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Education: **Ph.D. in Aerospace Engineering, 1995**
(Experimental Fluid Dynamics)
Dissertation: "*An Experimental Investigation of a Forward-Facing Nose Cavity on a Blunt Body at Mach 5*"
The University of Texas at Austin, Texas, U.S.A.

M.Sc. in Aeronautical Engineering, 1989
(Experimental Fluid Dynamics)
Thesis: "*An Experimental Investigation of Shock Wave/Boundary Layer Interaction induced by Cylindrical Obstacles*"
Istanbul Technical University, Istanbul, TURKEY

B.Sc. in Aeronautical Engineering, 1987
Istanbul Technical University, Istanbul, TURKEY

Research Interests :

Physics of Inlet Unstart in Scramjet Engines
Optical Diagnostics of Supersonic Turbulent Boundary Layers
Highly Underexpanded Sonic/Supersonic Jets
Aerothermodynamics of Hypervelocity Projectiles with Forward-Facing Cavity
Shock-Wave/Turbulent Boundary-Layer Interactions
Optical Diagnostics of Supersonic Flows

Experience:

1998 – Present Assistant Professor, Department of Aerospace Engineering
Istanbul Technical University, TURKEY

2006 – 2009 Visiting Research Assistant Professor, Department of ASE/EM
The University of Texas at Austin
Taught Aerodynamics/Heat Transfer/Boundary Layer classes
Conducted collaborative research on Experimental Investigation of Scramjet Inlet Unstart

1999 – 2005 Director, ITU Trisonic Research Center (TAM)
Istanbul Technical University, TURKEY

Summer 1999 Visiting Scholar, Aerodynamics Laboratory, Polytechnic University, U.S.A.
• Worked on Probe and PIV measurements in highly underexpanded sonic/supersonic jets

May – Sep 2004 Acting Chairman, Department of Aerospace Engineering
Istanbul Technical University, TURKEY

KEMAL BULENT YUCEIL

- 2000 – 2002 Graduate Program Coordinator, Aerospace Engineering in Advanced Technologies, Istanbul Technical University, TURKEY
- 2000 – 2003 Advisor to the Dean, Faculty of Aeronautics and Astronautics, Istanbul Technical University, TURKEY
- IT Management
- 1996 – 1997 Military Service as Second Lieutenant, Department of Aeronautical Engineering, Turkish Air Force Academy, TURKEY
- Worked in Aerodynamics Laboratory for the set up and installation of 1-D LDA system and electromechanical pressure scanning (Scannivalve) system to be used in low speed wind tunnels for educational purposes.
 - Taught fluids and structures classes in engineering undergraduate program.
- 1992 – 1996 Research Assistant, Institute for Advanced Technology, The University of Texas at Austin, U.S.A.
Department of Aerospace Engineering, Mach 5 Wind Tunnel Laboratories
Research Assistant on the ARDEC Research Grant, "Hypervelocity Projectiles"
- Conducted research on aerothermodynamics of hypervelocity projectiles, Reduction of blunt nose heating using forward-facing cavity configurations.
 - This research consisted of:
measurements using high-frequency response pressure transducers, temperature measurements using IR camera in supersonic flow and experiments of shock wave visualization using PLMS (Planar Laser Mie Scattering) in supersonic air flow. Used standard and high-order statistical methods for analysis of random data are used. Code development for reduction and analysis of experimental data has been performed.
- 1988 – 1998 Research Assistant, Istanbul Technical University, TURKEY
Department of Aerospace Engineering
(September 1991-February 1996 on leave of absence for Ph.D. studies at UT Austin)
(April 1996 – September 1997 on leave of absence for military service)
- Worked in Supersonic Wind Tunnel Labs on Shock Wave/Boundary Layer Interactions by conducting flow visualization and pressure measurement experiments.
- Summer 1986 Practical Training in Turkish Airlines, TURKEY
Istanbul Ataturk Airport
- trained in various departments such as specific machine shops (i.e. hydraulic systems, aircraft structure etc.) and engineering offices

Achievements & Honors:

- Research Assistantship, The University of Texas at Austin, 1992-1996.
- Scholarship awarded to Research Assistants for Ph.D. in the U.S.A. by the Turkish Higher Education Council, 1991
- 2nd place in the 1990 Competition for Scientific Publication by the Turkish Air Association, Ankara, 1990

Publications:

J. L. Wagner, K. B. Yuceil and N.T. Clemens, "PIV Measurements of Unstart of an Inlet-Isolator Model in a Mach 5 Flow," Submitted to *AIAA Journal*, under minor revision, Oct 2009.

A. Valdivia, K. B. Yuceil, J. L. Wagner, N. T. Clemens and D. S. Dolling, "Active Control of Supersonic Inlet Unstart Using Vortex Generator Jets," AIAA Paper-2009-4022, June 2009.

