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## Obituary

The late Professor Makoto Ohkusu of Kyushu University, Japan, died of cancer at pancreas on May 12, 2006, aged 68. He was a member of the 18th ITTC seakeeping committee (1984-1987), and the chairman of the 19th ITTC seakeeping committee (1987-1990).

The late Professor Ohkusu started his scientific career working on the steady wave-making resistance of a ship, as a student of Professor Emeritus Takao Inui at the University of Tokyo. The first work which made him internationally famous was on the hydrodynamic interactions among multiple floating bodies. This work has drawn much attention from engineers and scientists, and greatly contributed to the development of multi-hull ships and ocean platforms. Another outstanding contribution by him in ship hydrodynamics is the development of the unsteady wave-pattern analysis method. This provided a new technique for studying the hydrodynamic forces on and motions of a ship running at forward speed in waves, and shed new light on the study of added resistance and resulting speed loss. He also published many other noteworthy papers, concerning such top-

ics as the nonlinear behaviour of a long 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. In his last years before retirement from Kyushu University, he also worked on hydroelastic problems connected with very large floating structures to be used as floating airports.



Professor Makoto Ohkusu

## 25<sup>th</sup> Conference Organisation



The 25th ITTC Conference to be held in 2008 in Fukuoka, Japan is being organized by the local organizing committee led by Professor Masashi Kashiwagi, Secretary of the Executive Committee. All information of the Conference will be made available through the ITTC website (<http://itcc.sname.org>). The information will be provided by the Research Institute for Applied Mechanics (RIAM), Kyushu University.

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As you may see from the website, the Conference will be held on September 14 through 20, 2008, at Fukuoka International Congress Center. This Congress Center is rather newly built in 2003, located conveniently in the heart of Fukuoka City and close to Fukuoka International Airport. The symbol (logo) mark of the 25th ITTC Conference is already decided and being used as the header of the local website. The local organizing and executive committees are discussing the conference program, social events, registration fee, and others, which will be announced in due course.

### **Proceedings of 24th Conference**

The final Volume 3 of the Proceedings of the 24th Conference have now been uploaded on the Conference website [www.ittc.ncl.ac.uk](http://www.ittc.ncl.ac.uk) and will be sent on CD to the registered participants in the conference. The entire Proceedings will eventually be available on the ITTC website.

### **News from the Executive Committee**

Two Working Groups of the EC are preparing documents, which will be discussed at the forthcoming EC Meeting in Rome next September. One is dealing with the principle of the ITTC actions to the IMO related matters, the other is about the revision of the ITTC Rules. Both will be discussed at the EC and AC Meetings in order to reach full agreement for adoption at the next Conference in Fukuoka, 2008.

In the meantime, representation of ITTC at IMO is handled on an ad hoc basis as described later in these News.

### **News from the Advisory Council**

The AC Working Groups have been active in the clarification of the tasks of the Technical Committees.

The most important clarification has been concerning the interaction between the Uncertainty Analysis Committee and the other technical committees regarding the UA analysis procedures. It has been concluded that the individual technical committees shall develop the uncertainty analysis procedures for their specific tests

and the UA Committee shall check them to avoid inconsistencies in approach and methodology.

### *Dates and venues for future meetings*

2006: Rome, Italy, 18th – 19th September  
2007: Kyushu, Japan, August-September  
2008: Copenhagen, Denmark, March-April

### **News from Technical Committees**

#### *Manoeuvring Committee*

At the first meeting (19-20 January 2006 at INSEAN, Rome, Italy), Committee tasks, deadlines for progress reports, conclusions and recommendations, Committee Report, SIMMAN 2007 Workshop, and *itc news* were discussed along with a timetable for the work. A table of contents for the Committee Report, the responsibilities for the research and writing contributions (both for the Committee Report and QM Procedures), and the dates and locations for future Committee meetings were agreed upon.

