

## Curriculum Vitae



### Personal Details:

<b>Name</b>	Omer Ali Elsayed Almatbagi
<b>Current Post</b>	Head of Aeronautical Engineering Department Sudan University of Science and Technology
<b>Nationality</b>	Sudanese
<b>Mutual Status</b>	Married- 4 Children
<b>Place And Date Of Birth</b>	Ed-Damer Nahr Alneel State, 7/4/1970
<b>Present Address</b>	Sudan University of Science and Technology College of Engineering Aeronautical Engineering Department P.O Box: 407 – Khartoum, Sudan Tel: h/p + (249)127515727, + (249)155144362 E-mail: <a href="mailto:almatbagi@yahoo.com">almatbagi@yahoo.com</a> , <a href="mailto:matbagi@hotmail.com">matbagi@hotmail.com</a> , <a href="mailto:omer_ali@sustech.edu">omer_ali@sustech.edu</a>

### Academic Qualifications

1	<b>Bachelor Of Science in Mechanical Engineering</b> (1991-1995), Faculty of Transportation Engineering, Branch of Aircraft, Technical University of Budapest, Hungary. Thesis Title: <b>Thermodynamics Analysis of Gas Turbine Engine with Cooled Stages.</b>
2	<b>Master Of Science in Aerospace Engineering</b> (200-2003), Faculty of Engineering, University Putra Malaysia (UPM), Malaysia. Thesis Title: <b>Computational Analysis of Incompressible Viscous Flow Over Single and Multi-Element Airfoil.</b>

3	<p><b>Doctor of Philosophy in Engineering</b> (2006-2010), Mechanical Engineering department, Kulliyyah of Engineering, International Islamic University Malaysia</p> <p><b>Thesis Title: Aircraft Wake Vortex Characterization And Alleviation</b></p>
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### Working Experience

Institution (Place of Work)	Period		Job Title (Academic Rank)	Nature of Work	Type of Work
	From	To			
Azza Air Transport, Khartoum, Sudan	Jan. 1997	July 1998	Engineer	Ground Engineer	Full-Time
Aeronautical Engineering Department, Sudan University for Science and Technology, Khartoum, Sudan.	Jan. 1999	Nov. 2001	Assistant Lecturer	Teaching	Full-Time
Department of Aerospace, University Putra Malaysia	May 2001	May 2003	Graduate Research Assistant	Research	Part Time
Aeronautical Engineering Department, Sudan University for Science and Technology, Khartoum, Sudan.	June 2003-	June 2006	Lecturer	Teaching	Full-Time
Department of Mechanical Engineering, Kulliyyah of Engineering, International Islamic University Malaysia	June 2006-	June 2010	Graduate Research Assistant - Lecturer	Teaching - Research	Full-Time Part Time
Korea Aerospace Research Institute	Jan 2008	Feb 2008	Cooperation Research	Research	Full-Time
Aeronautical Engineering Department, Sudan University for Science and Technology, Khartoum, Sudan.	Jun. 2010	up to date	Head of the Department Assistant professor	Teaching - Administrative work	Full-Time

### Language Proficiency

Arabic (Native), English (Fluent), Hungarian (Fairly Good).

### Prizes and Awards

No	Organization Conferring Award	Type of Award	Awarded For	Date
1	Technical University of Budapest	Certificate of Merit	Outstanding dedication to study	Academic year 1993/1994
2	Technical University of Budapest	Certificate of Merit	Outstanding dedication to study	Academic year 1994/1995
3	International Islamic University Malaysia	Bronze Medal	Research	Jan 2009

### Teaching Experience

Institution	Course Title	Language of Instruction
Sudan University for Science and Technology	Aerodynamics I, II and III	English/Arabic
International Islamic University Malaysia	Experimental Aerodynamics	English
Sudan University for Science and Technology	Flight Dynamics (Performance)	English/Arabic
International Islamic University Malaysia	Mechanics (Static and dynamics)	English
Sudan University for Science and Technology	Fluid Mechanics	English/Arabic
International Islamic University Malaysia	Aircraft design	English
University Putra Malaysia	Thermodynamics	English
Sudan University for Science and Technology	Computational Fluid Mechanics (CFD)	English/Arabic
University Putra Malaysia	Numerical Methods	English
Civil Aviation National Institute	Principle of Flight	English/Arabic

