### RADM Paul E. Sullivan, USN, presents the "Jimmie" Hamilton Award to:







Dr. Bilal M. Ayyub

Dr. Ibrahim A. Assakkaf

Mr. David P. Kihl

# THE AMERICAN SOCIETY OF NAVAL ENGINEERS

takes great pleasure in presenting

The "Jimmie" Hamilton Award for the year 2002 to

Dr. Bilal M. Ayyub, Dr. Ibrahim A. Assakkaf, Dr. David P. Kihl, and Mr. Michael W. Sieve

## For the best original paper published in the Naval Engineers Journal during the year 2002 as set forth in the following

#### CITATION:

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 NAVSEA.

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.



## AMERICAN SOCIETY OF NAVAL ENGINEERS

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Dr. Ibrahim A. Assakkaff 8016 Greenwich Woods Drive McLean, VA 22102

Dear Dr. Assakkaff:

It is my great pleasure to announce that you and your co-authors have been selected by the American Society of Naval Engineers as recipients of the Society's "Jimmie" Hamilton Award for 2002. Your paper, "Reliability-Based Design Guidelines for Fatigue of Ship Structures," has been judged the best paper published in the *Naval Engineers Journal* during 2002.

As the recipient of this prestigious award, you are cordially invited to be a guest of the Society for all events during our annual meeting, ASNE Day, on March 24-25, 2003, at the Hyatt Regency Crystal City, Arlington, Virginia. The "Jimmie" Hamilton Award is scheduled to be formally presented during the ASNE Day Awards Luncheon on Monday, March 24, 2003. The Society's Executive Director, Dennis Kruse, will send you full details concerning ASNE Day and the award presentation. If you have any questions, please contact him at the Society's office (703) 836-6727.

Please send us a current biography and a recent picture for publication in the ASNE Day Program and the *Naval Engineers Journal*. Please send them to the attention of Danny Martin, our Awards coordinator, at the Society's office. We will need them no later than 14 February to meet the publication deadline.

I extend my most sincere congratulations on this well deserved recognition.

Sincerely

D. P. Sargent, Jr. RADM, USN (Ret.)

President