

## Conclusions

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There are tremendous benefits to be gained from organizing a Workshop like this. The bringing together of experts in the field for a free and frank exchange of ideas is an essential part of the development of a scientific approach to ship stability. Each workshop has had a core of committed participants, but also each year new faces are added to the mix, depending on the location. It is a unique opportunity for researchers, regulators and practicing designers and operators to discuss problems from their own perspective, and in turn gain a better understanding of the topics.

Form an organizational point of view, the workshop should continue to evolve. The original idea for the Workshop resulted from collaboration between the United Kingdom and Japan. The strength of the idea has been confirmed since now we have had half the workshops within the original organizers and half outside. As new organizers are invited to participate, it is important that the original idea is allowed to grow in natural directions. The publication of the proceedings of the four Workshops to date as a book is important recognition of the value of the work presented. However, it is important to keep open discussion and freedom to present new and challenging ideas as an essential part of the process. Hopefully the potential conflict between publication for posterity and exploring challenging ideas can be addressed by the next organizers. We certainly wish them luck in organizing the next even. I am sure that it will be as rewarding for them as organizing the fourth workshop was for us.

Based on the discussion for each of the papers and Tom Allan's notes, I would like to take the opportunity to summarize the areas where I feel we should move forward. Hopefully at the next Workshop in Trieste, in 2000, we will see some interesting new developments in these and other areas.

Validation of numerical models against model and full scale data

Integration of non-linear dynamics with conventional 'structural' models

Operational limits for ships using dynamic lift, such as planing hulls

Data reduction into a format for simple but meaningful regulation

Consolidation of results for water on deck of a flooded RO-RO ship

There is a general shift from prescriptive regulations for preventing the loss of ships to a safety case management approach. This will result in the need for more sophisticated analysis at the design stage than is the current practice. The need for educating Naval Architects in the results of the latest research on ship stability continues to grow. The Ship Stability Workshops should continue to contribute towards this goal for many years to come.

Finally I would like to thank all the presenters and discussion leaders. It is a risky business to stand before your peers and discuss research results which are partially complete or challenge accepted practices. However, this open mindedness helps to accelerate the development of new ideas, which will eventually result in safer ships. This is the goal that we must all be aiming for.