

HAL F. NEEDHAM

Research Associate
Department of Geography and Anthropology
Louisiana State University
Baton Rouge, LA 70803
Phone: (225) 578-4723; Email: hneedh1@lsu.edu

(A) PROFESSIONAL PREPARATION

Penn State University, University Park, Pennsylvania	Geography	B.S.	1997
Louisiana State University, Baton Rouge, Louisiana	Geography	M.S.	2010

(B) APPOINTMENTS

2010-present	Research Associate, Dept. of Geography and Anthropology, Louisiana State University, Baton Rouge, Louisiana
2007-2008	Scientific Programmer, National Snow and Ice Data Center, Boulder, Colorado
2005-2007	Public Relations Specialist, Geophysical Institute, University of Alaska Fairbanks
2002-2004	Extension Assistant, Dept. of Crop and Soil Sciences, Penn State University
1997-2001	Cross-Cultural Education Specialist, Global Corporation, Casablanca, Morocco

(C) PRODUCTS

Research interests include: weather/ climate extremes, coastal vulnerability to storm surges, monitoring reservoirs in drought-prone areas. Project manager for SURGEDAT, the world's most comprehensive storm surge data archive. Development of storm surge web tools that estimate vulnerability of specific locations to tropical storm surges.

(i) Publications within the last 3 years

Refereed Publications:

Needham, H.F., and B.D. Keim, 2012: A Storm Surge Database for the U.S. Gulf Coast. *International Journal of Climatology*, **32(14)**, 2108-2123. DOI: 10.1002/joc.2425.

Trepanier, J.M., J.B. Elsner, T.H. Jagger, and H.F. Needham, 2013 (Undergoing Final Revisions): A Statistical Model of Return Periods for Combined Wind and Surge Hazards from Hurricanes. *The Professional Geographer*.

Reports and Conference Proceedings:

Needham, H., D. Brown, and L. Carter, 2012: *Impacts and Adaptation Options in the Gulf Coast*. Science and Impacts Program, Center for Climate and Energy Solutions: Arlington, VA. Available on the Web at: <http://www.c2es.org/publications/gulf-coast-impacts-adaptation-options>.

Needham, H., and L. Carter, 2012: *Gulf Coast Climate Information Needs Assessment*. NOAA-Funded Southern Climate Impacts Planning Program, 20 pp. Published on the Web at: http://www.southernclimate.org/publications/Gulf_Coast_Assessment_Final.pdf.

(ii) Other relevant products

Needham, H.F., and B.D. Keim, 2011: Storm Surge: Physical Processes and an Impact Scale. Chapter 20 within publication *Recent Hurricane Research- Climate, Dynamics, and Societal Impacts*, ISBN: 978-953-307-238-8. Pages 385-406.

(D) SYNERGISTIC ACTIVITIES

- Partnered with U.S. Department of Energy to analyze storm surge vulnerability of energy infrastructure
- Partnered with Oak Ridge and Pacific Northwest National Labs on storm surge modeling project for offshore and coastal energy infrastructure
- Partnered with Rice University SSPEED Center on storm surge modeling for Houston Ship Channel
- Partnered with Lake Pontchartrain Basin Foundation to analyze storm surge vulnerability of New Orleans Flood Protection System

(E) COLLABORATORS AND OTHER AFFILIATIONS

(i) Collaborators and co-editors

P. Bedient (Rice Univ.); M. Boone (Univ of Oklahoma); D. Brown (NOAA); H. Campbell (OK Dept of Env Quality); L. Carter (Louisiana State Univ); R. Edwards (Louisiana State Univ); J.B. Elsner (Florida State Univ); C.C. Fan (U.S. Dept of Energy); J. Hocker (Univ of Oklahoma); T.H. Jagger (Florida State Univ); B. Keim (Louisiana State Univ); A. Lippert (U.S. Dept. of Energy); H. Needham (Louisiana State Univ); A. Petersen (Adaptation International); B. Preston (Oak Ridge Nat'l Lab); R. Riley (Univ of Oklahoma); K Robbins (Louisiana State Univ); D. Sathiaraj (Louisiana State Univ); A. Sieminski (U.S. Dept. of Energy); J. Trepanier (Louisiana State Univ); T. Wang (Pacific NW Nat'l Lab); Z. Yang (Pacific NW Nat'l Lab); M. Yuan (Univ of Oklahoma);