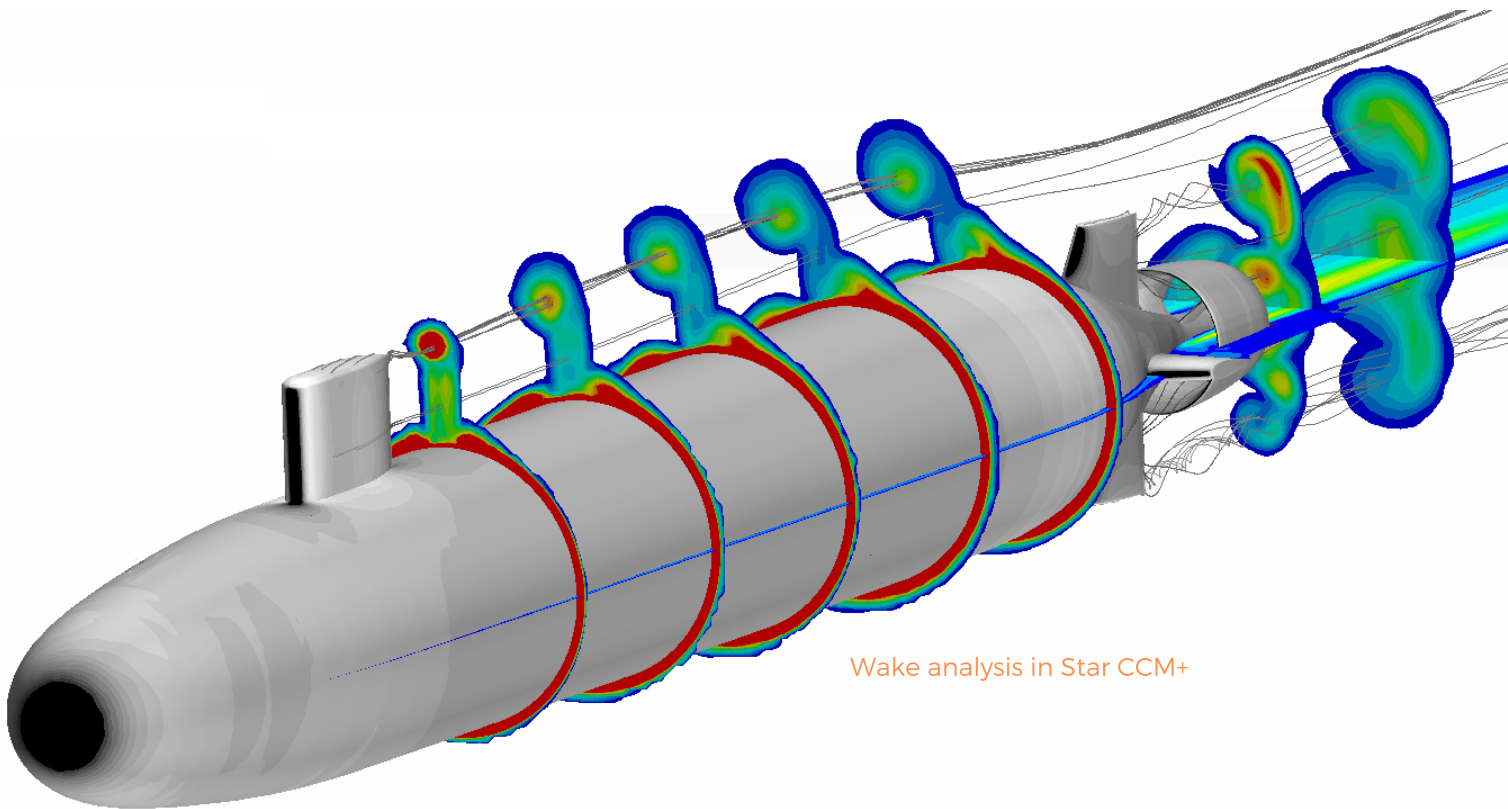


AT A GLANCE

## COMPUTATIONAL FLUID DYNAMICS



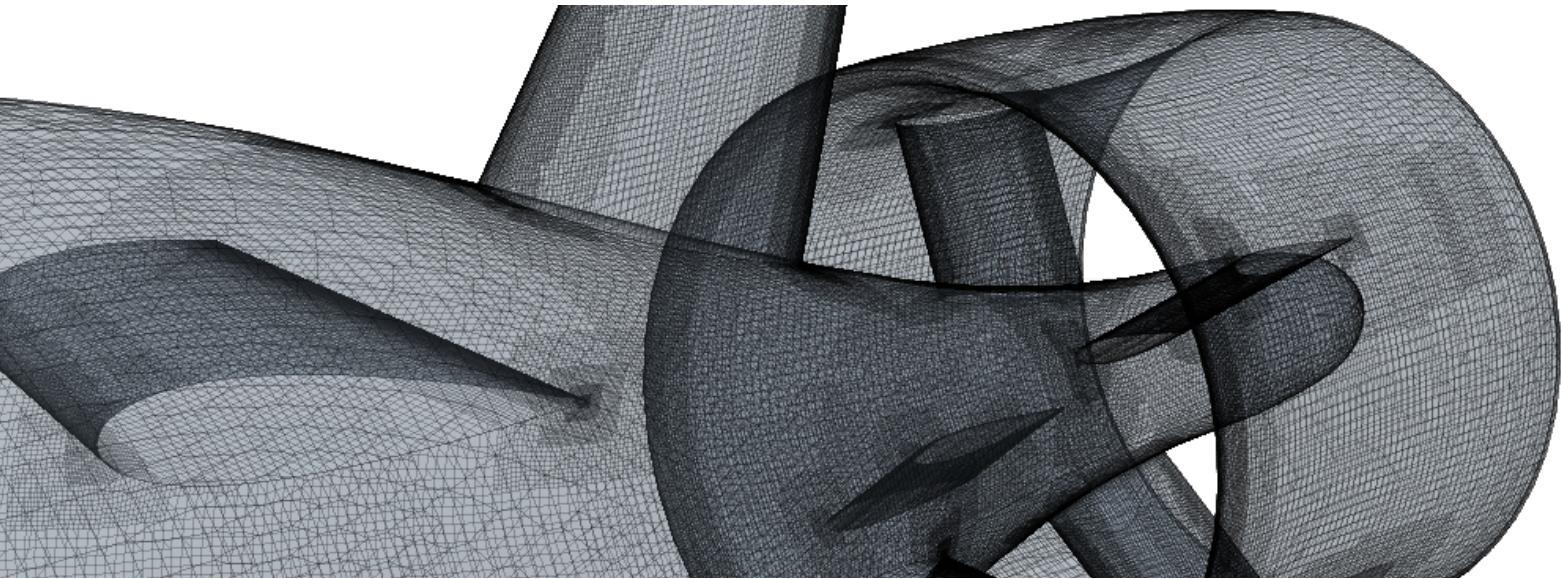
Wake analysis in Star CCM+

### CORE CAPABILITIES

- External flow modelling of submerged, surface and air platforms.
- Internal flow analysis of 1D systems to 3D rotating hydraulic components.
- Multi-phase analysis including cavitation effects.
- Fully transient investigations along with steady-state and multiple reference frame.
- Performance prediction of complex 3D geometries and designs.
- Concept evaluation, optimisation as well as assessment of platform modifications.
- Free-surface & Dynamic Fluid-Body Interaction (DFBI) simulation.
- Near-field acoustic modelling and far-field propagation analysis.

# AT A GLANCE

## COMPUTATIONAL FLUID DYNAMICS



Propulsor Concept Analysis in Star-CCM+

### MULTI-DOMAIN MODELLING

#### Extensive, capable and applied.

Stirling Dynamics' Computational Fluid Dynamics (CFD) capability is utilised across a wide range of applications within the marine, aerospace and turbomachinery sectors.

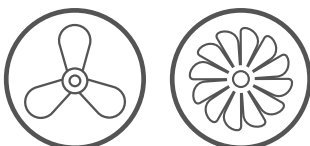
With over 30 years of experience in dynamic systems, Stirling Dynamics offers a full range of analytical, design and evaluation services to clients globally.

### ENTERPRISE LEVEL ANALYSIS

Extensive experience of commercial analytical toolsets and development of in-house extensions to 3rd party and client tools.

- **Siemens STAR-CCM+**
- **ANSYS Fluent and CFX**
- **120 core in-house HPC**
- **Mesh up to 100+ million cells**

Steady State
Rotating Reference Frame
Fully Transient
Multi-Phase (inc. Cavitation)
Volume of Fluid (VoF)
Dynamic Fluid-Body (DFBI/FSI)
Acoustics & Propagation
Internal & External Flows



**Stirling Dynamics Limited**  
 an expleo company  
 230 Bristol Business Park  
 Stoke Gifford  
 Bristol  
 BS16 1FJ  
**Tel:** +44 (0)117 915 2500  
**Email:** enquiries@stirling-dynamics.com