

***Brenda Leroux Babin, PhD***

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***Education:***

- PhD (Oceanography and Coastal Sciences, Ecosystem Modeling--Minor) Louisiana State University Baton Rouge, LA, 2012.  
Dissertation Topic: *Factors Affecting Short Term Variability in Oxygen Cycling in the Northern Gulf of Mexico Hypoxic Zone*  
Research Interest: Data and statistical analysis of real-time oceanographic data, data mining, hypoxia.  
Coursework: Statistics, Spatial analysis, ecosystem modeling, teaching online.
- MPS (Kingdom Ministries), Loyola University, New Orleans, LA, 1996  
Focused on Institutional and Organization Design, Interpersonal Communication, and Effective Leadership
- MEd (Curriculum and Instruction), Nicholls State University, Thibodaux, LA, 1984  
Specialization in Reading including 27 hours in Computer Science
- BA (English Education, Speech Minor), Nicholls State University, Thibodaux, LA, 1982

***Professional Experience:***

- 2011-Present, Busy Bee Clinic, Houma, LA, Owner/Trainer  
Computer/Technology Trainer (Microsoft Office, QuickBooks, iOS, Windows, Google, Social Media), American Safety and Health Institute Trainer (First Aid, CPR, AED, Bloodborne Pathogens, Childcare and Babysitting Safety), Computer Repair, Social Media Management, Web Development
- 2011-Present, Terrebonne Parish School Board District 5 Representative, Houma, LA  
Served on the Finance Committee one year, Served on the Education, Policy, and Technology Committee 6 years, Served on Terrebonne Parish Sales Tax Advisory Board in 2015, Vice-President 2015
- 2009-2013, Computer Science Instructor, Fletcher Technical Community College, Houma, LA  
Taught Computer Science, Developmental Reading, and Freshman Studies. Served as Faculty Chair for the Student Technology Fee Committee. Represented the Business and Computer Technology Department on Faculty Senate. Served on the Fletcher Foundation Employee Campaign Committee and the Fletcher Foundation Gala Committee.
- Summer 2010, NOAA-NGI Intern, Louisiana State University, Baton Rouge, LA  
Data management and web development in support of ecosystem modeling. Upgrade and maintained the modeling lab and classroom.
- Summer 2010, Instructor, Louisiana State University Continuing Education Program, Baton Rouge, LA
- 2000-2009, Information and Technology Manager, Louisiana Universities Marine Consortium, Chauvin, LA  
Primary responsibility is to maintain a 100+ node, Microsoft network supporting Windows, Macintosh, and LINUX desktop systems and including 8 Windows 2003 servers which handle all network authentication, distributed applications and e-mail. Maintain a 54+ node Microsoft network on board the RV Pelican. Oversee the institution's technology plan and budget. Maintain the hardware and network for

LUMCON's Distance Learning Classroom and Lab. Also responsible for design and implementation of the LUMCON web site (www.lumcon.edu), Managed the installation and maintenance of LUMCON's MOODLE. Manage LUMCON's Environmental Monitoring System including the design of the real-time display and distribution of these data over the World Wide Web (weather.lumcon.edu), the creation, maintenance of a metadata database and station maintenance. Oversee the publication of the LUMCON News, the quarterly newsletter and other public information literature. Served as the Office of Telecommunications Management Coordinator

1991-2000 Teacher/Network Manager/Computer Coordinator, South Terrebonne High School, Terrebonne Parish School Board, Houma, LA  
Taught Computer Science I & II, Computer Multimedia, Calculus, Algebra II, Algebra I, Applied Algebra, and English. Wrote and directed four LEARN for the 21st Century grant projects involving the use of graphing calculators, CBL (Calculator Based Laboratory) equipment, computer robotics equipment, and weather data graphing equipment. Served on Terrebonne Parish's Technology Planning Committee helping write, implement, and evaluate the District's technology plan. Chair the school's Technology Committee charged with writing and implementing the school's technology plan. Maintained and provided technical support for the school's administrative program by performing continued file and database maintenance, initializing the steps in the scheduler, preparing the program for grade posting each grading period, and assisting the guidance secretary in printing report cards, grade verification reports, and other reports as necessary. Administered both an NT and Novell network in the school including several servers. Managed the school's website. Maintained the school's Internet connection and services. Provided technical support and PC troubleshooting for over 200 computers.