#### Table of Contents 25<sup>th</sup> ITTC MC Report:

1. Introduction
2. Overview of Maneuvering Prediction Methods
3. Progress in System Based Simulations
4. Progress in CFD Based Simulations
5. Validation of Simulations & Benchmark Data: SIMMAN07
6. Maneuvering and Course Keeping in Waves
7. New experimental techniques and Extrapolation
8. Shallow and Confined Waters
9. Standards and Safety
10. Procedures
11. Conclusions
12. Recommendations
13. References

#### QM Procedures:

- 7.5-02-06-01 Free Model Tests
- 7.5-02-06-02 Captive Model Tests
- 7.5-02-06-03 Validation of Maneuvering Simulation Models
- 7.5-02-05-05 Maneuverability HSMV
- 7.5-04-02-01 Full Scale Maneuvering Trials

Dates and locations for future Committee meetings:

No. 2: 16-18 October 2006 NAOE Shanghai Jiao Tong University

No. 3: March 2007 Basin d'Essais des Carenes

No. 4: November 2007 MARIN

Non-Mandatory Editorial Meeting Schiffbau-Versuchsanstalt Potsdam

#### *Propulsion Committee*

The first meeting of the 25<sup>th</sup> ITTC Propulsion Committee was held during 1-3 February 2006 at the Istanbul Technical University, hosted by Professor Emin Korkut. Seven members were present and two members were absent. At this meeting, the Recommendations and Tasks given to the Committee by the 24<sup>th</sup> ITTC were reviewed in detail. Specific work assignments were made among Committee members. There are aspects for coordination among other related ITTC Committees, which include the Specialist Committee on Powering Performance Prediction, Specialist Committee on Cavitation, Specialist Committee on Uncertainty Analysis, Specialist Committee on Azimuthing Podded Propulsion, and Maneuvering Committee. The Chairman will coordinate with these Committees in due course in order to minimise duplication of effort.

The next meeting of the Committee is scheduled for 25-27 September 2006 at CETENA in Genoa, Italy, hosted by Dr. Paolo Becchi, right after the 26<sup>th</sup> Symposium on Naval Hydrodynamics in Rome.

#### *Resistance Committee*

The first RC meeting was held at AMC, Launceston, Australia (6-7 February, 2006). Joe Gorski was elected secretary of the RC. There was considerable discussion of the recommendations of the AC by the entire committee and they were each looked at individually. Based on these discussions 8 chapters were tentatively decided upon by the RC for the full report with an additional task covering the evaluation of current Procedures. Task leaders were assigned for each area along with some preliminary guidance on the important issues related to each area.

The 2nd meeting of the RC is tentatively scheduled for 23-24 September, 2006 in Rome, fol-

lowing the 26-th Symposium on Naval Hydrodynamics.

Below is an update of the current situation about the Worldwide Series for identifying facility biases. Both the small and the large model are travelling at a decent speed even if we encountered recently some custom problems.

#### *Seakeeping Committee*

The first meeting of the 25<sup>th</sup> ITTC Seakeeping Committee was held at QinetiQ LTD Haslar, United Kingdom, on 9-10 January 2006. The nine formal tasks given to the Committee by the AC were distributed, discussed, and assigned for action. There was general discussion on the review of new experimental techniques & facilities, and also on benchmark data, particularly as it relates to identifying and specifying requirements for new benchmark data. There was also discussion on the value of comparative experiments for modern hull forms, conducted at various model basins using the same model, to generate benchmark data. The schedule for the Committee and reporting requirements were reviewed, and future meeting sites and dates were agreed to. The next meeting of the 25<sup>th</sup> ITTC Seakeeping Committee will be held in Washington, DC, USA on 2-3 October 2006.

#### *Specialist Committee on Azimuthing Podded Propulsion*

The first meeting was held on 27-29 March at NMRI (National Maritime Institute) of Japan, hosted by Noriyuki Sasaki (Japan). Prof. Chen-Jun Yang was appointed secretary of the committee.

There were three subjects which were discussed. The first one is task distributions concerned with technical review according to following tasks.

- Task 1 – Procedure and scaling guideline
- Task 2 – Cavitation focus on oblique condition & hybrid
- Task 3 – Off-design conditions (loads and stability)
- Task 4 – Special application (ice, CRP, hybrid)

The second is draft of questionnaire which will be sent to main facilities where they are conducting with podded propulsion tests.

The last one is schedule and decided as follows:

- 2006 – 2<sup>nd</sup> meeting in Oct., Brest, after T-POD 2006.
  - 2007 – 3<sup>rd</sup> meeting in June, KSRI. Finalize procedure in Oct. and submit to AC.
- 2008 – 4<sup>th</sup> meeting in Jan., SJTU. Submit committee report in June.

#### *Specialist Committee on Cavitation*

The first meeting of the Specialist committee on cavitation was held on January 17-18, 2006 at the Bassin d'essais des carènes in Val de Reuil – France. All committee members attended except Dr Mohammad Saeed Seif. Dr William Zierke was elected as secretary.

