

# ANDREW WHITTAKER

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## PROFILE

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**A knowledgeable, enthusiastic and dedicated professional with extensive experience in the custom high-tech Marine and Composites industry with a specialist knowledge in Superyachts design, Race Yacht structural engineering and production. Likes new challenges and is self-motivated. Now looking to enhance and further this role. High end composites and luxury bespoke design is my passion and the area that I have had extensive experience in over my working career.**

## CAREER SUMMARY

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### Southampton Solent University

#### Senior Lecture – Yacht design program

Sept 14 – Current

Lecturer on the Yacht and Power Craft and Yacht Design and Production Degrees. Responsible for unit management, assessment and teaching on many subjects including Marine Materials, Marine Production, Advanced Production technology, Sailing Yacht design, Yacht Hull surveying and Practical Marine structures. These subject bring together my past production, engineering, design and project management experience. The mentioned subject are very practical in their approach to the specifics of small private and commercial motor and sailing craft. Hands on Lab work take a lead in the materials, production and surveying units. 3D / 2D modelling and drawing is a major area covered in the design and structures units. Alongside this, rules and regulations such as the RCD, ISO 12215, DvN and Lloyds special service craft are covered from a highly relevant case study and practical basis.

Teaching across 4 years from Foundation through to final year students allows the build-up of theoretical knowledge and practical hands on construction. I personally cover most the composite, practical structures and production sides of the degree. Engaging in classroom based teaching, hands on lab experimentation using basic through to advanced composite processing techniques such as infusion, SPRINT and Prepreg. I also take students on hands on surveys and yard / vessel inspections leaning with a large network of marine contacts. Additionally I deal with small craft systems covering engine installations, propulsion, electrical and hydraulic systems. I have been responsible for supporting the composite lab technician, developing laboratories in to a teaching space where we cover the industry standards for production and repair work. Work has also included dealing with external and internal suppliers sourcing 3D printing and CNC machining for part and tooling production.

Working at Southampton Solent University has allowed me to refresh and upskill my knowledge in the traditional naval architecture subjects improving my abilities to deal with general classification societies calculations and first principal project design issues. This complements my past structural design, manufacturing, drafting and project management experience.

Last academic year I carried out a Post Graduate Certificate in learning and teaching. This was an interesting process of research and reflection of my professional development within my industry (advanced composites and yacht design / production) as well as the educational world. This helps to see the relationship between training and development in the industry and education to improve and enhance this rapidly expanding technological sector.

**GURIT**

**Aug 05 – Sept 14**

**Design Engineer**

**Jan 07 – Sept 14**

Responsible for the structural design, project management and production support of numerous medium to large scale projects. A typical working week involves working on several projects at a time which entails managing priorities, risks and customer's requirements as well as delegating project tasks to my colleagues. I collaborate with interior and systems designers to produce accurate structural 3D models in Solid Works and Rhino. I also provide design details to our draughting team in order for them to produce construction drawings.

I am currently working on the structural design of the sailing yacht Pink Gin VI (Baltic 175'). I am heavily involved in the projects' design and build team, developing the structural GA and producing structural specifications. I utilise the design, engineering and construction experience I have gained on previous projects such as Hetairos (Baltic 200' Panamax Ketch) and Nautor Swan's 60', 80' and 105'. Other recent projects include a composite 24m SWATH, Southern Wind's 82', 94' and 102', numerous offshore racing yachts and X Yachts' current range of production boats. Smaller projects have included several components such as communications masts, swimming pools, boarding ladders and large hatch covers for +50m motor yachts.

I have also worked on civil engineering projects such as wind turbines, a station roof for the DLR in London, the Dokaa Clock Tower in Mecca and automotive body parts for the Aston Martin DBS. My communication skills help me to deal with everyone from race teams, classification societies, and major civil engineering firms.

**Trainee Design Engineer**

**Aug 06 – Jan 07**

Soon after starting at Gurit I was identified as having suitable aptitude to move into an engineering role. I attended training sessions on the Gurit Graduate Training Scheme covering composite engineering theory, composite processing and structural design concepts. I began to co-engineer several projects including sailing yachts, architectural structures and other composite components increasingly taking more responsibility.

