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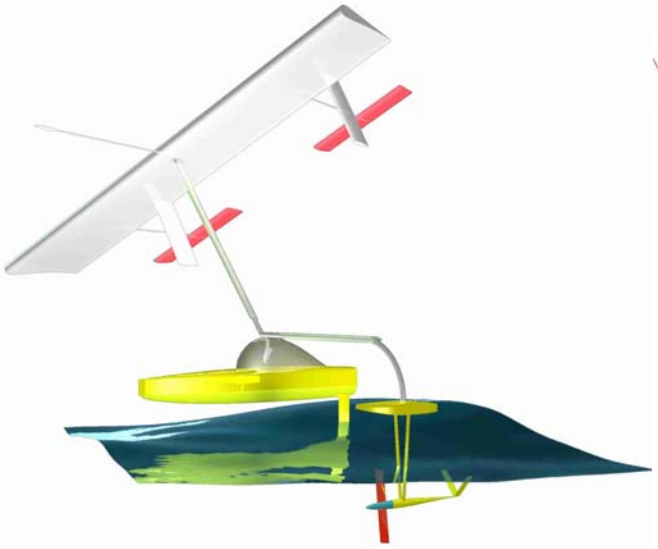
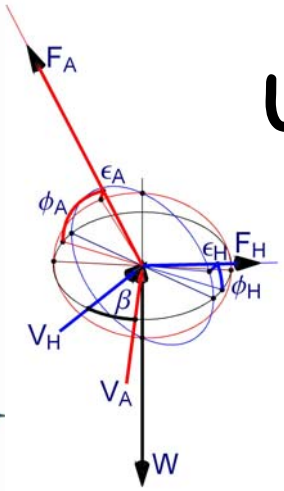
Joint Technical Programme
Mechanical & Manufacturing





Ultimate Sailing

Stephen Bourn

www.wingbornehydrofoil.cjb.net

Chapman Hall, Engineering House
11 Bagot Street, North Adelaide

Tuesday 12th July 2005
Light tea commences at 5.30 pm
Meeting commences at 6.15 pm

Abstract

A revolutionary new sail craft design will sail at more than twice the wind speed and challenge the world sailing speed record. The craft will carry one or two people and can sail in all directions on open unsheltered water in all weather conditions, making it suitable for racing or recreational sailing as well as extreme sport. The patented wing borne hydrofoil based design is self-righting and inherently stable, powered and supported by an offset inclined wing that lifts the whole craft, leaving only a submerged hydrofoil slicing through the water. The structure is lightweight and resilient, the wing collapses easily for transport, and the craft can be launched off any beach. The design was inspired after a fresh look at basic principles and absolute limits to performance revealed a new fundamental law of motion applicable to all sail craft. The design has been proven on a series of radio-controlled models, and by computer simulation. Construction has commenced of a full size craft with an eight-metre wingspan, carrying a pilot who will control the craft via two joysticks.

Speaker

Stephen Bourn studied physics and mathematics at the University of Adelaide. He graduated in 1978 with an honours degree in Pure Mathematics. He spent the next four years as a PhD student working in finite geometry and combinatorics, including a year spent at the University of Bologna in Italy. He entered the workforce, teaching mathematics and then working in a number of Government Departments, including the Australian Bureau of Statistics, before joining the Defence Science and Technology Organisation (DSTO) in 1988. In that year Stephen also completed a Graduate Diploma in Computer Science.

At DSTO Stephen has been involved with operations research in a number of divisions, generally using war gaming, modeling and simulation tools. His most notable achievement at DSTO has been the development of a methodology to optimise the deployment of surface-to-air missiles. This has been adopted by the Army in its Air Defence Command Post Automation (ADCPA) software. Stephen is currently the Discipline Leader Combat Evaluation in Land Operations Division. Stephen is also a keen sailor with over 30 years experience, including membership of the Macquarie Innovation speed sailing team that held the world record from 1993 until 2004.

All Visitors Welcome

For further information, contact Alan Hicks, ahhicks@adam.com.au