J. L. Wagner, K. B. Yuceil and N.T. Clemens, "PIV Measurements of Unstart of an Inlet-Isolator Model in a Mach 5 Flow," AIAA Paper 2009-4209, June 2009.

J.L. Wagner, K.B. Yuceil, A. Valdivia, N.T. Clemens, and D.S. Dolling, "Experimental Investigation of Unstart in an Inlet/Isolator Model in Mach 5 Flow," *AIAA Journal*, vol. 47, No. 6, pp. 1528-1542, June 2009.

J.L. Wagner, K.B. Yuceil, A. Valdivia, N.T. Clemens, and D.S. Dolling, "PIV Measurements of the Unstart Process in a Supersonic Inlet/Isolator," *AIAA Paper 2008-3849*, June 2008.

J.L. Wagner, A. Valdivia, K.B. Yuceil, N.T. Clemens, and D.S. Dolling, "An Experimental Investigation of Supersonic Inlet Unstart," *AIAA Paper 2007-4352*, June 2007.

Z.R. Murphree, K.B. Yuceil, N.T. Clemens, and D.S. Dolling, "Experimental Studies of Transitional Boundary Layer Shock Wave Interactions," *AIAA Paper 2007-1139*, January 2007.

Idil Fenercioglu and K. Bulent Yuceil "Determination of Shock Oscillation Character by Instantaneous Imaging of Bow Shock Wave Caused by a Projectile," *12th International Symposium on Flow Visualization*, Göttingen, Germany, September 10-14, 2006.

Hakan Gunes, Idil Fenercioglu, and K. Bulent Yuceil, "Instantaneous Imaging of Highly Unstable Bow Shock Wave Caused by a Hypervelocity Projectile with a Streamwise Nose Cavity," *11th International Symposium on Flow Visualization*, Notre Dame, Indiana, USA, August 9-12, 2004.

A. Sayin, K.B. Yuceil, and O. Cetiner, "Determination of Transonic Flow Properties of a Trisonic Wind Tunnel for its Use in Missile Aerodynamics," *Seventh Triennial International Symposium on Fluid Control, Measurement and Visualization*, Sorrento, Italy, CD-ROM Proceedings, August 25-29, 2003.

K.B. Yuceil, M.V. Otugen, and E. Arik, "Interferometric Rayleigh Scattering and PIV Measurements in the Near Field of Underexpanded Sonic Jets," *AIAA Paper 2003-0917*, January 2003.

K. Bulent Yuceil and M. Volkan Otugen, "Scaling Parameters for Underexpanded Supersonic Jets," *Physics of Fluids*, Vol. 4, No. 12, pp. 4206-4215, December 2002.

I Fenercioglu, T. Balkan, K.B. Yuceil and F.O. Edis, "Experimental and Computational Investigation of a Blunt Body with a Streamwise Nose Cavity at Supersonic Speeds," *IVth Kayseri Symposium on Aeronautics*, Kayseri, Turkey, May 13-15 2002. (In Turkish)

K.B. Yuceil, and M.V. Otugen, "Scaling Parameters for Underexpanded Sonic Jets," *AIAA Paper 2001-1052*, January 2001.

K.B. Yuceil, M.V. Otugen and E. Arik, "Underexpanded sonic jets: A PIV study," *10th International Symposium on Applications of Laser Techniques to Fluid Mechanics*, Lisbon, 10-13 July, 2000

K.B. Yüceil and D.S. Dolling, "Infrared Imaging and Shock Visualization of Flow over Concave Blunt Bodies," *Journal of Thermophysics and Heat Transfer*, Vol. 11, No. 3, pp. 375-383, July-September 1997.

Oktay Ozcan and K. Bulent Yuceil, "Comment on "Supersonic Separation with Obstructions", Reader's Forum, *AIAA Journal*, Vol. 35, No. 8, pp. 1423-1424, August 1997.

W.A. Engblom, B. Yuceil, D.B. Goldstein, and D.S. Dolling, "Experimental and Numerical Study of Hypersonic Forward-Facing Cavity Flow," *Journal of Spacecraft and Rockets*, Vol. 33, No. 3, pp. 353-359, May-June 1996.

K.B. Yuceil and D.S. Dolling, "IR Imaging and Shock Visualization of Flow over a Blunt Body with a Nose Cavity," *AIAA Paper 96-0232*, January 1996.

K. B. Yuceil, "An Experimental Investigation of a Forward-Facing Nose Cavity on a Blunt Body at Mach 5", Ph.D. Dissertation, The University of Texas at Austin, Texas, U.S.A. December 1995.

