



# COMPUTATIONAL FLUID DYNAMICS

AEROSPACE / AUTOMOTIVE / MARINE / ENERGY

WINNING SOLUTIONS  
TO ENGINEERING CHALLENGES



# SCITEK CONSULTANTS

Is an engineering consultancy that was founded in October 1997 by Dr. Marios Christodoulou. The diverse range of engineering disciplines in which the Company excels is borne from years of experience in research and development in industry and in academia. We maintain a flexible and multi-skilled organisation that can react quickly to the needs of our customers. We offer very competitive rates and we are more than willing to work to fixed contracts to concrete deliverables.

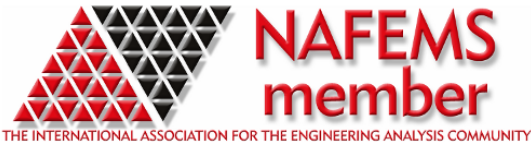
The amount of repeat business we attract speaks volumes for our customer's satisfaction and also of their view of our value for money. We guarantee confidentiality and SCITEK will not, under any circumstances, reveal our clients' details without express permission from an authorised source.

Our specialist fields of: Numerical Modelling, Fluid Mechanics, Mechanical Design, Control Systems, Instrumentation and Software engineering are complementary and ensure that we can take a project from conception to reality. Our background in R&D also gives us access to many experts in other fields and we often provide a link between industrial and academic partners.

**SCITEK Approvals:**

- ISO 9001:2008, approved by a UKAS accredited body.
- OHSAS 18001.
- Rolls Royce Sabre.

Dr Marios Christodoulou  
Managing Director



# COMPUTATIONAL FLUID DYNAMICS (CFD)

At its core Engineering Analysis & Simulation involves the application of scientific and analytical principles to identify the properties and behaviour of a system under investigation.

The experimental and computational fields of fluid dynamics are complementary skills. At SCITEK we pride ourselves on having a great deal of experience in both. Therefore as part of our fluid mechanics consulting expertise we supplement our experimental capabilities with [Computational Fluid Dynamics \(CFD\)](#).

Understanding the client's requirements is at the core of our service, and having the expertise to deliver innovative solutions, and not merely results, is what sets SCITEK apart.

## Key Benefits:

- State-of-the-art CFD resources, and extensive experience in applying them to complex flow problems in the Aerospace, Automotive, Marine and Energy sector.
- Complementary experimental and numerical modelling, offering a fully integrated service.
- Physical understanding of flow characteristics and visualization of fluid dynamic devices.
- Efficient, dedicated and multi-disciplined team providing answers that meet project requirements and deadlines.
- Over 25 years of experience providing consulting services in the research and development sector.

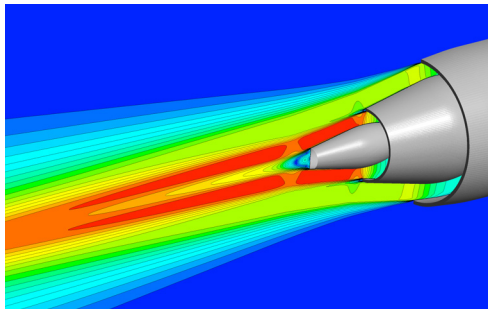
## 25 Years

Of experience in the Research and Development sector.

CFD uses numerical methods to solve the fundamental nonlinear differential equations that describe fluid flow. It is a powerful tool that can provide in-depth flow analysis for a wide range of applications.

When used effectively CFD can provide cost effective solutions with short lead times and minimal up-front investment, subsequently reducing the time and cost to market.

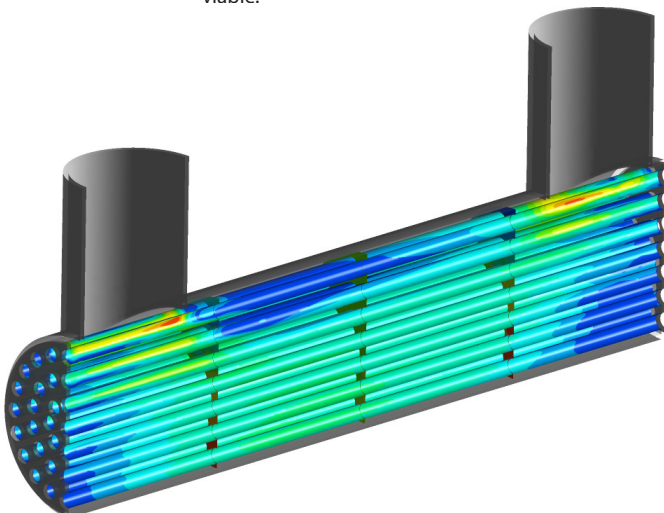
"Delivering innovative solutions, not simply results"



