

SUNDAY 11th MARCH 2012

19:00 – 21:00

REGISTRATION

Emirates Team New Zealand Base, 135 Halsey St.

MONDAY 12th MARCH 2012

08:00 – 09:00

REGISTRATION

Auckland Maritime Museum

09:00 – 09:30

OPENING SESSION (Chair, David Le Pelley)

Conference Opening and Official Welcome

Opening Addresses – Len Brown, Mayor of Auckland City
Grant Dalton, CEO Emirates Team New Zealand

09:30 – 10:15

KEYNOTE ADDRESS (Chair, David Le Pelley)

Giovanni Belgrano, Principal Structural Engineer, Emirates Team New Zealand

10:15 – 10:45

MORNING BREAK

10:45 – 12:45

SESSION 1: (Chair, Peter Richards)

AC45: A study of high performance composite construction

Susan Lake, Tim Smythe & Chris Mellow

Sail CFD and wind tunnel testing for VOR70 design

Steve Collie & Nick Hutchins

Speed vs. Stability- Design considerations and velocity prediction of a hydro-foiled international moth

Christian Boegle, Heikki Hansen & Karsten Hochkirch

Aerodynamic force deduction on yacht sails using pressure and shape measurements in real time

David Le Pelley, Dale Morris & Peter Richards

12:45 – 13:45

LUNCH

13:45 – 15:15

SESSION 2: AERODYNAMIC CFD (Chair, Richard Flay)

CFD calculation of downwind sail performance using flying shape measured by wind tunnel test

Yusuke Tahara, Yutaka Masuyama, Toichi Fukasawa & Masanobu Katori

Modelization and calculation of the windage of sailing boat standing rigging

Sabrina Malpede & Nicola Salin

CFD models of downwind sail aerodynamics using eddy viscosity and Reynolds stress turbulence models

Stuart Norris & Peter Richards

15:15 – 15:45

AFTERNOON BREAK

15:45 – 17:45

SESSION 3: STRUCTURES (Chair, Giovanni Belgrano)

Damage initiation and evolution in marine composite laminates

Cecile Laguette, Mark Battley, Thomas Basset & Rebecca Islin

Evaluation of the influence of hydro-elasticity in slamming of elastic panels using a coupled FE-FV method

Maxime Goutard, Raj Das, Mark Battley, Tom Allen & Stuart Norris

New material for sail production

James Winton

Effect of stiffener compliance on response of curved hull panels

Mark Battley, Erwan Grossman & Thomas Basset

19:00 – 21:00 PUBLIC DESIGN SESSION (Chair, David Le Pelley)
Viaduct Exhibition Centre
Well known Volvo sailors and designers will discuss what has made the VO70 class so successful.

TUESDAY 13th MARCH 2012

09:00 – 09:45 KEYNOTE ADDRESS (Chair, Mark Battley)
Ian Campbell, Emeritus Fellow, Wolfson Unit MTIA, UK.

09:45– 10:45 SESSION 4: HYDRODYNAMIC TESTING (Chair, Mark Battley)
Investigation of scale effects in sailing yacht hydrodynamic testing
Ahmet Ziya Saydam & Mustafa Insel
A review of unsteady hydrodynamic behaviour of sailing yachts and methods to study it
Rogier Eggers, Guilhem Gaillarde & Jos Koning

10:45 – 11:15 MORNING BREAK

11:15 – 12:45 SESSION 5: HYDRODYNAMICS (Chair, Len Imas)
Model testing – What is the point? A review of yacht testing and the implications for yacht designers
Chris Hutchison, Jonathan Binns, Jonathan Duffy & Paul Brandner
Investigation of keel bulbs for sailing yachts
Kasper Ljungqvist, Björn Axfors, Hanna Tunander, Michal Orych, Florian Vesting & Lars Larsson
Tuning of appendages for an IMOCA60 yacht
Ian Campbell, Merfyn Owen, Clay Oliver & Giorgio Provinciali

12:45 – 13:45 LUNCH

13:45 – 15:15 SESSION 6: ALTERNATIVE HULLFORMS (Chair, Dan Jowett)
Side force generation of slender hulls – influencing Polynesian canoe performance
Florin Boeck, Karsten Hochkirch, Heikki Hansen, Stuart Norris, Richard Flay
Using parametric modelling, CFD, and historic data, to estimate planing hull performance on a laptop
Jérémie Raymond & Kevin Cudby
Design by best engineering principles for the solar catamaran Tûranor PlanetSolar
Axel Köhlmoos, Volker Bertram, Hasso Hoffmeister, Heikki Hansen & Andre Moltschaniwskyj

16:00 – 18:00 Harbour Cruise

19:30 onwards Conference Dinner
Royal New Zealand Yacht Squadron, Westhaven Marina.

WEDNESDAY 14th MARCH 2012

09:30 – 10:15 KEYNOTE ADDRESS (Chair, Graeme Finch)
Len Imas, Stevens institute of Technology, USA.

10.15 – 11:15 SESSION 7: HYDRODYNAMIC CFD - I (Chair, Graeme Finch)
Anisotropic grid adaptation for RANS simulation of a fast manoeuvring catamaran
Michel Visconneau, Gan Bo Deng, Patrick Queutey, Jeroen Wackers & Benoit Mallo
On the CFD modelling uncertainty of ACC yachts
Ignazio Maria Viola, Richard Flay & Raffaele Ponzini

11:15 – 11:45 MORNING BREAK

11:45 – 12:45 SESSION 8: HYDRODYNAMIC CFD – II (Chair, Ian Campbell)
Systematic study of the hydrodynamic forces on a Volvo 70 racing yacht using parametric design, CFD and variable selection
Lionel Huetz, Yann Andrillon, Pierre Emmanuel Guillerm & Bertrand Alessandrini
Hydrodynamic performance of a submerged lifting surface operating at high speeds
Romain Garo & Len Imas

12:45 – 13:45 LUNCH

13:45 – 15:45 SESSION 8: FLUID-STRUCTURE INTERACTION (Chair, Susan Lake)
A strongly coupled fluid-structure interaction model for wind-sail simulation
Matteo Lombardi, Massimiliano Cremonesi, Andrea Giampieri, Nicola Parolini & Alfio Quarteroni
An experimental investigation of unsteady sail aerodynamics including sail flexibility
Fabio Fossati & Sara Muggiasca
Numerical investigation of the unsteady fluid structure interaction of a yacht sail plan
Benoit Augier, Frederic Hauville, Patrick Bot & Mathieu Durand
Pressure distribution on sail surfaces in real sailing conditions
Miro Lozej, Damjan Golob, Bojan Vrtič & Drago Bokal

15:45 – 16:00 CLOSING REMARKS

ORGANISING COMMITTEE

Mr David Le Pelley, University of Auckland (Chair)
Dr Mark Battley, University of Auckland
Mr Graeme Finch, Finch & Associates
Prof. Richard Flay, University of Auckland
Mrs Susan Lake, Core Builders Composites
Mr Daniel Jowett, University of Auckland

Ms Michelle Kahn, Marine Industry Assoc.
Ms Helen Queckett, RINA NZ
Assoc. Prof. Peter Richards, University of Auckland
(Tech. Chair)
Mr Mark Sorensen, NZTE