(+30) 695-576-982
periklis.ntinos@hotmail.com
2, Rue de Dublin
Mamer, Luxembourg, L-8224

PERIKLIS NTINOS

EDUCATION

Turbomachinery & Propulsion Department,
Von Karman Institute for Fluid Dynamics — Rhode-Saint-Genése, Belgium

M.Res. in Fluid Dynamics — OCT 2022 - JUL 2023

- Supervisor: Prof. Dr. Tom Verstraete
- **Thesis:** 3D optimisation of a tandem compressor cascade

School of Mechanical Engineering,
National Technical University of Athens — Athens, Greece

M.Sc. in Mechanical Engineering (5-year joint Diploma)
312 ECTS

- **GPA:** 8.29/10, Top 10% in class of 300
- **Thesis:** Aerodynamic design principles of a Formula Student car underbody diffuser, Grade: 10/10
- Concentration: Ground and Air Vehicles

AWARDS &HONORS

GreenTech Challenge N.T.U.A.
Top 5 Finalist amongst 30 competitors — DEC 2019

Formula Student Germany
Engineering Design Finals as a member of the Aerodynamics Team of PROM Racing NTUA FSAE Team, achieved 7th position out of 60 competitors — AUG 2019

Formula Student Austria
*Engineering Design Finals as a member of the Aerodynamics Team of PROM Racing NTUA FSAE Team, achieved **3rd** position out of 34 competitors* — JUL 2019

Formula Student East
1st position in Skidpad dynamic event, as a member of PROM Racing NTUA FSAE Team — JUL 2019

RESEARCH

Von Karman Institute for Fluid Dynamics |
Rhode-Saint-Genese, Belgium — DEC 2024 – PRESENT

- Generated CAD model for tandem compressor cascade with surfacing in C++ using the toolboxes of the in-house *CADO* software.
- Used the adjoint method to perform Single-Point optimization for a 3D geometry based on previous 2D optimisation results and identified design approaches through which the optimization algorithm improved the design.
- Performing Multi-Point optimization with increased parametrisation degrees of freedom, with the goal of identifying good design strategies for tandem blades in design and off-design conditions.
- Identifying the viability of optimizing the design only near the endwall and using blade profiles resulting from 2D optimization at midspan , aiming for reduced optimisation wall clock time with equivalent objective function values.

Ceratizit | Mamer, Luxembourg — NOV 2020 - JAN 2021

- Performed geometry development and pre-processing with SALOME and python to model the flow inside an existing Chemical Vapor Deposition (CVD) reactor.
- Simulated the 2D flow inside the CVD reactor using OpenFOAM.

Prom Racing NTUA FSAE Team | Athens, Greece NOV 2017 - JUN 2020

- **Co-lead of the Team of Aerodynamics**, leading a team of 6 members (2020 Season)
- Achieved a **30% increase in underbody Cl*A and 18% increase in vehicle Cl*A** through parametric study of underbody diffuser. (2019 Season)
- Worked on conceptual and detailed design of the car's Aerodynamic package, as well as 3D flow simulations using OpenFOAM on a High Performance Computing center. (2018, 2019 & 2020 seasons)
- Launched an experimental campaign to validate Computational Fluid Dynamics (CFD) simulations through the use of flow-visualisation and force measurement techniques in subsonic wind tunnel and on track testing. (2019 season)

Publications

1. **Ntinos, P.**, Tran, T., Verstraete,T. *Investigation of the effects of a high degree of freedom parametrisation on the adjoint optimisation of a tandem blade compressor cascade. paper: in preparation*

Teaching

Prom Racing NTUA FSAE Team | Athens, Greece NOV 2019 - JUN 2020

- Trained new members of the Aerodynamics team on principles of aerodynamics, Computational Fluid Dynamics and Computer Aided Design.

Independent Tutoring | National Technical University of Athens OCT 2020 - JAN 2024

- Privately tutored undergraduate students on course material for the following courses: Numerical Methods, Machine Elements, Fluid Mechanics, Turbomachinery, Gas and Steam Turbines for Power Production, Computational Fluid Dynamics.

Work Experience

Fluid Power Engineering | Aspropyrgos, Greece FEB 2021 - FEB 2022

- Mechanical design of high pressure hydraulic components for marine applications.
- Created a measurement workflow for in-situ data acquisition for hydraulic systems.
- Prepared engineering reports and documentation for submission to classification bodies.

Activities &Leadership

Formula Student Switzerland | Valais, Switzerland JUL 2025

- Chief Aerodynamics judge, judging 16 student teams on Aerodynamics as part of the Engineering Design event of the competition.

Formula Student Switzerland | Valais, Switzerland JUL 2023

- Chief Aerodynamics judge, judging 20 student teams on Aerodynamics as part of the Engineering Design event of the competition.

Prom Racing NTUA FSAE Team | Athens, Greece NOV 2019 - JUN 2020

- Co-lead of the team of Aerodynamics, responsible for simulations, design and training of new members as well as coordinating with team members from different groups of the team.

TEDx NTUA | Athens, Greece MAY 2022

- Event volunteer.

Skills &Other info

Languages: English (Proficient, TOEFL IBT 115/120), German (intermediate, B2), French (basic), Italian (basic), Greek (native)

Programming: MATLAB, C++, python, C, Fortran, R, G-code

Software: OpenFOAM, Solidworks, ANSYS, ANSA, gnuplot, SALOME, AutoCAD, Linux (Ubuntu, Debian, Fedora), Microsoft Suite, git, LaTeX

Experimental: Wind tunnel, flow visualisation, velocity and pressure measurement sensors

Technical: Lathe, CNC Mill, Thread tapping, composite material layup, soldering, Arc Welding, PCB schematic drawing

Interests: guitar, music, photography, cooking, pastry, swimming, running, cinema