### Computer Skill

1. Microsoft Office
2. Internet Browsing
3. Fluent
4. Katia V5 (Sketcher and Part Design)

5. AutoCad
6. Tecplot
7. Image Processing software (Flow Manager for PIV system)
8. Fortran, Pascal and Matlab Fundamentals (as programming languages)

### Projects

Project Title	Institute	Position Held	Period
Numerical Simulation of Unsteady Incompressible Flow Around Single Airfoil.	University Putra Malaysia (UPM)	Graduate Research Assistant	200-2002
Numerical Simulation of Unsteady Incompressible Flow Around Multi-Element Airfoil	University Putra Malaysia (UPM) <sup>cs</sup>	Graduate Research Assistant	2002-2003
Experimental investigation of a Wing-Tip alleviation Using Sharp-edge Delta Wing Tip extension	International Islamic University	Graduate Research Assistant	2007-2010

### Laboratories Technique:

#### Fluid Mechanics Technique

1. Volumetric flow rate measurements
2. Friction losses measurement
3. Reynolds-Osborne experiment
4. Fan test
5. Pumps in series and parallel

#### Experimental Aerodynamics

1. Calibration of wind tunnels
2. Calibration of Constant Temperature Anemometer (CTA) and measurement of the turbulence intensities in wind tunnel test section using CTA
3. Flow past different aerodynamics shapes: surface pressure measurements and drag coefficient from wake velocity profile
4. Measurement of aerodynamics moments and forces using balance system
5. Flow visualization techniques ( smoke and tufts)
6. Particle Image Velocimetry (PIV) velocity field measurement technique
7. Calculation of velocity, vorticity and circulation from PIV measurement technique
8. Prediction of the span load distribution and induced rolling moment coefficient from wake velocity survey.

## Gas Dynamics Techniques

1. measurement of choking phenomena in compressible flow : effects of back pressure in convergent divergent nozzles
2. Measurement of jet reaction and specific thrust of nozzles

## Research Interests:

1. Grid Generation Around Complex Geometry
2. Steady and Unsteady Aerodynamics
3. 2-D Incompressible Navier-Stokes
4. Experimental Aerodynamics and Wind Tunnel Testing
5. Hotwire Anemometry (CTA)
6. Particle Image Velocimetry (PIV)

## Certificates

1. **P&W JT 3D Engine Course** (Jun. 1996). Azza Air Transport Co.Ltd. Khartoum, Sudan.
2. **Sudan Air Law**, (Aug. 1998). Sudan Civil Aviation, Khartoum, Sudan
3. **Basic Concepts of IT, Autocad and Matlab** (Oct. 2004). Ministry of High Education, Sudan University of Science and Technology, Faculty of Computer Science and Information Technology Khartoum, Sudan.
4. **CATIA V5 ( Sketcher and Part Design)** (Feb. 2009). Advance Engineering and Innovation Center (AEIC). International Islamic university Malaysia.
5. **Training on MATLAB Fundamentals (Nov. 2007)**. Advance Engineering and Innovation Center (AEIC). International Islamic university Malaysia.
6. **Certified Corporate Trainer (CCT)**. (Oct. 2010). Canadian Training Center of Human Development

## Publications

### International Journals

1. Omer A. Elsayed, Waqar Asrar, and Ashraf A. Omar and Kijung Kwon and Hyejin Jung. “*Experimental Investigation of Plain and Flapped Wing Tip Vortex*”. Journal of Aircraft, Vol. 46, No.1 pp254-262 January-February 2009.