Fall 1994 Instructor/Lab Facilitator, Nicholls State University, Thibodaux, LA  
Taught Computer Science 206: Software Applications and administered an off-campus lab at the Dulac Community Center

1985-1991 Teacher, Evergreen Junior High School, Terrebonne Parish School Board, Houma, Louisiana  
English I & II, Speech I, and Reading. Served as Department Chair, supervised the Language Arts Fair and designed the computer program to schedule alternate classes.

1983-1985 Lecturer, Nicholls State University, Thibodaux  
Taught Developmental Reading and supervised the graduate assistants teaching in the Developmental Reading program

### ***Certifications:***

American Safety and Health Institute (ASHI)  
Campbell CRBasic Data logger Programming—March 2006  
Campbell CR10X Data logger Programming—December 2002  
Wide Band Network Engineer—June 23, 2001  
High School Louisiana INTECH through LCET in Baton Rouge, 2000  
Microsoft Office User Specialist—Expert Level PowerPoint, July 1999  
Elementary Louisiana INTECH through Region III, 1999  
Compaq's AdvanCE Integrating Technology, 1999  
State of Louisiana Teaching Certificate Type A #047624—Computer Science, Computer Literacy, Mathematics, English, Speech, Reading Specialist, and Supervisor of Student Teaching, National Teaching Exam 1981

## ***Technical Knowledge:***

*Operating systems:* All Microsoft operating systems, LINUX, MacOS

*Programming languages:* Visual Basic, Matlab, SAS, R, C++, Pascal, Java, JavaScript, VBscript

*Web related:* IIS 5.0, IIS 6.0, Apache, HTML, VBscript, JavaScript, PHP, CSS, Active Server Pages (ASP)

*Database:* Microsoft SQL, MySQLPostgreSQL, Access, ODBC, ActiveX Data Objects (ADO)

*Software:* ESRI's ArcGIS, Golden Surfer, QuickBooks, Microsoft Office (Word, PowerPoint, Excel, Access), Adobe Photoshop

## ***Publications:***

Solomon, C. T. et al. 2013 Ecosystem respiration: Drivers of daily variability and background respiration in lakes around the globe. *Limnology and Oceanography*, 58(3), 2013, 849–866. [http://www.aslo.org/lo/toc/vol\\_58/issue\\_3/0849.pdf](http://www.aslo.org/lo/toc/vol_58/issue_3/0849.pdf).

Babin, B. L. 2012. Factors affecting short-term oxygen variability in the Northern Gulf of Mexico hypoxic zone. Louisiana State University, Doctoral dissertation. <https://dl.dropboxusercontent.com/u/25717674/BabinDiss.pdf>

Babin, B. L. and N. N. Rabalais. 2009. Trends in Oxygen Variability in the NGOM Hypoxic Zone. Proceedings of OCEANS '09 MTS/IEEE Biloxi. <ftp://compsweb.marine.usf.edu/pub/misc/jdorton/papers/090602-006.pdf>

Babin, B. L. and L. Hu. 2009. A Tale of Two Observing Systems: Opening Windows to Interoperability. Proceedings of OCEANS '09 MTS/IEEE Biloxi. <ftp://compsweb.marine.usf.edu/pub/misc/jdorton/papers/090601-172.pdf>

Babin, B. L. and L. Hu. 2008. A Tale of Two Observing Systems: Data Visualization of Real-time Coastal Ocean Data on the Web. Proceedings of the Environmental Information Management Conference, 14-18.

Hu, L. and B. L. Babin. 2008. Quality Control and Quality Assurance Procedures Applied to Real-time Coastal Ocean Data. Proceedings of the Environmental Information Management Conference, 69-76.

## ***Posters:***

Bridger, E, Bermudez, L E, Maskey, M, Rueda, C, Babin, B L, and Blair, R. OOSTethys - Open Source Software for the Global Earth Observing Systems of Systems, American Geophysical Union, 2009. <https://marinemetadata.org/community/teams/presence/presentations/agufm09-oost>

Babin, B. L., J. Lentz and N. Rabalais. Measuring its Environmental Impact Using Net Ecosystem Metabolism in the Barataria Basin Related to Diverted Mississippi River Water, Global Lakes Ecological Network, 2009.

