

Department News

VIEW

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Subject	Professors Awarded
Author & Date	Toby Bantug Fri May 16 11:15:52 EDT 2003

Dr. Bilal M. Ayyub and Dr. Ibrahim A. Assakkaf of the Center for Technology and Systems Management (CTSM), and Dr. David P. Kihl and Mr. Michael E. Sieve of the U. S. Navy received the "Jimmie" Hamilton Award for the best original paper published in the Naval Engineers Journal of the American Society of Naval Engineers during the year 2002.

The paper "Reliability-Design Guidelines for Fatigue of Ship Structures" was published in the Naval Engineers Journal of Spring 2002. The authors have developed reliability-based methods for determining the fatigue life of structural details associated with conventional displacement-type, surface monohull ships based on the maximum stress to cycles-to-failure ratio (S-N curve) approach. The methods are also based on structural reliability theory and can be applied either in direct reliability-based design or in a load and resistance factor design (LRFD) format. The LRFD methods were developed according to spectral analysis of wave loads, building on conventional codes, nominal strength and load values, and achieving target reliability levels. The first-order reliability method (FORM) was used to develop the partial safety factors for selected fatigue limit state equations and for demonstration purposes.

This paper stands not only on its own merits but is also representative of the eight quality papers of the spring 2002 special issue on reliability-based design of naval ship structures using LRFD. These papers were the culmination of work begun in the early 1980s by NSWCCD and the University of Maryland and subsequent program management provided by NA VSEA.

This paper captures the essence of the analytical and experimental work done in the development of this design methodology. It is definitely in keeping with the technical standards of the Naval Engineers Journal. The authors are most deserving of the Society's 2002 "Jimmie" Hamilton Award.

21	2003 USUCGER Distinguished Service Award	Toby Bantug	06-09-03
18	Professors Awarded	Toby Bantug	05-16-03
16	Professors Lovell and Seagren Promoted	webstaff	05-12-03