

# YAŞAR OSTOVAN

yostovan@sivas.edu.tr, yasar.ostovan@centraledlille.fr

## EXPERIENCE

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**Sivas University of Science and Technology (SBTU)**

*Assistant Professor*

Aeronautical Engineering Department

August 2020 - Present

*Sivas, Turkey*

**Laboratoire de Mécanique des Fluides de Lille-LMFL (CNRS)**

*Post-doc Researcher*

January 2018 - Present

*Lille, France*

- Responsible for experiments in LMFL large-scale boundary layer Wind Tunnel.
- Research in the state of the art optical flow measurement techniques such as tomographic PIV and time-resolved three-dimensional particle tracking velocimetry (Shake-The-Box).

**Norwegian University of Science and Technology (NTNU)**

*Visiting PhD candidate*

February 2016 - April 2016

*Trondheim, Norway*

- Aerodynamic performance measurements of 2/3 interacting horizontal axis wind turbines in NTNU large-scale wind tunnel.

**METU Center for Wind Energy-METUWIND**

*Experimental Aerodynamicist*

October 2013 - December 2017

*Ankara, Turkey*

- Actively engaged in the design and construction processes of METUWIND Large-Scale wind tunnel.
- Conducted several experimental aerodynamic tests and CFD analysis for companies from industry.
- Design and construction processes of METUWIND C2, C3 and C4 small-scale wind tunnels and several aerodynamic test rigs.

**Turbotek Turbomachinery Technologies Ltd. Co.**

*Research & Development Engineer*

September 2010 - August 2012

*Ankara, Turkey*

- Design and manufacturing process of experimental aerodynamic test devices (e.g., educational small-scale wind tunnels, propeller test rig and, force/moment balance system for 2D wing tests)

## EDUCATION

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**Middle East Technical University, Ankara, Turkey**

Ph.D. in Aerospace Engineering

Thesis Title: Winglets for Wind Turbines: An Experimental Study on Aerodynamic Performance and Tip Vortex Behavior

Thesis Advisor(s): Prof. Dr. Oğuz Uzol

*September 2017*

**Middle East Technical University, Ankara, Turkey**

Master of Science in Aerospace Engineering

Thesis Title: Experimental Investigation of Waveform Tip Injection on the Characteristics of the Tip Vortex

Thesis Advisor(s): Prof. Dr. Oğuz Uzol

*September 2011*

**Science & Research branch of Azad University, Tehran, Iran**

Bachelor degree in Mechanical & Aerospace Engineering

*September 2006*

## PUBLICATIONS

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### Articles:

1 - Cheminet A, Ostovan Y, Valori V, Cuvier C, Daviaud F, Debue P, Dubrulle B, Foucaut JM, Laval JP. Optimization of regularized B-spline smoothing for turbulent Lagrangian trajectories. submitted to *Experimental Thermal and Fluid Science* (under review) 2020

2 - Ostovan Y, Akpolat M, Uzol O. Experimental Investigation of the Effects of Winglets on the Tip Vortex Behavior of a Model Horizontal Axis Wind Turbine using Particle Image Velocimetry. *Journal of Solar Energy Engineering-Including Wind Energy and Building Energy Conservation* 2019- doi:10.1115/1.4041154

3 - Abdulrahim A, Anik E, Ostovan Y, Uzol O. Effects of tip injection on the performance and near wake characteristics of a model wind turbine rotor. *Renewable Energy* 2016;88:73–82. doi:10.1016/j.renene.2015.11.030

4 - Mercan B, Doğan E, Ostovan Y, Uzol O. Effects of camberwise varying tip injection on loss and wake characteristics of a low pressure turbine blade. *Int J Heat Fluid Flow* 2015;54:119–30. doi:10.1016/j.ijheatfluidflow.2015.04.008

### Conference Proceedings:

1 - Yaşar Ostovan, Christophe Cuvier, Paul Debue, Valentina Valori, Adam Cheminet, Jean-Marc Foucaut, Jean-Philippe Laval, Cécile Wiertel-Gasquet, Padilla Vincent, Bérengère Dubrulle, François Daviaud. 4D Particle Tracking Velocimetry measurements in a Von Karman turbulence experiment, 13th International Symposium on Particle Image Velocimetry – ISPIV 2019 Munich, Germany, July 22-24, 2019.

