ittc-news

INTERNATIONAL TOWING TANK CONFERENCE

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Obituaries

Dimitar Kostov Kostov

Dimitar Kostov Kostov, Dr, Senior Research Scientist, Head of Ship Hydrodynamics department of the Bulgarian Ship Hydrodynamics Centre in Varna, died on 02 October 2007 at the age of 62.

Born on 26 June 1945 in Varna, Bulgaria, Dr. Kostov received his M. Sc. degree as naval architect at the Technical University, Varna, in 1969.

Dr. Kostov started his scientific career in 1973 at the Shipbuilding Institute, Varna.

He received his PhD degree at Leningrad Shipbuilding Institute in 1977 for his thesis on investigation and development of methods for evaluation of full ships wave making resistance.

In 1986 academic rank “senior research scientist” was conferred on Dr. Kostov in the field of “ship theory”. In the same year he realized successful scientific fellowship on the ship form optimization for resistance minimization at the University of Tokyo and Yokohama National University in Japan.

Dr. Kostov was one of the first researchers with deep contributions to the formulation of the composition and the scientific research tasks of the Bulgarian Ship Hydrodynamics Centre and was amongst the founders of this Institution. From the establishment of BSHC in 1977 till 2007 Dr. Kostov occupied series of scientific management posts in the field of ship design and ship performance investigation as well as the post of BSHC scientific research activities assistant director. He was an active member of BSHC Scientific Council since its foundation.

Dr. Kostov was manager of series successively finished European and International investigations and projects.

He was one acknowledged researcher and scientist amongst the international scientific community as well as member of the Resistance & Flow Committee of the 20-th ITTC.

Kostadin Yossifov

25th Conference Organisation

The conference website is being continuously updated, see http://ittc.sname.org . The website now includes instructions and time schedule for reporting from the technical committees to the conference organisers.

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News from the Executive Committee

The Executive Committee held its third meeting in Fukuoka, Japan on 21st September, 2007, in continuation of the Advisory Council meeting. The main subjects on the agenda were the revision of the ITTC Rules, IMO relationship, AC membership, committee membership changes, arrangements for the 25th conference, venue for the 26th conference, and ITTC finances.
The next meeting will be held in Copenhagen, Denmark, on 28th March, 2008.

News from the Advisory Council

The second meeting of the 25th Advisory Council was held in Fukuoka, Japan, on 20th to 21st September, 2007. The major activities of the meeting were the review of the progress reports and the draft procedures submitted by the technical committees. The organisation of the AC into four working groups again demonstrated to be an efficient approach. The fact that some committees had not submitted progress reports and more had not submitted the draft procedures gave rise to some concern and the defaulting committees should be approached concerning this. It is important for the ITTC work that deadlines are met.

A revised draft of the ITTC Rules was discussed at length. A new draft will be issued for final discussion by the AC and EC at the forthcoming meetings end March, 2008. At that time the version to be put for approval by the full conference should be finalised.
An improved process for developing the Terms of Reference for the new committees was discussed and agreed. As part of this process, all members, AC, EC and present committees shall be asked to bring forward their suggestions to be considered by the AC/EC.
Both the Chairman and the Vice Chairman of the AC will retire before the next full conference and will be unable to continue their functions. Therefore, new candidates for these positions need to be found.

News from Technical Committees

Manoeuvring Committee

Considerabe progress on the given tasks has been achieved since the third meeting of the committee at Basin d'Essais des Carenes in April 2007. First drafts of the reviewed procedures 7.5-02-06-02 on Captive Model Tests and 7.5-02-06-03 on Validation of Manoeuvring Simulation Models as well as on the rewritten procedure 7.5-04-02-01 on Full Scale Manoeuvring Trials have been submitted to the AC. In addition, a proposal for a new procedure on Uncertainty Analysis (UA) for Captive Model PMM Tests has been submitted to the Quality Systems Group and Special Committee on UA. Complete drafts of all Sections of the Manoeuvring Committee Report to the 25th ITTC are being exchanged and commented on by all members with revised versions to be presented and discussed at the next and final meeting.

The preparation of the workshop on simulation of manoeuvring SIMMAN 2008 is in good progress. All necessary information and instructions for the participants have been posted now on the web site of the workshop www.simman2008.dk Predicted results of system and CFD based manoeuvring simulation techniques and time histories of hydrodynamic forces and moments acting on the model during typical PMM motions predicted with CFD codes are going to be compared with one another and with experimental data for different test cases at the workshop. The workshop will be held on 14-17 April 2008 in Copenhagen, Denmark. The submission deadline is 31 December 2007. Please refer to the web site for all details and on-line registration information.