2. Omer A. Elsayed, Kijung Kwon, Waqar Asrar and Ashraf A. Omar. *“Induced Rolling Moment for NACA4412 Plain and Flapped Wing”*. Aircraft Engineering and Aerospace Technology: An International Journal. Vol. 82. Issue 1, p 23 – 31. Emerald Group 2010.
3. Omer A. Elsayed, Waqar Asrar and Ashraf A. Omar and Kijung Kwon. *“Evolution of NACA23012 Wake Vortices Structure Using PIV”*. Journal of Aerospace Engineering. doi:10.1061/(ASCE)AS.1943-5525.0000109.
4. Omer A. Elsayed , Waqar Asrar, Ashraf A. Omar and Kijung Kwon. *“Influence of Differential Spoiler Settings on the Wake Vortex Characterization and Alleviation”* Journal of Aircraft, pp1728-1738, Vol. 47, No. 5, Sep.–Oct. 2010. DOI: 10.2514/1.C000258.
5. Omer A. Elsayed , Ashraf A. Omar, Waqar Asrar and Kijung Kwon. *“Effects of Differential Spoiler Settings (DSS) on the Wake Vortices of a Wing at High-Lift-Configuration (HLC)”*. Journal Of Aerospace Science and Technology. Nov. 2010, doi.org/10.1016/j.ast.2010.11.001
6. Ashraf A. Omar, Waqar Asrar and Omer A. Elsayed , *“Numerical Simulation of Separated Unsteady Incompressible Flow”* Journal- Institution of Engineers, Malaysia. pp56-63, Vol.63, No. 4, Dec.2002.

### International Conferences

1. Omer A. Elsayed, Waqar Asrar, Ashraf A. Omar, *“Reverse delta wing characteristics by particle Image Velocimetry”*. Proceedings of the 3rd Int. Symposium on Adv. Fluid/Solid Science & Tech in Experimental Mechanics, (ISEM) conference, Tainan, Taiwan, Dec 7-10, 2008.
2. Omer A. Elsayed, Waqar Asrar, and Ashraf A. Omar and Kijung Kwon and Hyejin Jung. *“Experimental Investigation of Wing Tip Vortex”*. Proceedings of the 47th AIAA Aerospace Sciences Meeting including The New Horizons Forum and Aerospace Exposition, Orlando, Florida, Jan. 5-8, 2009.
3. Omer A. Elsayed, Waqar Asrar and Ashraf A. Omar. *“Evaluation of aircraft wing-tip vortex using PIV”*. The 10<sup>th</sup> Asian International Conference on Fluid Machinery, (AICFM) conference, Kuala Lumpur, Malaysia, 21st -23rd Oct. 2009.
4. Omer A. Elsayed , Waqar Asrar, Ashraf A. Omar and Kijung Kwon. *“Span Load Modification Via Differential Spoiler Setting”* Abstract submitted to

2010 RAeS Aerodynamics Conference Applied Aerodynamics: Capabilities and Future Requirements. Royal Aeronautical Society.

5. Ashraf A. Omar, Omer A. Elsayed , Waqar Asrar and ShahNor Basri, “Computational Analysis of Incompressible Viscous Flow Over a Multi-Element Airfoil”, 12<sup>th</sup> Annual Conference of Computational Fluid Dynamics Society of Canada, Ottawa, Canada, July 2006.
6. Omer A. Elsayed, Ashraf A. Omar, Waqar Asrar and ShahNor Basri, “*Numerical Simulation of Unsteady Incompressible Flow A round Aerofoil*” Conference On Aerodynamic and Related topics, USM, Malaysia, 2001.

**Referees:**

1. **Waqar Asrar, Professor, Head** , Department of Mechanical Engineering, Kulliyah of Engineering, International Islamic University Malaysia, Jalan Gombak 53100 Kuala Lumpur, Malaysia. TEL: 603-20564447, FAX:603-20564853  
E- mail: [waqar@iiu.edu.my](mailto:waqar@iiu.edu.my) .
2. **Ashraf Ali Omar (PhD), Professor, Lecturer**, Department of Mechanical Engineering, Kulliyah of Engineering, International Islamic University Malaysia, Jalan Gombak 53100 Kuala Lumpur, Malaysia. TEL: 603-20564447, FAX:603-20564853  
E- mail: [aao@iiu.edu.my](mailto:aao@iiu.edu.my)
3. **Kijung Kwon (PhD), Senior Researcher**, Korea Aerospace Research Institute, Daejeon, 305-333. Republic of Korea E-mail: [kjkwon@kari.re.kr](mailto:kjkwon@kari.re.kr)

Omer Ali Elsayed Almatbagi

Attachment 1  
Academic  
Qualifications  
Certificates



# Attachment 2 Journal Publications

# Attachment 3

## Papers Presented at Conferences

# Attachment 4 Awards and Honors

# Attachment 5

## Short course and Training Certificates