

Rig Design: the Debate

Sailing Yachts work in multi-physical environments and extreme conditions. Only recently, engineering approaches are applied to rig structural design and more structural integrity requirements are due to MCA - LY3 code. Moreover **rig design is key in maximising sailing yachts performance.**

Evaluating realistic sail loads and how rig elements and sails interact enable optimal rig design.

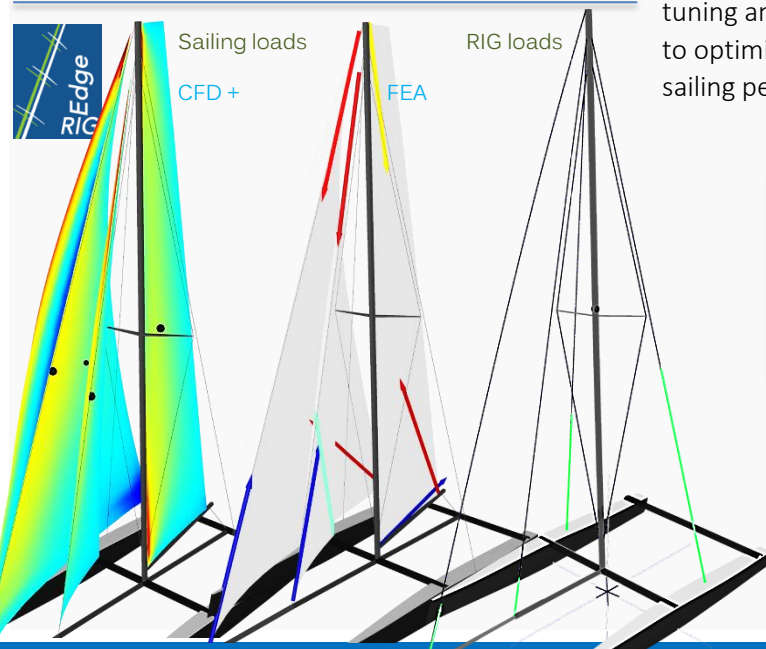
RigEdge allows yacht and rig designers to design optimal sail and rig plans by virtually simulating the structural behavior of rigs while sailing. With our integrated sail and rig technology – developed

by the SMAR Azure team – we can calculate the effect of the tuning, sailing and inertial loads on the rig.



Sailing loads are calculated via non-linear structural analysis (FEA), integrated with a vortex lattice with wake relaxation analysis method(CFD) - see picture below.

Dr. Malpede adds that: *“Unlike existing structural analysis tools (FEM/FEA) for rigs, the SMAR Azure technology can directly take into account the fluid-structure interactions between sails and rig components, which will allow further improvements over current design methods.”*

The ability to calculate the effect of sailing loads, tuning and also inertial loads on rigs allow designers to optimise rig weight and stiffness for optimal sailing performance.



RINA (Italy) and Lloyd's Register (UK) have adopted RigEdge to certify rigs, according to the Sailing Rigs certification under MCA LY3 code.

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 - ✓ Full SAIL SHAPE Design tools

“SMAR Azure uses Global Innovation Ecosystem, just as Apple and other big ICT companies” says prof. Martin Fransman, whose main research interests are in the areas of innovation and competitiveness of enterprises. In his recent talks, one of which in Brussels to European Commission representatives, Prof. Fransman, said 'SMAR Azure - although being a micro tech-company based in Scotland - has developed constructive relationships with its customers world-wide, which have nurtured the company innovative developments and priorities. Welcoming the news, Sabrina Malpede, SMAR Azure CEO, says "it is a great opportunity to validate our progresses and methods with Prof. Fransman. His experience and views of our activities is of great encouragement for myself and our team."

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CORPORATE HOLIDAYS
 SMAR Azure closes from
 Mon 3rd Aug until Fri 7th Aug 2015.