K.B. Yuceil and D.S. Dolling, "Nose Cavity Effects on Blunt Body Pressure and Temperatures at Mach 5," *Journal of Thermophysics and Heat Transfer*, Vol. 9, No. 4, pp. 612-619, October-December 1995.

W.A. Engblom, B. Yuceil, D.B. Goldstein, and D.S. Dolling, "Hypersonic Forward-Facing Cavity Flow: An Experimental and Numerical Study," *AIAA Paper 95-0293*, January 1995.

B. Yuceil and D.S. Dolling, "Effects of a Nose Cavity on Heat Transfer and Flowfield Over a Blunt Body at Mach 5," *AIAA Paper 94-2050*, June 1994.

B. Yuceil, D.S. Dolling, and D. Wilson, "A Preliminary Investigation of the Helmholtz Resonator Concept for Heat Flux Reduction," *AIAA Paper 93-2742*, July 1993.

B. Yuceil and D.S. Dolling, "Use of an Inframetrics 600 Imaging System for Temperature Measurements in a Mach 5 Blowdown Tunnel," *Presented at 79th Meeting of Supersonic Tunnel Association at the University of Texas at Arlington*, March 28-30, 1993.

Oktay Ozcan and Bulent K. Yuceil, "Cylinder-Induced Shock-Wave Boundary Layer Interaction," Technical Note, *AIAA Journal*, Vol. 30, No. 4, pp. 1130-1132, April 1992.

U. Gulcat, B. Yuceil and H. Kul, "Numerical Flow Simulation and Visualization with Computer Generated Imagery," *Proceedings of the IASTED International Symposium Applied Simulation and Modelling- ASM '90 held in Lugano, Switzerland*, Ed. M.H. Hamza, pp. 135-138, June 18-20, 1990.

K. B. Yuceil, "An Experimental Investigation of Shock Wave/Boundary Layer Interaction induced by Cylindrical Obstacles", M.Sc. Thesis, Istanbul Technical University, Istanbul, 1989.

M.Sc. Theses Supervised:

Fenercioglu, I., "An Experimental Investigation of Aerodynamic Characteristics of a High Speed Projectile with a Forward-Facing Nose Cavity," Istanbul Technical University, Institute of Science and Technology, January 2001.

KEMAL BULENT YUCEIL

Karakuzulu, M., "*PIV Measurements of an Aircraft Carrier Airwake*," Istanbul Technical University, Institute of Science and Technology, January 2003.

Orkun, E., "*Numerical Predictions of the Scaling Parameters for Highly Underexpanded Jets*," Istanbul Technical University, Institute of Science and Technology, May 2004.

Gunes, H., "*Jet Flow Measurements by Using a 3-D LDA System*," Istanbul Technical University, Institute of Science and Technology, May 2005.

Research Projects:

- Trisonic Wind Tunnel Project (Improvement of the Infrastructure), funded by Prime Ministry State Planning Organization, Project Director, 2000-2002.
- International Validation of the Test Facilities and Results of ITU 150mm x 150mm Trisonic Wind Tunnel, funded by ITU Research Fund, AFS-1505, Researcher, 2000-2005.
- Flow Separation, Shock Wave and Boundary Layer Interactions (Supersonic Vortex Breakdown), funded by NATO-RTO, NATO-RTO 127, Researcher, 2001-2005.
- Aerospace Research, Development and Application Project (Design and Manufacturing of a Light Commercial Helicopter Prototype), funded by Prime Ministry State Planning Organization, Researcher, 2001-2006.
- Advanced Technologies in Engineering Research and Education Project, funded by Prime Ministry State Planning Organization, Aerospace Engineering Graduate Program Coordinator, 2000-2002, Assistant Program Coordinator, 2002-2006.
- Research Assistant on the ARDEC Grant, "Hypervelocity Projectiles", 1992-1995.

Courses Taught (Last 4 years):

Year	Semester	Course Name
2004-2005	Fall	Principles of Aircraft Propulsion
	Spring	Rocket Propulsion Hypersonic Aerodynamics (Graduate)
2005-2006	Fall	Principles of Aircraft Propulsion Advanced Problems in Compressible Flow (Graduate)
	Spring	Orbital Mechanics
2006-2007	Spring	Airfoil and Wing Theory (ASE/EM Dept. UT-Austin)
	Summer	Boundary Layer Theory/Heat Transfer (ASE/EM Dept. UT-Austin)
2007-2008	Spring	Airfoil and Wing Theory (ASE/EM Dept. UT-Austin)
	Summer	Boundary Layer Theory/Heat Transfer (ASE/EM Dept. UT-Austin)

Languages: Fluent in English
Turkish (native language)

Memberships:

2000-Present American Institute of Aeronautics and Astronautics (AIAA)

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References:

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