "Embedding a Risk Management Culture," U.S. Coast Guard Missions Conference, World Maritime Day Celebration, Tampa, Florida, 28 October 2011.
<http://www.tvworldwide.com/events/propellerclub/111027/default.cfm?id=14085&type=flv&test=0&live=0>
8. "Challenges for Maritime Human Factors in the 21st Century," Keynote address to *ERGOShip Conference on Maritime Human Factors*, Goteburg, Sweden, 14-16 September 2011.
9. "Highly Reliable Crisis and Disaster Systems." Keynote address to the 6th *International Conference on Information Systems for Crisis Response and Management, ISCRAM '09*, Gothenburg, Sweden, 8-13 May 2009.
10. "Leading Indicators of Safety in Virtual Organizations." Keynote address. SINTEF, Norwegian Foundation for Scientific and Industrial Research, Symposium on Human Factors and Control, Halden, Norway, 19-20 April 2006.
11. "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.
12. "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.
13. "The Future of Integrated Bridge Systems," *Integrated Bridge and Navigation Systems—User Enhanced Designs*. Conference of the Nautical Institute. London, 13-14 November 2002.
14. "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.
15. "Teaching Effectiveness: What Works? What Doesn't?" *Maine Maritime Academy Teaching Effectiveness Roundtable*, Castine, Maine, 26 February 2002.
16. "Risk Mitigation in Complex Systems," *21st Century Driver and Truck Alliance Roundtable on Risk Taking and Systems Accidents*, American Trucking Associations, Arlington, Virginia, 1 August 2000.
17. "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.
18. "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.
19. "The Marine Information Highway: Intelligent Real Time Bridge Systems," *U.S.-Canadian Safe Marine Transportation (SMART) Forum*, Vancouver, British Columbia, 11-12 June 1998.

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PROFESSIONAL AND PUBLIC LECTURES

Invited presentations, continued

20. "Accidents, Incidents, and Lessons Learned for Maritime Safety." *American Petroleum Institute's Workshop on Enhancing Maritime Safety*. New Orleans, Louisiana, 26 June 1997.
21. "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.
22. "The Prince William Sound Risk Assessment Project." *Annual British Petroleum Safety Conference*. Skytop Lodge, Skytop, Pennsylvania, 23 April 1997.
23. "Mitigating Human and Organizational Risk," *Biannual Meeting of the American Petroleum Institute*, Washington, D.C., 8 October 1996.
24. "Development and Evolution of Intelligent Piloting Systems," National Transportation Safety Board Forum on Integrated Bridges, Reston, Virginia, 5-6 March 1996.
25. "Evolution of Intelligent U.S. Piloting Aids," *20th Meeting of the U.S.-Japan Marine Facilities Panel*, Washington, D.C., 25 September 1995.
26. "Minding the Helm: Advances in Marine Navigation and Piloting," *British Columbia/States Oil Spill Task Force Annual Meeting*, San Diego, California, 18 July 1995.
27. "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.
28. "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.
29. "The State Maritime Academies: Where Should They Be Going?" Massachusetts Maritime Academy Board of Visitors, Boston, Massachusetts, 7 June 1994.
30. "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.
31. "Decision Support and Organizational Forms in High Velocity Environments," Hong Kong University of Science and Technology, 12 November 1993.
32. "Maritime Industry--Aerospace Technology Transfer Opportunities," US Department of Transportation, Maritime Administration, Ship Operations Cooperative Program conference, Baltimore, 8 October 1992.
33. "Shipboard Manning: How Low Can You Go?," MIT International Shipping Colloquium series, Boston, 24 September 1992.
34. "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.
35. "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.
36. "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.
37. "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.
38. "The Advent of Second Generation Expert Systems," closing address, American Association of Librarians, Washington, DC, 17 October 1990.
39. "Who Should Build Expert Systems--Knowledge Engineers or Experts?" Association for Information Systems Technology dinner meeting, Syracuse, New York, 15 November 1989.
40. "Knowledge Acquisition for Management," Expert Systems for Management Conference, Syracuse University, 26 October 1989.
41. "Challenges for Second Generation Expert Systems," Northern Illinois University Graduate Colloquium Series, DeKalb, Illinois, 17-18 July 1989.