2 - Bartl J, Ostovan Y, Uzol O, Sætran L. Experimental study on power curtailment of three in-line turbines. *Energy Procedia*. 14th Deep Sea Offshore Wind R&D Conf. EERA DeepWind2017, Trondheim, Norway.

3 - Ostovan Y, Uzol O. Experimental Study on the Effects of Winglets on the Performance of Two Interacting Horizontal Axis Model Wind Turbines. *J Phys Conf Ser* 2016;753:22015. doi:10.1088/1742-6596/753/2/022015

4 - Orbay E, Bilgen S, Sezer-Uzol N, Ay BO, Ostovan Y. Numerical and Experimental Investigation of Aerodynamic Loads for Tall Buildings with Prismatic and Twisted Forms. *Int. Conf. Wind ENERGY Harvesting*, Coimbra, Portugal.

5 - Anik E, Abdulrahim a, Ostovan Y, Mercan B, Uzol O. Active control of the tip vortex: an experimental investigation on the performance characteristics of a model turbine. *J Phys Conf Ser* 2014;524:12098. doi:10.1088/1742-6596/524/1/012098.

6 - Ostovan Y, Amiri H, Uzol O Aerodynamic Characterization of NREL S826 Airfoil at Low Reynolds Numbers, *Conference on Wind Energy Science and Technology - RUZGEM 2013*, Ankara, Turkey.

7 - Mercan B, Doğan E, Ostovan Y, Uzol O. Experimental Investigation of the Effects of Waveform Tip Injection in a Low Pressure Turbine Cascade. Vol. 8 *Turbomachinery, Parts A, B, C*, ASME; 2012, p. 1473. doi:10.1115/GT2012-69316.

8 - Mercan B, Ostovan Y, Dogan E, Uzol O. Effect of Chordwise Modulated Waveform Tip Injection on the Characteristics of the Tip Vortex. 40th *Fluid Dyn. Conf. Exhib.*, Reston, Virginia, American Institute of Aeronautics and Astronautics; 2010, p. 1–8. doi:10.2514/6.2010-4270.

### National Conference Proceedings (Turkey):

1 - Ostovan Y, Mutlu T, Onay O K, Khalilov J, Kutkan H, Çete A, Mercan B, Abdulrahim A,

Uzol O, Özdede S. AÇIK VE AÇIK JET ODALI RÜZGAR TÜNELLERİNİN TASARIMI, ÜRETİMİ VE KARAKTERİZASYON SONUÇLARI. IV. ULUSAL HAVACILIK VE UZAY KONFERANSI, 12-14Eylül 2012, Hava Harp Okulu, İstanbul.

2 - Onay O K, Khalilov J, Ostovan Y, Çete A R. İNSANSIZ HAVA ARACI PERVANELERİNİN TASARIM, ANALİZ VE TEST YETENEKLERİNİN GELİŞTİRİLMESİ. IV. ULUSAL HAVACILIK VE UZAY KONFERANSI, 12-14Eylül 2012, Hava Harp Okulu, İstanbul.

3 - Ostovan Y, Mercan B, Dogan E, Uzol O. AKTİF UÇ ENJEKSİYONUNUN KANAT UÇ GİRDABI YAPISI ÜZERİNDEKİ ETKİLERİNİN DENEYSEL İNCELENMESİ. III. ULUSAL HAVACILIK VE UZAY KONFERANSI, 16-18 Eylül 2010, Anadolu Üniversitesi, Eskişehir.

