



NATIONAL TECHNICAL UNIVERSITY OF ATHENS

LABORATORY FOR SHIP AND MARINE HYDRODYNAMICS

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Marseille Conference

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Current trends in the design of sailing yachts
&
The competition of racing sailing yachts

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Current trends in the design of sailing yachts

New Designs - Cruise Boats

New Mediterranean Designs emphasized on space on deck enjoy the sun full tables and platforms for swimming. In order to achieve that they have a full stern that give also more space on salon and cabins at stern.

A second important factor for the design is depth of the keel, especially for the chartering boats, in order to enable mooring as close to the shore as possible and to ensure mooring in all marinas and ports, while retaining the necessary side force and stability.



Current trends in the design of sailing yachts

New Designs – Racing Yachts

Open deck, full stern, very light construction and a deeper carbon keel with bulb and a rudder with carbon fibers.

The new designs includes carbon masts and shrouds. The shrouds are pieces of standing rigging which hold the mast up from side to side.

There are also canting keels designs and soon will be introduced foils. Canting keels is a form of sailing ballast, suspended from a rigid canting strut beneath the boat, which can be swung to windward of a boat under sail, in order to counteract the heeling force of the sail. Canting keel must be able to pivot to either port or starboard, depending on the current tack.

CFD procedures are included more and more in the designing of boats in order to achieve better performance and a good rating.

An important factor is that, a lot of owners asking a boat that could use for both cruising and racing, so the production boats needed to have a configuration with deeper keel and higher mast.



Traditional design of sailing yachts



SUN
ODYSSEY
479

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Modern construction following traditional design



DUFOUR 450

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Modern design of sailing yachts



OCE 45 Full Stern



The competition of sailing yachts

The World Sailing Federation (WS) include the following International measurement systems for Offshore Boats:

- ORC (open formula based in IMS) divided in ORC I (full measurement boats) and ORC Club (reduced measurements).
- IRC (close formula). IRC is an International rating system administered by Royal Offshore Racing Club (RORC) and UNCL (Union Nationale pour la Course au Large)

Both international measurement systems includes almost all the offshore boats one design and production boats

The World Sailing recognizes

- several one design classes as Farr 30, Farr 40, Swan 45, Swan 60 and others
- Multihull classes
- Americas Cup Boats



The competition of sailing yachts

Offshore Racing Congress (ORC) is the authority recognized by WS and administers the ORC rating system.

ORC has also several rating classes (close racing without time allowance): GP26, GP33, GP42 and time allowance classes for Superyachts

ORC organize Worlds and Continental Championships including European and Mediterranean Championship under ORC I and also GP and ORC Classes.