Dates and locations for future Committee and SIMMAN 08 meetings:

Manoeuvring Committee Meeting No. 4: 17-18 January 2008 at MARIN
SIMMAN 2008 Executive and Organizing Committee Meeting No. 7: 19 January 2008 at MARIN

Propulsion Committee

The 25th ITTC Propulsion committee met for the fourth time in Lyngby, Copenhagen hosted by Anton Minchev of Force Technology between the 23rd and 25th of October. The original plan had been to meet in Shanghai just after the Fast2007 conference but unfortunately due to USA visa issues this was not possible and Force Technology kindly agreed to act as host organisation. Eight of the nine members were able to attend and a busy work schedule was required to complete all the items on the agenda of the meeting. The main purpose of the meeting was to complete a first draft of the final report following the previous meeting where each member had been given lead responsibility for the various sections of the report. A tour of the impressive experimental facilities of Force Technology including the towing tank, boundary layer flow wind tunnels and the impressive suite of ship bridge simulators that can work together, for example in practising ship-tug manoeuvres. The Secretary was particularly impressed as a "live" emergency training exercise involving a tug controlling a large oil\tanker with a crippled rudder in the approaches to his home port of Southampton.

The change of date and venue had disrupted the work of the committee on the five procedures for which it had the task of reviewing and this was the focus of the first day's work. By the end of the meeting all four procedures for which the committee had decided to make substantive changes had been amended to the satisfaction of the committee members. The committee now awaits the response of the AC review of their proposals. The fifth procedure, "Guidance for LDV", has not been changed although up to date references to this technique as well as PIV will be included in the committee's report. It is the considered opinion of the committee that both LDV and PIV techniques should be the subject of a new procedure that captures all of the advances of the last decade or so. This task was seen to be beyond the resources of the present committee. The remainder of the two days was spent working through the main report section by section with each committee member leading the committee through their draft section. A particularly challenging area was the residual task of capturing the remaining data and subsequent analysis of the collaborative waterjet testing programme carried out for the 24th ITTC. The committee was indebted to the hard work of John Hoyt in assisting with this task. At this stage the remaining challenge is to present the revised datasets and associated discussion within the page limits of the report. Overall by the end of the meeting the main report, although 30% over limit has in place the review of new developments, advances in CFD and experimental techniques, supporting evidence for the procedural amendments, secondary thrusters and shallow water propulsion effects. The work of the committee now continues with the completion of a working draft and with a final meeting in April 2008 of those committee members able to attend to the SIMMAN manoeuvring workshop available to produce the final version of the report.

Specialist Committee on Wake Fields

The Specialists Committee on Wake-Fields met for the fourth time from the 2nd – 3rd of August 2007, at the David Taylor Model Basin, Naval Surface Warfare Center, Carderock Division near Washington DC. The meeting was hosted by the Dr. Thomas Fu (NSWCCD) and was attended by all but one of the committee members. The work focused on completing the review and updates to the Testing and Extrapolation Methods Propulsion; Cavitation procedures: 7.5-02-03-03.1 (Model-Scale Cavitation Test), 7.5-02-03-03.3 (Cavitation Induced Pressure Fluctuations Model Scale Experiments), 7.5-02-03-03.5 (Cavitation Induced Erosion on Propellers, Rudders and Appendages Model Scale Experiments), 7.5-02-03-03.6 (Podded Propulsor Model-Scale Cavitation Test) and completing the two procedures the committee was tasked to develop, Nominal Wake Measurement; LDV Procedure and Nominal Wake Measurement; 5-hole Pitot Tube Procedure. Further detailed discussion and reviews were made of the on-going work on the numerical prediction and experimental measurement of wake fields. Plans were made for the submittal of the Procedures and Guidelines and for completing an initial draft report by the end of the year with the final review at the next meeting. The next meeting of the committee will take place at CTO SA in Gdansk, Poland the week of January 14th, 2008 hosted by Dr. Tomasz Bugalski.

Specialist Committee on Cavitation

The 25th ITTC Specialist Committee on Cavitation held their fourth meeting on November 7-9, 2007 in Washington, D. C., United States at the Naval Surface Warfare Center (NSWC). Seven of the nine committee members were able to attend the meeting. During this meeting, the committee reviewed comments from the Working Group #2 of the ITTC Advisory Council for the two draft procedures that were submitted in August. The committee started going through the current draft of the final report. Two sections still need to be further addressed. Finally, the committee discussed the key points for the Summary and Conclusions. The short section on Recommendations was also briefly discussed. Before closing the meeting, the committee discussed some possible proposed tasks for the next Specialist Committee on Cavitation. The committee wishes to extend their appreciation to the NSWC for hosting the meeting.

Specialist Committee on Stability in Waves

The Committee on Stability in Waves submitted the draft of the revised procedure on model tests on intact stability to the AC on the 10 August 2007. The committee is awaiting the review of the procedures from the AC working group.

The Committee launched the second phase of the time-to-flood benchmark test study in October 2007. This task was conducted under the coordination of Dr. van Walree and was performed at the request of the IMO. In this phase a typical passenger cruiser ship hull with a complex internal compartment configuration was used, which was made available by SSRC. It is noteworthy that this study could not have been realised without the kind support of SSRC, particularly Professor Vassalos and Dr. Jasionowski, for their supply of realistic cruise ship geometry data, which is not readily available in the public domain due to commercial reasons. There are five participants for this phase of the study, SSRC (UK), Napa (Finland), MARIN (the Netherlands), Chalmers (Sweden) and MOERI (Korea). The deadline for their submissions is the 15 December 2007. The Committee appreciates their positive contributions and participation in the study. The test case starts with the vessel in the intact condition in irregular waves without forward velocity; a two-compartment damage is then instantaneously created. All defined internal openings between compartments are considered open during the simulation. The results are to be submitted to the SLF51 of the IMO.

