### Proceedings of the

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## FOURTEENTH INTERNATIONAL WORKSHOP

## ON WATER WAVES AND FLOATING BODIES

Thomas Edison Inn Port Huron, Michigan USA

11 April - 14 April, 1999

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#### **Abstract**

The 14th International Workshop on Water Waves and Floating Bodies was organized by the Departments of Naval Architecture and Marine Engineering and Mechanical Engineering and Applied Mechanics at the University of Michigan. The Workshop was held at the Thomas Edison Inn on the St. Clair River in Port Huron, Michigan, USA from the 11th to the 15th of April, 1999.

A total of 47 abstracts were accepted for presentation. This publication contains extended abstracts of all of the presentations.

#### **Sponsors**

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## TABLE OF CONTENTS

Workshop Information	iv
Preface	v
List of accepted abstracts	vi
Abstracts of Presentations	ix

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#### Preface

The 14th International Workshop on Water Waves and Floating Bodies (IWWWFB) was held at the Thomas Edison Inn on the St. Clair River in Port Huron, Michigan from the 11th to the 15th of April, 1999. The Workshop was organized by the Departments of Naval Architecture and Marine Engineering and Mechanical Engineering and Applied Mechanics at the University of Michigan. It is the first IWWWFB held in the United States since the 6th in 1991.

Additional financial support for the workshop was provided by the Society of Naval Architects and Marine Engineers, the College of Engineering at the University of Michigan, and the Departments of Naval Architecture and Marine Engineering and Mechanical Engineering and Applied Mechanics at the University of Michigan. We are most grateful for their support, without which this workshop would not have been possible.

As usual, the papers were selected on the basis of extended abstracts. A total of 47 abstracts were selected to be presented at the workshop. The selection committee consisted of Professors Robert Beck and William Schultz from the University of Michigan and the two previous organizers, Professor Aad Hermans of the Delft University of Technology and Professor Bernard Molin of Ecole Supérieure d'Ingénieurs de Marseille.

The following pages contain the extended abstracts. They are listed in alphabetical order of the first author's name. Written discussions to the presentations and the author's replies will be published after the workshop in a companion volume. Also to be included in that volume will be a schedule of the presentations and a final list of the names and addresses of all participants.

There were several firsts for the 14th Workshop. For the first time, the annual Georg Weinblum Memorial lecture will be presented as part of the workshop. The Weinblum Memorial lecture is presented each year by an internationally recognized authority in marine hydrodynamics. This year the lecture is to be given by Professor Aad Hermans of the Delft University of Technology. His lecture is entitled, "The Role of Applied Mathematics in Hydrodynamics for Ships and Floating Offshore Structures."

For the first time, the Internet was used to post the announcement of the Workshop, all the selected abstracts, and the registration form. From our point of view, using the Internet for all postings saved postage and improved access for everyone. There were some problems transferring abstracts because of incompatibility of different computer systems, particularly word processor attachments. Postscript files nearly always worked; two pdf files failed because of font differences. Electronic registration worked well and we do not know of anyone having trouble. We feel that use of the Internet should be encouraged for future workshops. Eventually, the workshop could become paperless with the entire proceedings posted on the web. To accomplish this a permanent web site will have to be set up where all proceedings are archived.

We would like to thank all our sponsors, a special thanks to Cora Bills Wheatley and Luella Miller of the NAME Department, and Marsha Quinn of the Thomas Edison Inn. We are thankful for the wisdom passed on to us by previous IWWWFB sponsors; especially to Aad Hermans and Bernard Molin for help with abstract selection. Finally, we thank our wives: Barbara Beck and Inger Schultz for helping us out where they could and putting up with us when they couldn't.

Bob Beck and Bill Schultz Ann Arbor, March 1999

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# Fourteenth International Workshop on Water Waves and Floating Bodies