Babin, B. L. and L. Hu. A Tale of Two Observing Systems: Interoperability in the World of Microsoft Windows, American Geophysical Union, 2008.

Babin, B. L.. Integrating the R/V Pelican's Underway Data into LUMCON's Environmental Monitoring System, 2nd Joint GOSUD/SAMOS Workshop, 2008.

DeLuca, N., A. Sapp (presenter), N. Rabalais, B. Babin. Gulf of Mexico Hypoxia Web Site Unveiled, Estuarine Research Federation, 2005.

## ***Reports:***

Babin, B. L., and Hamilton, K. Towards a Data Sharing Model Workshop Report—May 22 & 23, 2003, Tulane University, New Orleans, LA.

Babin, B. L., and Hamilton, K. Gulf Coast Regional Cast-net Workshop—August 26, 27, & 28, 2002, Cocodrie, LA.

## ***Presentations:***

Babin, B. L. Bee-Friend Public Speaking and Effective Presentations, Houma-Terrebonne Chamber of Conference Lunch-n-Lean, August 21, 2015.

Babin, B. L. Preparing a Resume for a Business Plan, Entrepreneur Fest, June 20-21, 2013.

Babin, B. L. and Guerrero, S. Fletcher Flip: Engaging Students Using Multimedia in an Online Management System. LCTCS Conference March 15, 2013.

Babin, B. L. and Guerrero, S. Fletcher Flip: Using Multimedia to Engage Students. League of Innovations Conference March 12, 2013.

Babin, B. L. Preparing a Resume for a Business Plan, Entrepreneur Fest, June 20-21, 2013.

Babin, B. L. Capturing Significant Events with Real-Time Continuous Environmental Monitoring, Global. Connecting Wetland Communities--Society of Wetlands Scientist Graduate Student Symposium, November 14, 2009.

Babin, B. L. and N. Rabalais. Net Ecosystem Metabolism as an Indicator of Stress in the Barataria Basin Related to Diverted Mississippi River Water, Coastal Estuarine Research Federation. Portland, OR, 2009.

Babin, B. L. and N. Rabalais. Using Net Ecosystem Metabolism to Determine the Health of the Barataria Bay Estuary. Graduate Student Symposium. February 23, 2008

Babin, B. L. QA/QC of Dissolved Oxygen Sensors, QARTOD to Open Geospatial Consortium, March 2008.

The R/V Pelican's Experiences with the HiSeasNet Small-footprint Ku-band System, International Marine Technicians (INMARTECH) Conference, October 19, 2006.

LUMCON's Environmental Monitoring System: From Sensor to Web, Seminar for Center for Computers and Technology at LSU, June 13, 2006.

LUMCON's Environmental Monitoring System Tri-State Data Services Workshop June 6, 2006

From Sensor to Web Presented to Southern University Computer Science group at LUMCON March 12, 2006.

Building a long Term Program for Environmental Monitoring in the Coastal LA/MS/AL Region: Ongoing Programs, Current Opportunities and Future Needs. University of Southern Mississippi Gulf Coast Campus Long Beach, MS June 23-25, 2003—Cast-Net purpose, history and accomplishments.

Towards a Data Sharing Model Workshop—May 22 & 23, 2003—Cataloging Metadata.

Career Day at Destrahan High School—March 27, 2003—On Being a Web Designer.

University of South Florida—March 6 & 7, 2003—Cast-net Metadata Training (with Keri Duval).

Web Design Course for staff at LUMCON, Cocodrie, LA—November 18, 2002.

Alabama Center for Estuarine Studies (ACES) Workshop November 12, 2002 Mobile, Alabama—Writing FGDC Compliant Metadata Using the Automated Cast-net Entry Tool.

Technology at LUMCON. Executive Board, October 30, 2002, Cocodrie, Louisiana.