The committee has initially discussed the four tasks recommended by the 24<sup>th</sup> ITTC and assigned focus tasks to each of the committee members. A questionnaire has been established by the committee and it was sent by mid-June to 179 e-mail address (ITTC members and other specifically-identified organisations). It can be load on website:

[http://www.arl.psu.edu/ITTC/survey\\_info.php](http://www.arl.psu.edu/ITTC/survey_info.php).

The next meeting will be hosted by MARIN (in Wageningen – Netherlands) on September 15-16, 2006, following CAV2006.

#### *Specialist Committee on Powering Performance Prediction*

The Specialist Committee on Powering Performance Prediction is being tasked with reviewing and updating the ITTC recommended procedure for predicting ship speed and power from model tests – currently known as the ITTC 1978 Powering Prediction Method, and the procedures for testing and extrapolating resistance and propulsion of High Speed Marine Vehicles. The update will be based on a balance between reflecting current practice and the results of the most recent developments in the field of model testing and ship power prediction. The committee has sent out a questionnaire to all ITTC members in order to determine the extent to which the ITTC 1978 Method is being used. Many replies have been received, but we would like to use this opportunity to remind those who haven't replied that they should do so in order to influence the updating of the powering performance prediction procedure. If you have not

received the questionnaire and would like to complete it, please contact the committee chairman at [Sverre.steen@ntnu.no](mailto:Sverre.steen@ntnu.no)

In addition to the questionnaire, the committee has been looking into the coupled problem of choice of friction line and scale effect of form factor.

The next meeting is scheduled to beginning of October, at ITU in Istanbul.

#### *Specialist Committee on Stability in Waves*

The Committee had the first meeting at the Maritime Research Institute in the Netherlands (MARIN), on the 10 February, 2006. Dr. Naoya Umeda (Chairman), Mr Andrew Peters (Secretary) and five other members attended this meeting.

The Committee had accepted the request from the IMO via the EC to assess and benchmark computer codes that simulate 'time to flood' and related damaged ship motion behaviour of ships. The Committee agreed that Dr. Jan Otto de Kat would take responsibility for this task and drafted a document describing the work plan to be submitted to the 49<sup>th</sup> session of the sub-committee on stability, load lines and on fishing vessel safety (SLF 49) of the IMO. This session is scheduled to be held on 24-28 July 2006.

Based on the tasks from the Conference, the Committee regrouped them as follows and appointed their coordinators:

##### 1. Prediction of parametric rolling

Reviewing the published experiments, a new procedure for model testing of head-sea (& beam-sea) parametric rolling will be developed and then benchmark testing of numerical simulation techniques will be planned to be compared with suitable experimental data. This will be coordinated by Dr. Shigesuke Ishida.

##### 2. Revision of the intact stability testing procedure

By collecting experiences from the ITTC member organisations, the procedure 7.5-02-07-04.1 focusing on capsizing will be revised to include broaching, deck

diving, irregular waves including confidence interval, wind and breaking waves. This will be coordinated by Prof. Sam Fan.

3. Time-to-Flood Prediction

As requested by the IMO, a benchmark testing of the numerical codes for time-to-flood will be planned and then will be executed for developing guidelines for numerical prediction. This will be coordinated by Dr. de Kat.

4. Review of stability assessment techniques in the field of naval ships

The relevant progress at navies will be reviewed. This will be coordinated by Dr. Arthur Reed.

5. Review of stability assessment techniques in the field of non-naval ships

The relevant progress at the IMO, SAFEDOR project and so on will be reviewed. This will be coordinated by Prof. Alberto Francescutto.

6. Numerical prediction of damaged ship behaviours in waves

With emphasis of the identified drawbacks at the 23<sup>rd</sup> ITTC and positive aspects obtained at the 24<sup>th</sup> ITTC, a benchmark testing of the numerical codes for damaged ship behaviours in waves will be planned in close coordination with Task 3. This will be coordinated by Prof. Apostolos Papanikolaou.

For facilitating the above tasks, the Committee invited Professors Dracos Vassalos from the Universities of Glasgow and Strathclyde and Kostas Spyrou from the National Technical University of Athens as corresponding members with endorsement of the EC.

