

**Kaan Iliter**

BSc, MSc, PhD, CEng, MRINA

Naval Architect

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Kaan is a highly skilled naval architect with expertise in structures, hydrodynamics and vessel design. He began his career in Turkey, conducting detailed Finite Element Analyses (FEA) on various commercial and naval vessels, focusing on factors like underwater explosion, fatigue, strength, and vibration. Kaan's contributions extended to overseeing ship design calculations, collaborating on hull optimization using Computational Fluid Dynamics (CFD), and conducting experimental research on drag reduction coatings and hydrodynamics. His expertise and project leadership make him a highly sought after consultant and his research and publications have been recognized through peer-reviewed articles and seminars.

Academic Qualifications

PhD - Experimental and Computational Investigation of the Effect of Dimpled Surfaces on Skin Friction Reduction

MSc - Investigation of Flow Noise Around Two-Dimensional Bodies

BSc - Naval Architecture, Ocean and Marine Engineering

Professional Memberships

- Member, Chamber of Turkish Naval Architectures and Marine Engineers
- Member of RINA.
- Chartered Engineer

Previous Employment

University of Strathclyde, Glasgow, UK, Research Associate

Kamome Propeller, Kuribayashi Steamship Co., Remote, Japan, Consultant Engineer.

FIGES Engineering, Istanbul, Turkey, Senior Structural Design & Analysis Engineer

STM AS, Istanbul, Turkey, Ship Theory Engineer

Bias Engineering, Istanbul, Turkey, Junior Engineer

Alsan Fan, Istanbul, Turkey, R&D Engineer

Surveying and Consultancy Experience

Finite Element Analyses:

- 3D Global Strength (Full ship modelling)
- 3D Local Strength (Local ship modelling)
- Under Water Explosion
- Global vibration analyses (with or w/o damping, wetted or dry)
- Forced vibration analyses
- Buckling analyses
- Vibroacoustic Analyses
- Equipment Shock Analyses
- Fatigue Analyses
- Muffler Acoustic Design (Acoustic analyses)
- Explicit simulations
- Topology optimisation
- Optimize designs to enhance performance, reduce costs, and meet regulatory requirements
- Composite modelling

Computational Fluid Dynamics Analyses (CFD):

- Design of Air Intake and Exhaust Systems
- Hull Form Design and Optimization
- Wake prediction and wake-adapted propeller design
- Air wake calculations
- Appendage (rudder, fin, ...) design, alignment and optimisation
- Power requirement prediction
- Muffler Acoustic Design (Thermal, backpressure)
- Fluid-structure interaction
- Survivability and operability of small crafts in waves (CFD)

Ship Design Projects:

- Preparing vessel arrangements and detailed structural drawings for class approval
- Preparing class/authority approval documents for longitudinal strength, stability (intact & damaged), and seakeeping
- Initial design and preliminary hull form design.
- Design performance verification (model tests and CFD)
- Muffler design and manufacturing for the main and the auxiliary systems
- Development and implementation of energy-saving devices
- Voyage data analysis to validate fuel consumption reduction of energy saving systems' claims

Physical Experimental Studies:

- Understanding drag reduction mechanisms of dimpled structures (experimental and numerical studies)
- An investigation on a novel wave-propelled autonomous and surface vehicle (experimental and numerical studies)
- Ship resistance and self-propulsion tests
- Flow visualisation tests
- Propeller open water tests
- Cavitation tests
- Motion tracking experiments in waves

Publications

- **İlter, Y. K.**, Ünal, U. O., Shi, W., Tokgöz, S., & Atlar, M. (2024). An experimental investigation into the drag reduction performance of dimpled plates in a fully turbulent channel flow. *Ocean Engineering*, 307, 118198.
- **İlter, Yasin Kaan**, Shi, Weichao, Wahren, Ken, Song, Yang, Xu, Yunxin, and Saishuai Dai. "A New Concept for a Wave-Propelled Autonomous Surface Vehicle: An Experimental Investigation." Paper presented at the The 33rd International Ocean and Polar Engineering Conference, Ottawa, Canada, June 2023.
- **Yasin Kaan İlter**, Aras Çetinkaya & Uğur Oral Ünal (2023) Large eddy simulations of the turbulent channel flow over dimpled surfaces, *Journal of Turbulence*, 24:3-4, DOI: 10.1080/14685248.2023.2186415
- Marino, Alessandro, U. of S., **İlter, Y. Kaan**, I. T. U., Song, Soonseok, U. of S., Shi, Weichao, U. of S., Atlar, Mehmet, U. of S. and Demirel, Yigit Kemal, U. of S. (2020). *DESIGN SPECIFICATION, COMMISSION AND CALIBRATION OF THE UNIVERSITY OF STRATHCLYDE'S FULLY TURBULENT FLOW CHANNEL (FTFC) FACILITY*. The Advanced Model Measurement Technology for the Maritime Industry (ss. 136–147). Rome.
- Hou, H., Krajewski, M., **İlter, Y. K.**, Day, S., Atlar, M. ve Shi, W. (2020). *An experimental investigation of the impact of retrofitting an underwater stern foil on the resistance and motion*. *Ocean Engineering*, 205, 107290. doi:10.1016/j.oceaneng.2020.107290
- **İlter Y. K.**, Unal, O.U. "Understanding The Capability of RANS Based Turbulence Models on Fully Turbulent Channel Flow" Conference Paper, OMAE 2019, Glasgow, June 2019.
- **İlter, Y. K.**, Bal, Ş. , "Investigation of Flow Noise Around Two-Dimensional Bodies" International Symposium on Naval Architecture and Maritime, İstanbul 2014.