Cast-net Regional Workshop August 26-28, 2002 LUMCON, Cocodrie, LA—Writing FGDC Compliant Metadata Using the Automated Cast-net Entry Tool

Cast-net Presentation to Mississippi Department of Natural Resources—May 8, 2002

Cast-net Workshop March 6-7, 2002 Charleston, South Carolina—Introduction to FGDC Compliant Metadata Using the Automated Cast-net Entry Tool

Louisiana Computer Using Educators Conference November 29, 2001—Pre-conference workshop “Sense”-ational Circus: Using Multimedia in the Classroom

Louisiana Computer Using Educators Conference November 30, 2001—Water, Water, Everywhere: Using LUMCON’s Environmental Monitoring Data in the Classroom

Cast-net Progress Meeting September 6, 2001—Progress of ACET, Cast-net’s Automated Metadata Tool

Web Page Design presented to employees at LUMCON February-March 2001

LaSip Drive in Conference March 31, 2001—Water, Water, Everywhere: Using LUMCON’s Environmental Monitoring Data in the Classroom

Leading and Learning with Technology Conference April 1, 2000—“Sense”-ational Circus: Using Multimedia in the Classroom

Louisiana Computer Using Educators Conference November 9, 2000—Pre-conference workshop “Sense”-ational Circus: Using Multimedia in the Classroom

Louisiana Computer Using Educators Conference November 10, 2000—Water, Water, Everywhere: Using LUMCON’s Environmental Monitoring Data in the Classroom

Louisiana Computer Using Educators Conference 1999—Video Conferencing: The K-12 Connection

Integrating Math and Science Workshop March 18, 1998—The Best Things in Math are Free: Using Everyday Items as Manipulatives in the High School Math Classroom

Louisiana Computer Using Educators Conference Meeting 1997—Believe It or Not on the World Wide Web! How to Avoid the Ripley Effect

### ***Research Cruises:***

July 2008, *RV Pelican* NGOMEX, Mapping the “Dead Zone” Data manager.

August 5, 2007, *RV Acadian* NGOMEX, Service Sensors, Scientific Diver.

July 2007, *RV Pelican* NGOMEX, Mapping the “Dead Zone” Collected and managed samples for Isotope research and web development

July 2006, *RV Pelican* NGOMEX, Mapping the “Dead Zone” Collected and managed samples for Isotope research and web development

May 27, 2006, *RV Pelican* NGOMEX, C-Transect, Photographer

April 18, 2004, *RV Acadian* NGOMEX, Service Sensors, Photographer

January 4, 2001, *RV Pelican* NGOMEX, C-Transect, Photographer

## ***Projects:***

Guide to Phytoplankton (including Harmful Algae) from Louisiana Estuarine and Coastal Waters website and database design, <http://www.lumcon.edu/research/phytoplanktonguide/> (2009).

OOSTethys at LUMCON, An SOS implantation to serve monitoring data as a web service. Implemented Gulf Coast Ocean Observing System—Local Data Nodes project contributing LUMCON data to the GCOOS data portal via a webservice. (2008-2009)

Redesigned LUMCON's website making service. (2008-2009)

HiSeasNet Small-footprint Ku-band System on the R/V Pelican (2006)

Use of a SQL server and a content management system to facilitate user updating (2006)

Upgrade a Baystack Router to a CISCO 1812 (2006)

Upgrade Microsoft NT Network to Windows 2003 running Active Directory (2004-2005)

Upgrade Microsoft Exchange Server 4.0 to 2003 (2004-2005)

As project manager for a CSC/NOAA Grant to restructure LUMCON's Environmental Monitoring Data, managed the data manager, developed programs to convert LUMCON's data to CDL files, designed an OpenDAP server, and prepared documentation for the final report.

Wind Doppler Profiler at LUMCON data access webpage—  
<http://weather.lumcon.edu/weatherdata/doppler/> (2003-2004)

Online Graphical Weather Information System <http://weather.lumcon.edu> (LUMCON: 2000-2009)

LUMCON data transfer to the National Data Buoy Center NDBC (2003-2009)

NOAA/FSL Ground-Based GPS Meteorology (GPS-MET) (2002)—designed a means of giving Kirk Holub met data to correlate with his GPS data and maintain external network connection for GPS data. The GPS-Met Observing Systems Branch develops and assesses techniques to measure atmospheric water vapor using ground-based Global Positioning System (GPS) receivers. <http://gpsmet.noaa.gov/jsp/index.jsp>

As a technical participant in the Cast-net project which addressed the need for enhanced connectivity among coastal observing systems, not only helped develop ACET, the Automated Cast-net Entry Tool for FGDC compliant metadata and led several workshops on writing metadata and data sharing but also assisted in design and maintenance of website [www.cast-net.org](http://www.cast-net.org). (2001-2002)