At the 49<sup>th</sup> session of the sub-committee on ship design and equipment (DE 49) of the IMO, which was held on 20-24 February 2006, Dr. de Kat introduced the document DE 49/5/2 co-sponsored by the Netherlands and the ITTC, which proposed amendments to the Interim Guidelines for the conduct of high-speed craft

model tests as an output from the 24<sup>th</sup> ITTC Stability committee. The DE sub-committee agreed to amend the MSC/Circ. 1029 based on this proposal.

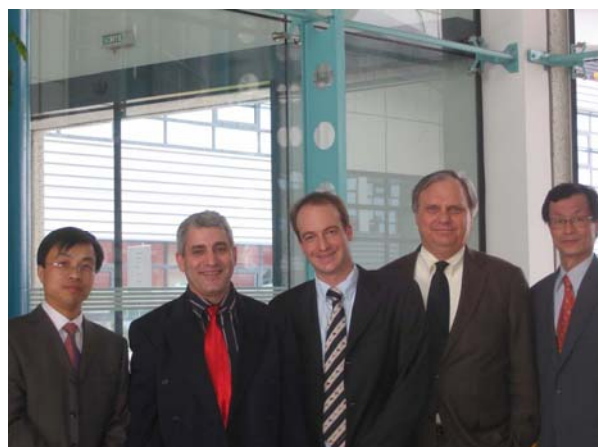
The next meeting will be held in Rio de Janeiro, Brazil, on 30 September 2006, in conjunction with the 9th International Conference on Stability of Ships and Ocean Vehicles (STAB2006) on 25-29 September 2006. This conference will be organised by Prof. Marcelo Neves, the Federal University of Rio de Janeiro, and cover all aspects of ship stability with refereed papers from the world. Its web site is now available with following address:

<http://www.oceanica.ufrj.br/stab2006/modules/news/>.

*Specialist Committee on Uncertainty Analysis*

The first meeting of the Uncertainty Analysis Committee was hosted by Erwan Jacquin at the Bassin d'Essais des Carènes in Val-de-Reuil, France, on March 30 and 31, 2006. A photograph of the committee members is shown below. The primary accomplishment of the meeting was the division of 10 tasks among the 5 members, which involves the review of 5 ITTC procedures and the development of 5 new ones.

The next meeting of the committee is scheduled for October 23 and 24, 2006, in Shanghai, China. Baoshan Wu of the China Ship Scientific Research Center will host the meeting.



Photograph of Uncertainty Analysis Committee Members. Left to Right: Baoshan Wu of China, Ahmed Derradji of Canada, Erwan Jacquin of France, Joel Park of USA, and Shigeru Nishio of Japan.

## **IMO Activities**

ITTC is now active in IMO in relation to the work on safety of passenger vessels. A paper has been presented to the SLF49, which takes place at the IMO Headquarters in London 24<sup>th</sup> to 28<sup>th</sup> July. The paper has been prepared by the Specialist Committee on Stability in Waves and is titled "Work Plan of Assessment of Time-to-Flood Prediction". ITTC will be represented at the meeting by Dr, Jan de Kat, MARIN, and Prof. Apostolos Papanikolaou, NTUA.

## **Membership Status**

The introduction of the ITTC membership fee of 600 US\$ for the entire three year period has as expected resulted in a reduction of membership. To date, 78 organisations have paid the fee, 4 have declared the termination of their membership, and 32 organisations have either not responded to the invoicing or are dragging their payment. Five organisations, only, have decided to use the opportunity to divide the payments into three instalments. Looking at the regions, in Americas 11 out of 19 have paid, in Central Europe 14 out of 18, in East Asia 12 of 16, in Northern Europe 9 of 13, in Pacific Islands 19 of 27 and in Southern

Europe 13 of 21. Those who have positively terminated membership are three from Central Europe and one from Americas.

The Regional Representatives are still trying to get an indication of the plans for those organisations which have not yet responded. At the forthcoming EC Meeting in Rome a decision is expected on how to deal with the organisations which have not paid the fee. Thereafter, the address list on the website will be updated.

## **ITTC website**

The ITTC website <http://itc.sname.org> is continuously being updated with relevant information. Scanning of the Proceedings from the 15<sup>th</sup> and onwards has now nearly been completed and the Proceedings are available on the website.

## **SIMMAN 2007**

The SIMMAN 2007 workshop has now been firmly planned to take place 15 to 17 October, 2007 in Copenhagen, Denmark. See the website [www.simman2007.dk](http://www.simman2007.dk) for more details, including the present status of the test plan.