**Design Draughtsman**

**Aug 05 – Aug 06**

In this role I worked closely with the engineering team to provide construction drawings for many marine and civil engineering projects. 3D skills were regularly used to validate complex geometry as well as to produce solid models for mould production.

**CONCEPT YACHTING****Feb 05 – Aug 2005****Owner of company**

I set up my own design and project engineering company. In conjunction with a composite boat yard in Hamble, I designed and engineered a custom luxury RIB for a large mega yacht, a Trans Pack 52 race yacht and a Ker 36 cruiser-racer using carbon pre-preg and Nomex. I worked on the design and quotation of several luxury yacht tenders and sailing yachts. I have implemented various methods and techniques in the yard which improved quality and productivity.

**CAMPER AND NICHOLSONS YACHTING Ltd, GOSPORT****May 03 – Feb 05****Design and Project Engineer**

I was responsible for the prototype design and build development of a luxury motor yacht utilising SP's advanced composite "Sprint" system. I worked on the design and production of two luxury custom tenders for a large mega yacht, using carbon pre-preg. Responsibilities included producing construction and concept designs from the initial design brief. Concept and final drawings of systems were produced using Rhino CAD and Auto CAD. I produced and tested advanced composite components from many manufacturers to keep up to date with new systems that may be suitable for the yacht construction or tooling. I specified and ordered equipment and components, and managed the assembly and fitting procedures. I held regular meetings with the Managing Director, Yard Manager and International Design Team to discuss developments with the design. I worked closely with industrial specialists, influential guests and customers in all areas of the projects. I worked on the boats technical and owners' manual drawings assessing the boats compatibility with the current RCD, MCA and ABS regulations liaising with the surveyor.

**ANCASTA INTERNATIONAL BOAT SALES, GOSPORT****May – Oct 02****Assistant Yacht Broker**

Responsible for the management and all associated duties of the office. This involved taking sole responsibility for the prospective client viewings, controlling new yachts by listing and assessing valuations of the new yachts utilising my personal knowledge and the company's database. Yachts were sea trialled and delivered for their owners, which required crucial leadership and health and safety responsibility. Surveys had to be negotiated and overseen as well as presenting this information to the clients. This position taxed my management, time planning and delegation skills especially during the busy Southampton Boat Show period. I improved my contractual knowledge by the monitoring of stage payments and negotiating final sales agreements. This involved drafting contract documents requiring legal solidarity.

**BERTHON BOAT COMPANY, LYMINGTON****Jun – Jul 01****Assistant to the Project Manager**

Responsibilities included: Managing the restoration project of a 1920's high-speed motor launch, restoring the vessel back to original glory. This included a significant update of the engine installation in time for the Americas Cup Jubilee. I also helped carry out the refit of a Mystic 60 "Matterhorn". I overviewed the construction of several "Severn" class lifeboats for the RNLI with the project manager and took part in sea trials.

## EDUCATION AND TRAINING

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**Southampton Solent University, UK**

**2015-2016**

**PGCLTHE (Masters level)**

**Fellow of the Institute of higher education**

**Southampton Institute, UK**

**2000-2003**

**BSc (Hons) Yacht Manufacture and Surveying (2:1)**

Modules included:

- Advanced Composite Technology
- Metallurgy
- Design Concepts
- Yacht Aesthetics and Ergonomics
- Yacht Mechanical Systems
- Small Craft Materials and Production
- Yacht Manufacturing and Management
- Advanced Production Techniques
- Yacht Performance Evaluation
- Theory of Sails, Keels and Spars
- Light Marine Engineering
- Light Marine Equipment
- Project Management

**Thesis:** I designed a 20m fast cruising catamaran for disabled sailors. This involved in-depth concept design work, including a sophisticated electro hydraulic system for sail handling, lifting of wheelchairs and auxiliary power. A complex wireless navigation and control system was also designed.

**Chichester High School**

**1993-2000**

A-levels: Chemistry, Geography, Geology and General Studies; 11 GCSEs.

## ADDITIONAL INFORMATION

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Full driving licence, experienced sailor (motor and sailing)

Competent in Auto CAD, Solidworks, Rhinoceros CAD, Microsoft Office. Has used MSC Patran & Nastran, Hyperworks and Multiframe

## INTERESTS

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Mountaineering, Climbing, Windsurfing, Sailing, Cycling, Squash, Swimming, Gym.

## REFERENCES

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