PERSONAL INFORMATION   Cosmin KATONA

📍 112th, Boerenkrijglaan, 2260 Westerlo, Belgium

📞 +32(0) 493 31 80 75   +40741201989

✉ cosmin.katona@gmail.com , katona.cosmin@yahoo.ro

Sex Male | Date of birth 29/05/1987| Nationality Romanian

JOB APPLIED FOR POSITION PREFERRED JOB STUDIES APPLIED FOR	**Combustion & Multiphysics Application Engineer (CFD)/ Research Assistant**

WORK EXPERIENCE

01.07.2020 – present

Combustion & Multiphysics Application Engineer (CFD)

Tialoc Group, Industriestraat 9, B-2500 Lier (Antwerpen), België/Belgium/Belgique
Tel: +32 (0)3 491 98 78, Fax: +32 (0)3 491 98 77, http://www.tialocgroup.com

- Perform numerical and thermodynamic analysis for thermal systems.
  Provide design engineering services for components and subsystems.
  Provide technical expertise in problem resolution and quality improvement.
  Perform technical design reviews.
  Executing design verification plans and commissioning/measurements testing methods.
  Aid in development of new method and technology for numerical analysis.

Business or sector Processing energy, Renewable Energy, Air pollution, Research, Education

01.11.2016 – 30.06.2020

Computational Fluid Dynamics modelling engineer

Europem Processing Energy, Duwijckstraat 17, B-2500 Lier (Antwerpen), België/Belgium/Belgique
Tel: +32 (0)3 491 98 78, Fax: +32 (0)3 491 98 77, http://www.euro-pem.com/en/

- Numerical analysis in combustion (ground flares, elevated flares, combustors, incinerators and burners), thermodynamics, internal/external aerodynamics, hydrodynamics and fluid-structure interaction

Business or sector Processing energy, Renewable Energy, Air pollution, Research, Education

16.10.2018 – 17.10.2018   **Guest Speaker**

NUMECA INTERNATIONAL MEETING USER – "High-fidelity Simulations - Fast track to robust design" – Berlin 2018 (www.numeca.com)

- CFD Numerical modeling and measurement resolution of a rotary kiln application with FINE™/Open solvers

Business or sector Processing energy, Combustion, Turbo, Aero& Multiphysics , Research, Education

08.05.2018   **Guest Speaker**

NUMECA INTERNATIONAL SEMINAR "RANS & Manifold based modeling of industrial Combustion processes" – Dusseldorf 2018

- Non-premixed combustion chamber vs measurements data using Fine Open with OpenLabs

Business or sector Processing energy, Combustion, Turbo, Aero& Multiphysics , Research, Education

13.11.2017 – 15.11.2017   **Guest Speaker**

NUMECA INTERNATIONAL MEETING USER – "Virtual Prototyping - Ensuring reliability of your simulations" – Belgium 2017 (www.numeca.com)

- Modeling industrial burners with FINE™/Open solvers

Business or sector Processing energy, Combustion, Turbo, Aero& Multiphysics , Research, Education

18.05.2017   **Guest Speaker**

NUMECA INTERNATIONAL SEMINAR "RANS & Manifold based modeling of industrial Combustion processes" – Eindhoven 2017

- Industrial combustion processes – CFD vs Measurements

Business or sector Processing energy, Combustion, Turbo, Aero& Multiphysics , Research, Education

09.09.2013 – 15.10.2016   **Principal instructor/Assistant lecturer**

"Mircea cel Bătrân" Naval Academy, Fulgerului Street, No. 1, Constantza, Phone +40241643096, website: www.anmb.ro,

- Educational activities

Business or sector Higher Education, Education, Research

18.05.2015 – 22.05.2015   **Principal instructor/Assistant lecturer**

- "Piris Reis" University, Postane Mahallesi, Eflatun Sk. No: 8, 34940 Tuzla, Istanbul, Turkey Phone +90 216 581 0050, website: http://www.pirireis.edu.tr/en/
- Educational activities in ERASMUS +

Business or sector Higher Education, Education, Research

13.08.2013 – 05.09.2013   **Head of Operation Department**

Military Base 02078, Portului Street, Mangalia, Constantza

- Officer of watch for operational level

Business or sector Planning international missions specific for ship level during XIIIth activation of Naval Cooperation Group in Black Sea – BLACKSEAFOR 13

06.04.2012 – 23.04.2012   **Navigation Officer**

Military Base 02078, Portului Street, Mangalia, Constantza

- Officer of watch for navigation level

Business or sector Planning international missions specific for ship level during XIIth activation of Naval Cooperation Group in Black Sea – BLACKSEAFOR 12

10.08.2011 – 29.08.2011   **Navigation Officer**

Military Base 02078, Portului Street, Mangalia, Constantza

- Officer of watch for navigation level

Business or sector Planning international missions specific for ship level during XIth activation of Naval Cooperation Group in Black Sea – BLACKSEAFOR 11

03.03.2011 – 19.08.2013   **Navigation Officer**

Military Base 02078, Portului Street, Mangalia, Constantza

- Officer of watch for navigation level

Business or sector Instruction and operation

EDUCATION AND TRAINING

01.10.2015 - present

PhD Candidate – Power Engineering
University Politehnica of Bucharest, Faculty of Power Engineering

- Power engineering

28.05.2018 – 24.06.2018

Certificate of Achievement
- Centre Europeen de Recherche et de Formation Avancee en Calcul Scientifique – Toulouse, France (www.cerfacs.fr)
- Fundamentals of thermo-acoustic instabilities
- Coupling between acoustic waves and flames in modern combustion systems