### List of accepted abstracts

		Page
1.	Ando, S.: Some aspects of hull-girder responses of ships in severe waves	1
2.	Aranha, J., da Silva, S., Martins, M. and Leite, A.: An experimental verification of the wave drift damping formula	. 5
3.	Bingham, H.: A Boussinesq-panel method for predicting the motion of a moored ship in restricted water	. 9
4.	Büchmann, B. and Skourup, J.: Stability of time-domain boundary element models; theory and applications	. 13
5.	Bunnik, T. and Hermans, A.: Comparison between three steady flow approximations in a linear time-domain model	. 17
6.	Chaplin, J., Rainey, R. and Retzler, C.: Waves generated by a vertical cylinder moving in still water	. 21
7.	Chen, X. and Diebold, L.: Analytical expressions of unsteady ship wave patterns	. 25
8.	Clément, A.: The spinning dipole: an efficient unsymmetrical numerical wavemaker	. 29
9.	Doutreleau, Y. and Chen, X.: Line integrals on the free surface in ship-motion problems	. 33
10.	Grue, J.: On the generation of upstream large amplitude internal waves at a bottom topography in the ocean	. 37
11.	Indeytsev, D. and Osipova, E.: Nonlinear effects in trapped modes in the case of gravitational waves in a channel with an elastic plate	. 41
12.	Ionina, M. and Korobkin, A.: Water impact on cylindrical shells	. 44
13.	Iwashita, H.: Diffraction waves of a blunt ship with forward speed taking account of the steady nonlinear wave fields	. 48
14.	Jiang, T. and Henn, R.: Numerical investigation of shallow-water wave equations of Boussinesq type	. 52

15.	Judge, C., Xu, L. and Troesch, A.: Water impact model with horizontal velocity	56
16.	Kagemoto, H., Murai, M. and Saito, M.: Experimental investigation on the wave decay characteristics along a long array of cylindrical legs	60
17.	Kanoria, M. and Mandal, B.: Second-order wave diffraction by thin vertical barrier in deep water	64
18.	Kashiwagi, M.: A hierarchical interaction theory for wave forces on a great number of buoyancy bodies	68
19.	Khabakhpasheva, T. and Korobkin, A.: Energy conservation law in the problem of elastic plate impact onto liquid free surface	72
20.	Kim, B-K. and Nam, J-H.: A b-spline panel method using NURBS surfaces	76
21.	Kim, Y. and Sclavounos, P.: Numerical simulation of the linear and second-order surface flows around circular cylinders in random waves	80
22.	Korsmeyer, T.: FFT acceleration of the rectangular dock problem	84
23.	Landrini, M., Lugni, C. and Bertram, V.: Unsteady nonlinear free surface flows around an oscillating hydrofoil	88
24.	Lloyd, P. and Stansby, P: Slam forces and pressures on a flat plate due to impact on a wave crest	92
25.	McIver, M.: Uniqueness and trapped modes for a symmetric structure	95
26.	McIver, P.: Water-wave propagation through an infinite array of cylindrical structures	99
27.	Molin, B.: On the piston mode in moonpools	103
28.	Mori, K-H., Kitajima, K., Doi, Y. and Nagaya, S.: Downward lifting force of submerged body with minimum drag	107
29.	Newman, J. and Lee, C-H.: Heave response of a semi-submersible near resonance	111
30.	Nguyen, T.: Radiation-diffraction problem with forward speed in a two-layer fluid	115
31.	Ohkusu, M.: Hydroelastic interaction of a large floating platform with head seas	119

 $\bigcirc$ 

0

O O

 $\bigcirc$ 

32.	Peregrine, D.H., Wood, D., Walkden, M. and Bruce, T.: Pressure near wave impact and the role of trapped air	ts 123
33.	Porter, R. and Evans, D.: Rayleigh-Bloch surface waves in the presence of infinite periodic rows of cylinders and their connection with trapped modes in channels	125
34.	Rognebakke, O. and Faltinsen, O.: A second order initial value solution of two-dimensional sloshing in rectangular tanks	129
35.	Scragg, C.: On the use of free surface distributions of Havelock singularities	133
36.	Takagi, K.: Hydroelastic behavior of a very large floating structure in waves	137
37.	Tyvand, P. and Storhaug, A.: Impulsive tsunami Green functions for two-dimensional basins	141
38.	Ursell, F.: The oscillating submerged sphere between parallel walls: the convergence of the multipole expansion	145
39.	Vanden-Broeck, J.: Nonlinear gravity capillary waves generated by a moving disturbance	149
40.	Wan, D. and Wu, G.: The numerical simulation of the green water effect	151
41.	Wyatt, D.: A nonlinear wave prediction methodology for surface vessels	155
42.	Yang, C., Noblesse, F. and Löhner, R.: Application of the Fourier-Kochin theory to the farfield extension of nonlinear nearfield steady ship waves	159
43.	Yeung, R., Liao, S. and Roddier, D.: Interaction of regular and extreme waves with submerged cylinders	163
44.	Zalar, M. and Malenica, S.: Uniform solution for water wave diffraction-radiation at small forward speed in water of finite depth	167
45.	Zhao, C. and Zou, Z.: A 3 D potential flow computing method based on NURBS	171
46.	Zhao, R. and Faltinsen, O.: A nonlinear method for predicting wave resistance of ships	175
47.	Zilman, G. and Miloh, T.: Hydroelasticity of a buoyant circular plate in shallow water: a closed form solution	179