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PROFESSIONAL AND PUBLIC LECTURES

Invited presentations, continued

42. "Piloting and Navigation Expert Systems," presentation to the National Academy of Sciences, Marine Board, New Orleans, 15 June 1989.
43. "Methodological Issues in Expert Systems: Knowledge Acquisition," CORS/ORSA/TIMS, Vancouver, British Columbia, 8-10 May 1989.
44. "Artificial Intelligence and Expert Systems," Society of Logistics Engineers, Garden City chapter, Garden City, New Jersey, 19 April 1988.

MEDIA CITATIONS, TESTIMONY

As Chair of the National Academies' policy committee on Arctic Oil Spill Response, there was extensive press coverage of the committee report* release, including continuing coverage, press briefings and interviews:

--*Offshore Technology*, 14 August 2018: Follow up on Arctic oil spill vulnerabilities. www.offshore-technology.com/features/oil-spills-in-the-ocean-arctic/, retrieved 25 August 2018

--*Alaska Dispatch News*, 30 August 2017: Follow up interview on changes in Alaska and in Arctic, national oil spill response capabilities

--National press briefing, webinar, National Academies (May 2014). Coverage and interviews appeared in 60 media outlets, including *National Geographic*, *Science*, *Seattle PI*, *Houston Chronicle*, *Oil & Gas Journal*, and *The Hill*. The *Houston Chronicle* multiple-part series on the report ran in *Emergency Management*, *Anchorage Daily News*, and *Fuel Fix*.

--Interviews with science and environmental national press outlets, May-June 2014, including *National Geographic* (x2), *Science*, *Houston Chronicle*, *Seattle PI*, *Science Insider*, *Roll Call*, *The Hill*, *Oil & Gas Journal*, *RigZone*, *Alaska Public Media*, *Penn Energy*, *Environment News Service*, *Alaska Dispatch*, *Maritime Executive*, *Nature World News*, *MarineLink*, *Reuters*, *Chemical and Engineering News*, *ClimateWire*, *Energy Wire*, *Law360/Lexis-Nexis*, *Petroleum News*, and blogs *Salon*, *Grist*, *Common Dreams*, *Huffington Post/Politics*, *Blue & Green Tomorrow*, and *American Interest*.

--Alaska community press briefing, Anchorage, Alaska, May 2014, including the *Alaska Dispatch News*, *Anchorage Times* and environmental publications

--National webinar, National Academies, May 2014, to brief science and environmental press on Arctic oil spill response capabilities and needs

--Congressional briefings for Senator Murkowski (D-Alaska), Senator Begich (R-Alaska), Senate Commerce Committee, House Transportation & Infrastructure committee, House Science, Technology and Policy committee; Senate Science, Technology and Policy committee, May 2014

--Video presentation to Washington and national press, briefings, May 2014:
<http://dels.nas.edu/Materials/Videos/RespondingtoOilSpills?bname>

--In the first week of release, the report was downloaded 1744 times, and to date (2018) is the 3rd most downloaded committee report at the National Academies/Polar Research Board, Ocean Science Board/Transportation Research Board. Downloads came from the press release, environmental press briefing, Congressional briefing, National Academies.org, Reuters, Twitter and RSS feeds.

* *Responding to Oil Spills in U.S. Arctic Marine Environments*. 2014. Washington, D.C.: National Academies Press (committee chair). <http://www.nap.edu/catalog/18625/responding-to-oil-spills-in-the-us-arctic-marine-environment>, retrieved 23 May 2014.

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MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

Association for Information Systems (AIS)	September 2000 to present
The Institute of Management Science/Operations	January 1987 to present
Research Society of America (INFORMS)	
-- <i>Secretary/Treasurer TIMS College on IS</i>	September 1992 to September 1995
The Institute of Electrical and Electronic Engineers	February 1983 to present
Decision Sciences Institute	March 1989 to 2010
Society of Naval Architects and Marine Engineers	February 1977 to 1998
American Association of Artificial Intelligence	July 1985 to July 1989
The Institute of Navigation	June 1989 to 1995