08.01.2018 – 10.01.2018

Certificate of Achievement
NUMECA International - Advanced Training in Fine™ / Marine – Belgium (www.numeca.com)

- Mono-fluid, multi-fluid flows around any kind of ships, boats, or yachts, including various types of appendages

24.06.2017 – 30.06.2017

Certificate of Achievement
Princeton University, Combustion Energy Frontier Research Center, New Jersey, USA

- *Advanced Laser Diagnostics in Turbulent Combustion* delivered by Prof. Andreas Dreizler of Technishe Universitat Darmstadt, Germany

- *Advanced Combustion Chemistry:*
  - Part A: *Predictive Ab Initio kinetics for Combustion* delivered by Dr. Stephen Klippenstein of Argonne National Laboratory, USA
  - Part B: *Mechanism Reduction and Advanced Chemistry Solvers* delivered by Prof. Tianfeng Lu of University of Connecticut, USA

07.11.2016 – 11.11.2016

Certificate of Achievement
NUMECA International S.A. - Advanced Training in AutoMesh™/Hexpress™/Hybrid and Fine™ / Open with OpenLabs™ – Belgium (www.numeca.com)

- Multiphysics, External Aerodynamics and Combustion

01.08.2016 - 05.08.2016

Certificate of Achievement
Vrije Universiteit Brussel (Belgium) and IAHR Experimental Methods and Instrumentation Committee (EMI-IAHR)

- W.A.T.E.R 2016 – Workshop on Advanced measurement Techniques and Experimental Research. Hydraulic measurement fundamentals, Image analysis methods for velocimetry, Particle Image, and Particle Tracking Velocimetry (PIV and PTV), Acoustic Doppler measurement fundamentals, Measurement of sediment concentration and fluxes, Bottom profiling and bed topography (including CTD measurements), Data processing and data visualization

17.03.2016 – 28.04.2016

Certification of Achievement
- "SimScale GmbH" Company, Academic Program – Germany (www.simscale.com)
- Fluid analysis in your browser, SimScale platform in association with CAESES (post-processing analysis)
- Workshop in Formula One Aerodynamics; Introduction to race car aerodynamics, design optimization strategy for race cars, parametric design optimization, CFD for external Aerodynamics, Turbulence and Boundary layer modeling, Post-processing with ParaView

14.03.2016 – 22.05.2016

Certification of Completion

- "Ovidius" University, Faculty of Psychology and Education Sciences - Constantza
- psychological and pedagogical level II

09.11.2015 – 22.01.2016

Certificate of Completion
Eindhoven University of Technology, Netherlands

- Sports and building aerodynamics
- https://www.coursera.org/account/accomplishments/records/Q4sfxZ8MPMq6Tqpz
- Ansys Webinar – Training for MOOC participants
- Ansys Webinar – Can a Better Understanding of Aerodynamics Change the Results of a cycling race

26.08.2014 – 29.08.2015

Master Degree – Naval Engineering and Navigation
Naval Academy "Mircea cel Bătrân" , Faculty of Navigation and Naval Management– Constantza

- Nautical science

06.01.2014 – 31.03.2014

Certification of Completion
"Ovidius" University, Faculty of Psychology and Education Sciences - Constantza

- psychological and pedagogical level I

10.12.2012 – 14.12.2012

Certification of Completion
NATO Maritime Interdiction Operational Training Centre, Souda Naval Base, Chania, Greece

- NATO Maritime Interdiction Operation

01.10.2012 – 01.11.2012

Certification of Completion
Application School for the Navy, Mangalia, Constantza

- Course for ship commaders

01.09.2010 – 03.03.2011

Certification of Completion
Application School for the Navy, Mangalia, Constantza

- Base course for the navy officers

01.10.2006 – 01.09.2010

Bachelor's degree – Naval Engineering and Navigation
Naval Academy "Mircea cel Bătrân" – Department of the Navy

- Navigation, hydrography and naval equipment

PERSONAL SKILLS

Mother tongue(s)   Romanian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
Netherlands	C1	C1	C1	C1	C1
Hungarian	B1	A2	B1	B1	A2
French	B2	B2	B2	B1	B1

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

Communication skills	▪ good communication skills gained through my experience as head of operation department.
Organizational / managerial skills	▪ leadership (responsible for a team of 45 people); ▪ member of the team for industrial patents in Europe, Asia, and USA. ▪ member of the team in cold and hot commissioning (Infinium – Germany, Solvay – France, Blue Paper – France, Shell – Nederland, EOC - Belgium) ▪ bridge team management.
Computer skills	▪ advanced command of NUMECA Platform (CFD) software (www.numeca.com). ▪ advanced command of OMNIS Platform (CFD) software (www.numeca.com). ▪ advanced command of ANSYS CFX/FLUENT (CFD) software (www.ansys.com). ▪ data processing and data visualization of Particle Image and Particle Tracking Velocimetry (PIV and PTV) experiments. ▪ good command of SIMSCALE (CFD) software (www.simscale.com); ▪ good command of CANTERA software (www.cantera.org); ▪ good command of GRI 3.0 software. ▪ good command of TRANSAS Simulators. ▪ good command of ECDIS - 4000 (Electronic Charts Display and Information System). ▪ good command of GMDSS (Global Maritime Distress and Safety System). ▪ good command of Microsoft Office™ tools;
Other skills	▪ First class specialist in navigation. ▪ Astronomical Observer. ▪ Handling vessels;
ADDITIONAL INFORMATION	
ANNEXES	

DATE

01.09.2022