International Conference Oral Presentations:

1 - Ostovan Y, Cuvier C, Debue P, Valori V, Cheminet A, Chaabo T, Foucaut JM, Laval JP, Wiertel-Gasquet C, Padilla V, Dubrulle B, Daviaud F. 4-D PARTICLE TRACKING VELOCIMETRY MEASUREMENTS IN A VON KARMAN TURBULENCE EXPERIMENT. 17TH EUROPEAN TURBULENCE CONFERENCE, 3-6 SEPTEMBER 2019, TORINO, ITALY.

2 - Cheminet A, Valori V, Chaabo T, Ostovan Y, Debue P, Cuvier C, Dubrulle B, Laval JP, Foucaut JM, Wiertel C, Padilla V, Daviaud F. IMPACT OF LAGRANGIAN TRAJECTORY FILTERING ON TURBULENT STATISTICS IN 4D-PTV MEASUREMENTS OF VON KARMAN FLOW. 17TH EUROPEAN TURBULENCE CONFERENCE, 3-6 SEPTEMBER 2019, TORINO, ITALY.

3 - Valori V, Debue P, Cuvier C, Ostovan Y, Cheminet A, Chaabo T, Wiertel C, Padilla V, Laval JP, Foucaut JM, Dubrulle B, Daviaud F. LAGRANGIAN VELOCITY AND POWER STRUCTURE FUNCTIONS FROM 4-D PARTICLE TRACKING VELOCIMETRY MEASUREMENTS OF A TURBULENT SWIRLING FLOW. 17TH EUROPEAN TURBULENCE CONFERENCE, 3-6 SEPTEMBER 2019, TORINO, ITALY.

4 - Ostovan Y, Uzol O. Experimental Investigation of Winglet Effects on the Performance of Two Interacting Model Wind Turbines. 12th EAWC PhD Seminar on Wind Energy in Europe 25-27 May 2016 Ankara- Turkey.

## PROJECTS

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Researcher in "Experimental Study of Dissipation Structures in Turbulence" project, founded by ANR (French Research Agency), conducted jointly by LMFL and CEA Saclay.(Jan. 2018-Dec. 2020)

DPT2011K120340, ODTÜ-RÜZGEM Büyük Rüzgar Tüneli projesi, Bilimsel Proje Uzmanı (Aerodinamik Uzmanı)

TÜBİTAK 1001, 112M105, Yatay Eksenli Rüzgar Türbinlerinde Uç Enjeksiyonu Kullanılarak Aktif Uç Girdabı Kontrolü Yönteminin Deneysel İncelenmesi, Scholar, 2013

TÜBİTAK 1001, 108M232, Veter-Boyunca-Modüle-Edilen Vurumlu Uç Enjeksiyonu Yönteminin Uç Girdabı Aerodinamiği ve Kontrolüne Etkisinin Deneysel İncelenmesi, Scholar, 2008-2011

## CERTIFICATES/SCHOLARSHIPS

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Certificate of Outstanding Contribution in Reviewing: European Journal of Mechanics/B Fluids(2018)

Scholarship for PhD Studies 2013, TÜBİTAK 1001 (112M105)

Scholarship for Master Studies 2008-2010, TÜBİTAK 1001 (108M232)

## TECHNICAL STRENGTHS

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<b>Wind tunnel measurements</b>	PIV/PTV, hotwire, pressure probes, force/moment balance
<b>Data acquisition &amp; processing</b>	LabVIEW, MATLAB, Tecplot, Python
<b>CAD/CAM</b>	CATIA, SOLIDWORKS, SolidCAM
<b>Production techniques</b>	CNC turning/milling machines, composites(RTM), rapid prototyping, 3D printing/laser sintering, metal heat treatment
<b>CFD</b>	STAR-CCM+, Pointwise, CFD++, Ansys

## LANGUAGES

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<b>English</b>	Proficient in speech, reading, and writing
<b>Turkish</b>	Proficient in speech, reading, and writing
<b>Azeri</b>	Proficient in speech, reading, and writing
<b>Farsi</b>	Proficient in speech, reading, and writing
<b>French</b>	Intermediate in speech, reading, and writing