COLLEGE, COMMUNITY, AND PROFESSIONAL SERVICE

COLLEGE SERVICE

1. College Service (Le Moyne College)

Member, Quantitative Reasoning Center Advisory Board	September 2017 - present
Formation Abroad, Ignatianum Krakow, Cazenovia College partner	September 2017 – present
<i>Academic – Professional – Service Learning partnership with new Jesuit University partner</i>	
Arts into Action, Non Profit Advisory Board	April 2017 - present
Veterans Education Advisory Council	March 2017 - present
Coordinator, Xerox Human Resource IS internships	March 2017 - present
Coordinator, GM IT internships/full-time positions	April 2016 – present
Moderator, Information Systems Club	April 2015 – present
Coordinator, Rapid Response Monitoring/Syracuse IT internships	April 2015- present
Coordinator, AYCO/Saratoga Springs IT internship program	February 2015 - present
Participant, Le Moyne College – Loyola Institute of Business Administration, Chennai, India – Le Moyne partnership	January 2015 – present
Participant, Le Moyne College – St. Aloysius Management & Information Technology (AMIT) – Le Moyne partnership Mangalore, India	January 2015 – present
Director, MS, Information Systems Program	February 2014 – present
McDevitt Distinguished Chair in Information Systems	September 2014 – present
Coordinator, Le Moyne College – Google Glass partnership	November 2013 – present
Coordinator, JPMorganChase – Le Moyne Technology Alliance	September 2013 – present
Coordinator, Ernst & Young IT Advisory Services/NYC Internships, full-time placements	January 2015 – present
Coordinator, Riccelli Enterprises – Le Moyne IT internships	January 2012 – present
Coordinator, Le Moyne College Health IS minor, certificate program	September 2011- present
Coordinator (with Jim Joseph, Le Moyne Executive in Residence), Le Moyne College – Blue Highway LLC Partnership	September 2011 – 2013
Coordinator, Le Moyne College – Syracuse University Global Enterprise Technology (GET) Immersion Internship program	September 2010 – 2017
Coordinator, Le Moyne College – Syracuse University FastTrack 4+1 B.S./M.S. Information Management program	September 2010 – present
Coordinator, Le Moyne College – SRC/SRCTec Government Contracting Systems partnership, Certificate program	June 2010 – 2014
Systems Librarian Search Committee	November 2009 – May 2010
Core Curriculum Task Force, Ex Officio Member	September 2009 - 2010
Director, Zogby Center for Contemporary Catholic Trends	January 2007 - 2010
Coordinator, Bank of New York Mellon – Le Moyne Technology Partnership	January 2008 – present
Coordinator, Le Moyne College – IBM University Alliance Program	July 2008 - present
Coordinator, Le Moyne College-SAP University Alliance Program	July 2006 - present
Coordinator, Le Moyne College – Oracle University Alliance	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
Member, Presidential Search Committee	September 2007 – 2008
Member, committee to develop Pastoral Ministry program	September 2007 - 2008
Member, 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
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

COLLEGE, COMMUNITY, AND PROFESSIONAL SERVICE, continued**COLLEGE SERVICE, continued****2. Madden School of Business /Business Department Service (Le Moyne College)**

Member, Search Committee, Assistant Professor, Accounting	May 2019 - present
Mentored new Assistant Professor of IS	Fall 2017 – present
Coordinator, Service Learning IT internship, Samaritan Center	May 2018 – present
Coordinator – Le Moyne MSIS – Syracuse iSchool MSIM Program	November 2016 - present
Director, MS, Information Systems program	February 2014-present
Member, Madden Curriculum Committee	January 2016 – present
Member, AACSB Assurance of Learning committee	January 2016 – present
Chair, Business Administration Department	Fall 2009 - 2013
Director, Information Systems program	Fall 2001 - present
Information Systems, Business student advisor (~62 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. Master's Theses (MSIS) (Le Moyne College)

Trevor Thompson	Spring 2019
Necdet Gurkan	Spring 2019
Irfan Tihic	Spring 2018
Sadina Mehmedovic	Spring 2018
Jean-Philippe Rancy	Spring 2017
Philip Stolarski	Spring 2017
Johnny Santiago	Spring 2016

4. Doctoral Committee Service (Rensselaer)

Aaron Rowen, Co-Chair	December 2019
Xin Zhang, Member	December 2019
Yulia Tyshchuk, Member	May 2015
James Brooks, Member	May 2014
Zhuyu You, Co-chair	December 2010
Huawei Song, Co-chair	May 2010
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