The Committee supports the benchmark testing study on validation of numerical codes for the prediction of the motions and flooding of damaged ships in waves, which has been organised by the EU Commission funded research project SAFEDOR. The coordinator of this study is Prof. Papanikolaou. The six organisations taking part in this study: NTUA (Greece), SSRC (UK), IST (Portugal), MARIN (the Netherlands), MOERI (Korea) and GL (Germany). The deadline for their submissions is the 15 January 2008. This study is evaluating the numerical simulation of the behaviour of a damaged RoPax ship in waves and the estimation of the survival wave heights. While this ship's internal layout is simpler than that of the cruise ship, experimental data is available for comparison with the numerical simulations. Preliminary results of this study are planned to be discussed at the 10th International Ship Stability Workshop in Daejeon, Korea on the 23-25 March 2008 (http://www.issw2008.org/). A summary of this benchmark study will be included in the final report of the Stability in Waves Committee. The Committee would like to appreciate the courtesy of the SAFEDOR project.

The next committee meeting will be held in Osaka on the 30-31 March 2008, to finalise the draft final report to the ITTC, in conjunction with the 6th Osaka Colloquium on Seakeeping and Stability of Ships on the 26-29 March 2008. Its web address is http://www.marine.osakafu-u.ac.jp/~oc2008/.

Specialist Committee on Uncertainty Analysis

The Uncertainty Analysis Committee (UAC) has written three new procedures and revised ITTC 7.5-02-01-02 "Uncertainty Guidelines for Uncertainty Analysis in Resistance Towing Tank Tests." The three new procudures include Calibration, Particle Imaging Velocimetry (PIV), and Laser Doppler Velocimetry (LDV). The three new procedures have been submitted to the Advisory Council (AC) for review. The revision to ITTC 7.5-02-10-02 is

currently under review by the committee and will be submitted in the near future.

All procedures by this committee are being written in conformance to the ISO "Guide to the Expression of Uncertainty in Measurement" (1995) or GUM. The terminology in GUM has been adopted by the committee. The committee will submit a list of ITTC symbols for uncertainty analysis. These symbols will be consistent with the GUM and the ISO "International Vocabulary of Basic and General Terms in Metrology" (1993) or VIM. As reported previously, ITTC 7.5-02-01-01, "Uncertainty Analysis in EFD," is being simplified and rewritten for conformance with the GUM.

Since calibration is a key element in all testing, a new calibration procudure has been written to complement the general uncertainty analysis procedure, ITTC 7.5-02-01-01. The calibration procedure includes two essential elements: a reference standard traceable to a National Metrology Laboratory (NMI) and the uncertainty in the curve fit for the calibration. The key element in the LDV calibration procedure is a direct calibration with a primary velocity standard. As the primary velocity standard, a spinning disk is proposed. This device is applied in many laboratories including NMIs. The PIV procedure outlines the key elements in the uncertainty sources for a conventional two-component system. An extension to stereo PIV will be proposed for the 26th ITTC.

The committee is also reviewing the ITTC draft procedure "Uncertainty Analysis, Example for Planar Motion Mechanism (PMM) Test" by the Manoeuvering Committee. A preliminary review has been completed, and the committee will have some suggestions on the technical aspects of this procedure.

The UAC membership has been reduced to four with members from Canada, China, Japan, and USA. Mr. Erwan Jacquin, formerly of Bassin d'Essais des Carènes in France, is now apparently employed by another company. He did not attend the last committee meeting in St. John's, Newfoundland.

The fourth and final meeting of the committee is scheduled for January 30 to February 1, 2008, in Washington, DC, at the U. S. National Academy of Science. Dr. Joel Park of the David Taylor Model Basin will host the meeting.

ITTC Benchmark data

At the last AC/EC meetings it was again discussed how a survey could be conducted on the availability of benchmark data, which could be of common interest to the ITTC community. All ITTC members are kindly requested to contribute to this survey with any information they may have on such data. It has not yet been decided how the data shall be organised, but information of interest at the present time could be origin of data (experimental or full scale), what sort of information (resistance, propulsion, manoeuvring, seakeeping, loads, cavitation, etc etc etc), in which form is the data found, availability, accessibility, owner of data, restrictions on use, and possible other information of interest in relation to the use of the data.

Please send any information on this to the ITTC secretary at aad@force.dk .

Membership Status

The ITTC membership list has now been updated. The introduction of the membership fee has resulted in the loss of xx members, and the present membership is as shown in the table below.

Region	Members	AC-members	Cancelled
Americas	12	3	7
C. Europe	14	7	4
East Asia	15	4	1
N. Europe	10	6	3
Pacific Is.	24	5	4
S. Europe	16	6	5
Total	91	31	24

ITTC website

Updating of the ITTC website ittc.sname.org continues. Proceedings from 8th through 24th conference are now available as is the Catalog of Facilities. The membership list has been updated to reflect the present membership.