**ITTC Worldwide Series for Identifying Facility Biases  
Provisional Schedule – 05 May 06**

**5.720 meters length model**

Institution	Country	Contact Person	e-mail	Scheduled Month	Check model
Canal de Experiencias Hidrodinámicas de El Pardo (CEHIPAR)	Spain	Jesús Valle	jvalle@cehipar.es	June 2004	X
Istituto Nazionale per Studi ed Esperienze di Architettura Navale (INSEAN)	Italy	Emilio F. Campana	e.campana@insean.it	September 2004	
Helsinki University of Technology	Finland	Juha Schweighofer Harri.Soininen	juhaschw@cc.hut.fi Harri.Soininen@vtt.fi	November 2004	
Krylov Shipbuilding Research Institute	Russia	A. Pustoshny	krylov@krylov.spb.ru Fax: +7 (812) 127 96 04	February 2005	
ICEPRONAV S.A.	Romania	Norman Pirvulescu	roman.pirvulescu@icepronav.ro	September 2005	X
Vienna Model Bassin	Austria	Richard Anzbözk	sva@sva.at	November 2005	
Huazhong University of Science and Technology	China	Liu Weibin	lwbjeffrey@163.com	February 2006	
Samsung Ship Model Basin	Korea	Se-Eun Kim	se-eun.kim@samsung.com	April 2006	
MOERI	Korea				
Pusan National University	Korea				
National Maritime Research Institute (NMRI)	Japan	Yoshiaki Kodama	kodama@nmri.go.jp	September 2006	X
Naval Surface Warfare Center (NSWC)	United States of America	Joseph Gorski	joseph.j.gorski@navy.mil	November 2006	
Institute for Ocean Technology (IOT)	Canada	David Murdey	David.Murdey@nrc-cnrc.gc.ca	February 2007	
QinetiQ	United Kingdom	Peter Bull	pwbull@qinetiq.com	April 2007	
Bassin d'Essais des Carenes	France	J-Marc Quenez Erwan Jacquin	quenez@bassin.fr jacquin@bassin.fr	June 2007	

	Tested
	New facility

## ITTC Worldwide Series for Identifying Facility Biases Provisional Schedule – 05 May 06

### 3.048 meters length model

Institution	Country	Contact Person	e-mail	Scheduled Month	Check model
Canal de Ensayos Hidrodinámicos - ETSIN (CEHINAV)	Spain	Luis Pérez-Rojas	lperezr@etsin.upm.es	February 2005	X
Laboratory for Ship and Marine Hydrodynamics - (LSMH/NTUA)	Greece	Theodoros Loukakis Sofia Peppas	loukakis@mail.ntua.gr speppa@mail.ntua.gr	April 2005	
Inha University	Korea	H. H. Chun	chunahh@pusan.ac.kr	September 2005	
Seoul National University					
Pusan National University					
Ulsan University					
Harbin Engineering University	China	De Bo Huang	debo_huang@hotmail.com	March 2006	X
Universiti Teknologi Malaysia	Malaysia	Omar Yaakob	omar@fkm.utm.my	May 2006	
?	Japan	Yusuke Tahara	tahara@marine.osakafu-u.ac.jp	July 2006	
Australian Maritime College	Australia	Gregor Macfarlane	G.Macfarlane@mte.amc.edu.au	September 2006	X
Canal de Experiencias de Arquitectura Naval	Argentina	M.Colpachi	mcolpac@fi.uba.ar	November 2006	
University of Iowa – IIHR	United States of America	Fred Stern	frederick-stern@uiowa.edu	February 2007	
Stevens Institute of Technology	United States of America	Raju Datla	rdatla@stevens.edu	April 2007	
University of Glasgow and Strathclyde	United Kingdom	A. H. Sandy Day	s.day@na-me.ac.uk	June 2007	X
University of Liège – ANAST	Belgium	André Hage	a.hage@ulg.ac.be	September 2007	
Ecole Centrale de Nantes	France	Pierre Ferrant	Pierre.Ferrant@ec-nantes.fr	November 2007	
Istanbul Technical University	Turkey	Mustafa Insel	insel@itu.edu.tr	February 2008	
Istituto Nazionale per Studi ed Esperienze di Architettura Navale (INSEAN)	Italy	Emilio F. Campana	e.campana@insean.it	April 2008	
Canal de Experiencias Hidrodinámicas de El Pardo (CEHIPAR)	Spain	Jesús Valle	jvalle@cehipar.es	June 2008	

	Tested
	New facility
	Import problems