

Proceedings

22nd International Workshop on Water Waves and Floating Bodies

Under the auspices of the Croatia Academy of Sciences and Arts
Scientific Council for Maritime Affairs



15 - 18 April 2007, Plitvice, CROATIA



Editors:
Šime Malenica and Ivo Senjanović

22nd International Workshop
on Water Waves
and Floating Bodies

Proceedings

Editors:
Šime Malenica and Ivo Senjanović

Foreword

The International Workshop on Water Waves and Floating Bodies is an annual meeting of engineers and scientists with special interests in water waves and the effects of waves on floating or submerged bodies. The workshop was initiated over twenty years ago by Professor Nick Newman from MIT and Professor David Evans from Bristol University. Since its inception, the workshop has grown from strength to strength and annually brings together marine hydrodynamicists, naval architects, offshore and arctic engineers and other scientists and mathematicians, from both industry and academia, to discuss current research and practical problems in a focused week of activity. Attendance is restricted to the authors of submitted extended abstracts that are reviewed for acceptance by a small committee. These proceedings include the extended abstract for every presentation made at the 22nd workshop. The proceedings of previous workshops are available online at www.rina.org.uk thanks to the cooperation of the Royal Institution of Naval Architects. The list of the previous Workshops is shown in the table below.

1st	16/02/1986	19/02/1986	M.I.T (MA)	USA
2nd	16/03/1987	19/03/1987	Bristol	U.K.
3rd	10/04/1988	13/04/1988	M.I.T (MA)	USA
4th	07/05/1989	10/05/1989	Oystese	Norway
5th	25/03/1990	28/03/1990	Manchester	U.K.
6th	14/04/1991	17/04/1991	Woods Hole (MA)	USA
7th	24/05/1992	27/05/1992	Val de Reuil	France
8th	23/05/1993	26/05/1993	St John's Newfoundland	Canada
9th	17/04/1994	20/04/199	Kuju	Japan
10th	02/04/1995	05/04/1995	Oxford	U.K.
11th	17/03/1996	20/03/1996	Hamburg	Germany
12th	16/03/1997	19/03/1997	Carry le Rouet	France
13th	29/03/1998	01/04/1998	Alphen aan den Rijn	Netherland
14th	11/04/1999	14/04/1999	Port Huron (MI)	USA
15th	27/02/2000	01/03/2000	Caesarea	Israel
16th	22/04/2001	25/04/2001	Hiroshima	Japan
17th	14/04/2002	17/04/2002	Cambridge	U.K.
18th	06/04/2003	09/04/2003	Le Croisic	France
19th	28/03/2004	31/03/2004	Cortona	Italy
20th	29/05/2005	01/06/2005	Longyearbyen	Norway
21st	01/05/2006	05/05/2006	Loughborough	UK

The 22nd International Workshop on Water Waves and Floating Bodies was jointly organized by Bureau Veritas - Research Department and Faculty of Mechanical Engineering and Naval Architecture of Zagreb University. The workshop took place in Hotel Jezero at Plitvice Lakes in Croatia.

Šime Malenica & Ivo Senjanović

Makoto Ohkusu

The 22nd IWWFEB is dedicated to Professor Makoto Ohkusu who left us suddenly last year. Professor Ohkusu was a regular contributor to the Workshop, indeed he hosted the 9th IWWFEB in Kyushu. He travelled extensively, often with his family, lecturing and collaborating with colleagues around the world.

After studying with Takao Inui at the University of Tokyo, Makoto began his prolific career at Kyushu University, working initially in association with the late Professor Fukuzo Tasai. Ohkusu performed seminal research on the hydrodynamic interactions among multiple floating bodies, which greatly contributed to the development of multi-hull ships and offshore platforms. Later he developed the unsteady wave-pattern analysis method, which provided a new technique for studying ships running with forward speed in waves. He also published many other noteworthy papers, concerning such topics as the nonlinear behaviour of a long flexible cable; a new evaluation method for the oscillating and translating Green function; and its application to the boundary-value problem for the flow around ships. He performed extensive studies of the hydroelastic problems associated with very large floating structures such as floating airports.

In 1981 Ohkusu was promoted as a Full Professor at Kyushu University. He served from 1997 to 1999 as the Director of the University's Research Institute of Applied Mechanics. Many students benefited from his tutelage and support. When he retired in 2001, an International Conference on 'Hydrodynamics in Ship and Ocean Engineering' was held in his honor. From 2004 to 2006 he served as the Director of the Marine Technology Center at the Japan Agency for Marine-Earth Science and Technology.

We all remember Makoto Ohkusu, both for his kindness and the high quality of his work. His research and generous spirit have inspired us, and his absence is mourned by our community.