Current trends in the design of sailing yachts



GP 26



Current trends in the design of sailing yachts



GP 33



Current trends in the design of sailing yachts



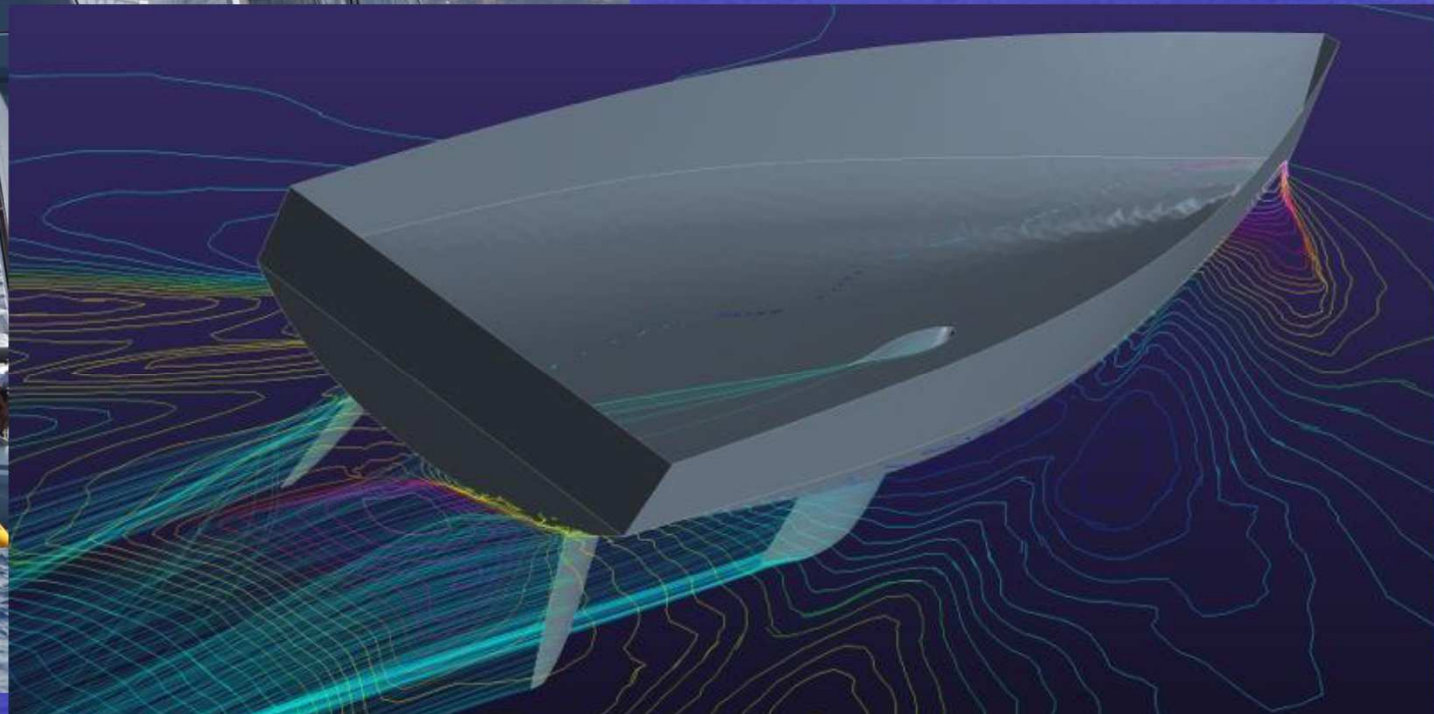
Super-Yacht
Class



The competition of sailing yachts



Modern racing
sailing yachts of the
ORC class





Production of sailing yachts depends on tourism, since the majority of them are acquired by the chartering companies. Since Mediterranean Sea offers ideal conditions for sailing, the sector is promising with France being the main provider.

Racing activities in the Mediterranean are, worth mentioning:

1. Regattas of classical sailing yachts, with many old yachts participations. Annual regattas in Spetses, Greece (<http://spetsesclassicregatta.com/en/>), in Cannes, France (<https://www.regatesroyales.com/en/>).

Comité International de la Méditerranée (CIM) handles their harmonization (<http://www.cim-classicyachts.org/index.php/en/>). Their 2016 schedule is found in <http://www.cim-classicyachts.org/index.php/en/calendrier-regates>



2. There are also regattas of more modern sailing yachts , like Barcolana regatta, recently carried out in Trieste with 2100 participants. In 2019 the regatta will take place in Greece.

https://www.facebook.com/RegataBarcolana/?hc_ref=ARSTY6EVTwqTWIg4MetgGBmhBj_2T6CJd7tQvf3ZIWx-Bo4pyjGsQAKayaPI00Pg7_Y&pnref=story).

3. In 2018 there is common World Championship (WC) of ORC & IRC, the two main rating systems. European Championship (EC) of ORC is in Cyprus and there is a major campaign every year in Mediterranean since WC and EC take place either in Med or in North/West Europe.

<http://lesvoilesdesaint-tropez.fr> Competition at Saint Tropez



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KIND ATTENTION!**