Installed and configured a 3Com Superstack firewall redesigning the supporting network (2003)

Assisted in the design and setup of LUMCON Environmental Monitoring Education Station (2002-2003)

Designed and rewired the network onboard the R/V Pelican during the ship's refit (2003)

Serving LUMCON's metadata—NBII (code to index SGML files)

## ***Awards and Honors:***

Women's Business Alliance Athena Award 2014

Girl Scout of Louisiana East 2013 Woman of Distinction

LSU Phi Kappa Phi, March 2012

American Academy of Underwater Scientists 2011 Service Award

Vocational Grant—Gatorsoft: Teaching Computer Science II—1999-2000  
LEARN for the 21<sup>st</sup> Century Grant—Integrating Weather Data into Calculus and Computer Science—1999-2000  
LEARN for the 21<sup>st</sup> Century Grant—Robotics in the Computer Science Classroom—1998-1999  
LEARN for the 21<sup>st</sup> Century Grant—Using Graphing Calculators and Vernier Probes in Calculus—1997-1998  
*Radioshack Tandy Scholars Outstanding Teacher 1998-1999*

### ***Committee membership and Offices:***

Women's Business Alliance of Houma—Steering Committee Chair, January 2015 to present.  
Keep Terrebonne Beautiful—Board President 2014 to present.  
Fletcher Foundation Gala Committee—January 2013 to January 2014 (member)  
Terrebonne Parish Democratic Party Executive Committee—Elected member-at-large, January 2011 to present.  
Student Technology Fee—January 2011 to 2012 (Faculty Chair)  
Fletcher Faculty Senate—August 2010 to August 2012 (Business and Computer Technology Department Representative)  
South Louisiana Wetlands Discover Center Commissioner—2008 to 2014 (Chair)  
South Louisiana Wetlands Discover Center Fund Development Committee (Member)  
Quality Assurance of Real-time Oceanographic Data (QARTOD I, III, IV, V)  
QARTOD to Open Geospatial Consortium (Q2O) Dissolved Oxygen Technical Lead—2008 to 2011  
Gulf of Mexico Hypoxia Monitoring Technical Committee—2007 to 2013  
Louisiana Adult Learning & Workforce Development Workgroup—2006 to 2009  
Gulf Coast Ocean Observing System Data Management and Communications Committee—2005- to present  
LUMCON Environmental Monitoring System's Advisory Committee—2005 to 2009 (Chair)  
LUMCON's Web Committee—2000 to 2009 (Webmaster)  
Nicholls State University Computer Science and Computer Information Systems Advisory Board—2005 to 2010  
Terrebonne Parish School Board Technology Council—1999 to 2005

### ***Professional Meetings Attended***

League of Innovations 2013, 2011  
LCTCS Conference 2013, 2012  
Louisiana Computer Using Educators 2009  
Workshop to Coordinate Gulf of Mexico Hypoxic Zone Research, Bay St. Louis, MS, February 18, 2010.  
QARTOD 2 OGC (Q2O), Atlanta, Georgia, November 2009  
American Geophysical Union, San Francisco, CA December 2008  
Ocean Observing Systems Semantic Interoperability, Boulder, CO, November 2008  
Environmental Information Management, Albuquerque, NM, August 2008  
Ocean Observing Systems Interoperability Planning Workshop, Huntsville, AL, August 2008  
2nd Joint GOSUD/SAMOS Workshop, 2008  
QARTOD 2 OGC (Q2O), Stennis, MS, March 2008  
Graduate Student Symposium, Cocodrie, LA, February 2008  
Ecosystem Functions and the Dynamic Atchafalaya River from the Old River Control Structure to the Continental Shelf, Baton Rouge, LA, January 2008.  
Estuarine Research Federation, Providence Rhode Island, November 2007

Gulf Coast Ocean Observing System Regional Association Data Management and  
Communications Committee (GCOOS-DMAC) Meeting, New Orleans, LA, December  
2007

Ecological Impacts of Hypoxia on Living Resources, Bay St. Louis, MS, March 26, 2007.

***Professional Membership***

Leadership Louisiana Alumni Association  
Leadership Terrebonne Alumni Association  
Women's Business Alliance  
Louisiana School Board Association  
Association of University Women  
Association of Women Scientists

May 25, 2017