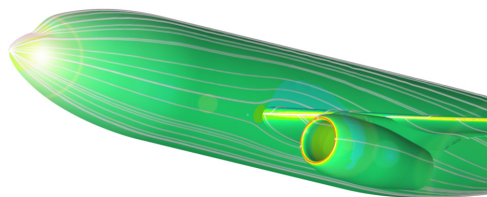
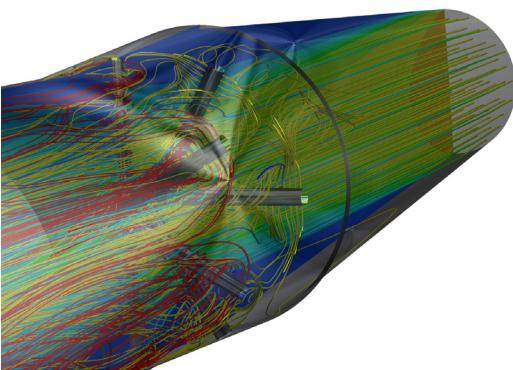
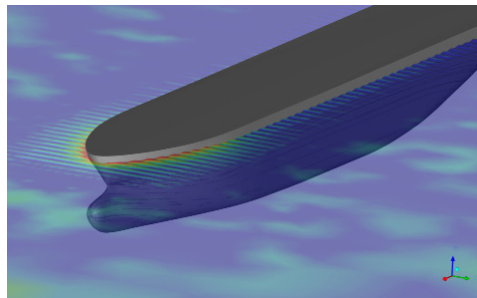
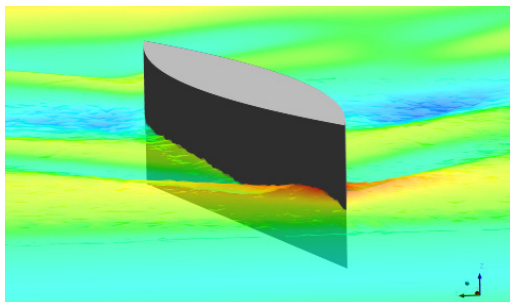
SCITEK possess the skills and expertise to harness the power of CFD and apply it to real world problems to deliver clients with high fidelity, pragmatic engineering solutions that are both cost effective and commercially viable.

## Areas of Expertise:

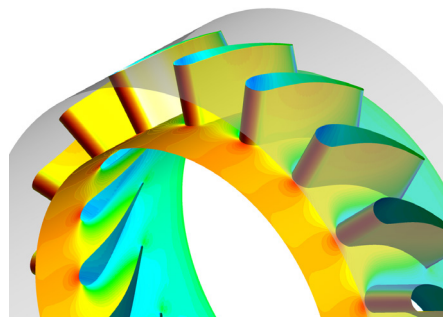
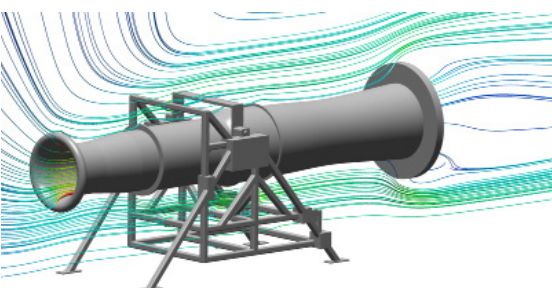
- **Hydrodynamics** - (Sea keeping, fluid/structure interaction, hull & propulsor optimisation).
- **Multiphase Flows**- (Fuel Cells, Sprays, Separators, Tank sloshing).
- **Industrial Flows**- (Heat Exchangers, Mixing Tanks, Valves).
- **External Aerodynamics**- (Lift/Drag predictions, streamlining, separated flow).
- **Conjugate Heat Transfer**- (Thermal Management, Heat Treatment Processes, Heat Exchangers).
- **Reacting Flows**- (Combustion, fuel efficiency, emission predictions).
- **Turbomachinery**- (Pump performance mapping, Guide Vane Optimisation).



# REDUCING TIME AND COST TO MARKET



"State of the art CFD Resources".



Top Left - Free Surface around hull test case, Top Right - Free Surface around clients hull, Mid Left - Sonic jets in cross flow with species transport, Mid Right - External flow over aircraft, Bottom Left - Ground vortex investigation on gas turbine test bed facility, Bottom Right - Compressible flow through turbine.

## GET IN TOUCH

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SCAN AND CLICK  
To find our homepage directly.