5. Master's Theses (Rensselaer)

LT Clare Dorsey, USCG	May 2018
Richard Garrett	May 2016
Tianshu Feng	January 2011
LTJG Michael Steward, USCG	May 2007
Jae Lee, Joseph Staats	May 1999

6. Doctoral Committees (outside of Rensselaer):

Jean-Philippe Rancy, <i>Syracuse University, School of Information Studies</i>	December 2020
Erika Mitchell, <i>Syracuse University, School of Information Studies</i>	May 2020
Manoj Joseph D'Souza S.J., <i>Anna University, Faculty of Information & Communication Engineering, Chennai, India</i>	August 2017
Stig Ole Johnsen, <i>Norwegian Technical University, Trondheim, Norway,</i>	May 2012
Andreas Aas, <i>Norwegian Technical University, Dept of Computer & Information Science, Trondheim, Norway,</i>	September 2010
Torkel Soma, <i>Norwegian Technical University, Trondheim, Norway,</i>	February 2005
Hala Annabi, <i>School of Information Studies, Syracuse University,</i>	May 2005

M. Grabowski

COMMUNITY SERVICE

1. **Syracuse Samaritan Center** – Technology Project Coordinator *May 2018 – present*
 - Giftworks Donation, Planned Giving System – Database Conversion, Migration (2019)
 - Volunteer Scheduling System – Requirements, Project Plan, Proposal Development (2018)
2. **Community Action Partnership of Madison County, NY** *February 2016 to 2018*
Board Member, Technology Partner
3. **Cazenovia Area Volunteer Ambulance Corps** *November 2009 – present*
 - Dispatcher, Volunteer
4. **U.S. Naval Academy, Blue & Gold Officer** *September 2009 – present*
 - Interview and provide local contact for candidates for admission to U.S. Naval Academy
 - Monitor candidate progress and coordinate admission requirements
 - Provide liaison between Academy and local high schools in New York State
 - Serve on Congressional Admissions Board
5. **Syracuse Rescue Mission** Volunteer *November 2003 – present*
 - Food Service, Mail Room, Thrifty Shopper Store volunteer
6. **St. James Church, Cazenovia, New York**
 - Pastoral Care Area (PCA) Facilitator *January 2001 – September 2010; September 2013-present*
Lead 4-parish committee consolidating 4 parish ministries/services; Diocesan planning representative
 - 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*
7. **Cazenovia Youth Athletic Association** *September 2000 – 2006*
 - Board member (2003-2004)
 - Junior high/high school recreational basketball coach (2003)
 - Volunteer (2000 – present)
8. **Cazenovia Youth Soccer Association**
 - Board member *January 2000 – June 2004*
 - Referee coordinator, Registrar *April 2003 – 2006, April 2000-2002*
9. **Cazenovia Middle School-High School PTA**
 - Membership Chair, Treasurer *September 2001 - August 2005, Sept 2005-2007*
8. **Central New York Girl Scouts**
 - Assistant Leader *September 1998 - 2000*
9. **Burton Street Elementary School Cazenovia, New York**
10. **Green Street Middle School Cazenovia, New York**
 - Volunteer, Elementary Education *September 1995 – 2000*

PROFESSIONAL SERVICE

Program Committee

Pre-ICIS HCI/MIS Research Workshop, Auckland, New Zealand, December 2014; Reviewer

Journal Reviewer:

<i>Decision Sciences</i>	<i>International Journal of Human-Computer Studies</i>
<i>IEEE Transactions on Systems, Man, and Cybernetics Part A</i>	<i>Journal of Crisis and Contingency Management</i>
<i>International Journal of Intelligent Systems in Finance, Accounting, and Management</i>	<i>Information Technology and Decision Making</i>
<i>Production and Operations Management</i>	<i>Ocean Engineering (2015)</i>
<i>Journal of Homeland Security and Emergency Management (2014-</i>	<i>IEEE Transactions on Human-Machine Systems (2016-)</i>
<i>TransNav, International Journal of Navigation and Transportation Safety (2015-)</i>	
<i>IEEE Transactions on Engineering Management (2016 -)</i>	

M. Grabowski, 26 July 2019