

CURRICULUM VITAE

Dr. Omar Othman Badran



Contact information:

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ACADEMIC QUALIFICATIONS

Aug. 89 - Jul. 93

Ph.D. in Mechanical Engineering -
Bradford University, England, U.K.
Title of thesis - "A FLYING HOT-WIRE
STUDY OF SEPARATED FLOWS"

Aug. 88 - Aug. 89

MPhil. in Mechanical Engineering
Bradford University, England, U.K.

March 83 - Jan 88

B.Sc. (First Class) in Mechanical Engineering
University of Engineering and Technology,
Lahore, Pakistan.

PROJECTS

Ph.D. project: "A FLYING HOT-WIRE STUDY OF SEPARATED FLOWS".

The research aims to provide a detailed understanding of fluid mechanics (aerodynamics) in studies of a large separation region created over two different configurations: (1) a high lift wing model having an NACA 4412 aerofoil section, at high angles of attack, (2) a backward-facing step, with the effect of both inlet and outlet conditions.

EMPLOYMENT HISTORY

Aug. 94 - Till Now

AL-BALQA` APPLIED UNIVERSITY
FACULTY OF ENGINEERING TECHNOLOGY

Associate Professor

Teaching the undergraduate and postgraduate students the following subjects:

- Hydraulic Machines I and II
- Thermal and fluid systems
- Fluid Mechanics II
- Engineering Drawing
- Mechanical Vibrations

Oct. 89 - March 93

UNIVERSITY OF BRADFORD

Teaching Assistant

Tutor for the undergraduate students in the following subjects:

- Fluid Mechanics
- Thermodynamics
- Solid Mechanics
- Mathematics (Calculus II)
- Mechanics of Machines

Laboratory demonstrator: Duties;

- Demonstrator in Mechanical-Engineering Department laboratories.
- Supervising students in performing their experimental works.

TRAINING AND COURSES

I have attended several courses and seminars in the field of Fluid Mechanics, Air Conditioning systems, Computer Sciences, Quality Management (BS 5750) and TQM. In addition, I have experience in using the following computer packages and languages: AutoCAD, POWER POINT, FORTRAN, HARVARD GRAPHICS, and Microsoft Windows XP, EXCEL, and FIDAP and PHOENICS (CFD packages). Also I have ICDL certificate from BAU.

AWARDS AND SCHOLARSHIPS

I won several awards due to my academic excellence such as British Aerospace sponsorship for Ph.D. research, Ministry of Higher Education (undergraduate sponsorship), H.R.C scholarship, BRE AWARD 1996 (UK) for Free Standing walls Aerodynamics research project at Hertfordshire University, and AWARD from Jordan Engineers Association. I am a Member of Jordan Engineers Association, ASME, WWEA and ISE.

REFERENCES

*Professor Hans. H. Bruun

University of Bradford,

Mechanical and Medical Engineering Department,

Bradford, West Yorkshire, BD7 1DP, United Kingdom.

Selected Publications:

1. Badran, O.O. and Bruun, H.H. (2002): Experimental investigation of turbulent flow with separation over a NACA 4412 airfoil at angle of attack 20 degree". Proceeding of ASME FEDSM'02, Fluids Engineering Division Summer Meeting, Montreal, Quebec, Canada, July 2002.
2. Yamin, J.A. and Badran, O.O. (2002): Analytical study to minimize the heat losses from propane powered 4-stroke spark ignition engine". International Journal of Renewable Energy **27**, 463-478.
3. Badran, O.O. (2001): Study in industrial applications of solar energy and the range of its utilization in Jordan. International Journal of Renewable Energy **24**, 485-490.
4. Badran, O.O., HoldΦ, A.E., Al-Far, S., and Nilsen, H. (2001): CFD studies on Ballast water separators. Proceeding of the 2001 ASME Pressure Vessels and Piping Conference, Emerging Technologies for Fluids, Structures, and Fluid-Structure Interaction, USA, **431**, 17-22.
5. Badran, O.O., Davis, J.B. and HoldΦ, A.E. (2001): Wind loads on rectangular free standing walls. Proceeding of the 2001 ASME Pressure Vessels and Piping Conference, Emerging Technologies for Fluids, Structures, and Fluid-Structure Interaction, USA, **431**, 55-60.
6. Badran, O.O. and Bruun, H.H. (2001): Flow visualization and pressure distribution over an aerofoil at different angles of attack". Proc. of the 5th

- Asia-Pacific Conference on Wind Engineering V, October 2001, **89**, 141-144.
7. Badran, O.O (2000): The effect of the top geometry on the flow around free standing walls using RNG $\kappa - \epsilon$ model. Emirates Journal for Engineering Research, **5**, No.1, 28-34.
 8. Badran, O.O. (2000): Wind energy research and development in Jordan. Proceeding of the World Renewable Energy Congress VI, Renewables – the Energy for the 21-Century, UK, 2360-2368
 9. Badran, O.O and Bruun, H.H. (1999): A wind tunnel study of turbulent flow behind a backward facing step with and without flow underneath the step. Proceeding of the 10th International Conference on Wind Engineering, Denmark, June 1999. (Wind Engineering into 21st Century, Larsen, Larose & Livesey (eds.) © 1999 Balkema, Rotterdam, ISBN 90 5809 059 0.
 10. Badran, O.O. and Bruun, H.H, (1999): Comparison of flying-Hot-Wire and Stationary-Hot-Wire measurements of flow over a Backward-Facing Step. ASME Journal of Fluids Engineering, **121**, 441-445.
 11. Badran, O.O. and HoldΦ, A.E., (1999): The influence of Surface roughness on two- dimensional flow around walls. Proceeding of The 1st International Conference on Advances in Structural Engineering and Mechanics, **2**, August 1999, Korea, 1671-1677.
 12. Badran, O.O. (1998): A flying hot-wire study of separated flows on a NACA 4412 aerofoil wing at high angles of attack. Dirasat Journal of Natural and Engineering Sciences, **25**, No. 1, 177-189.
 13. Badran,O.O. and Bruun, H.H (1998): The effect of inlet conditions on flow over backward facing step. Journal of Wind Engineering and Industrial Aerodynamics, **74-76**, 495-509.
 14. Badran, O.O (1997): Gas-turbine performance improvements. International Journal of Applied Energy, **64**, No. 1-4, 263-273.
 15. Bruun, H.H, Badran, O.O. and Al-Kayiem, H.H (1991): A flying hot-wire probe study of flow behind a backward-facing step. Proceedings of the Second World Conference on Experimental Heat Transfer, Fluid Mechanics and Thermodynamics, Dubrovnik, Yugoslavia 1991, 230-240.
 16. Bruun, H.H, Al-Kayiem, H.H. and Badran, O.O (1990): Flying hot-wires anemometry with X-wire probes. Presented at ASME Fluids Engineering Spring Conference, June 4-7, University of Toronto, Canada.