

# **CURRICULUM VITAE**



## Assoc. Prof. Ashraf Elwy Abdel Aleem Balabel

Mechanical Power Eng. Dept., Faculty of Engineering, Minoufiya University, Shebin El-Kom, Minoufiya, Egypt جامعة المنوفية لية الهندسة بشبين الكوم

#### • Personal Information

Date of Birth: 06/12/1965Nationality: Egyptian

• Marital Status: Married, (3 children)

• Religion : Muslim

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#### • Current Occupation

• Associate Prof. in Mechanical Power Engineering Dept., Faculty of Eng., Minoufiya University

• Executive Director of Quality and Assurance Unit, Faculty of Eng., Minoufiya University.

• Executive Director of CIQAP Project, Faculty of Eng., Minoufiya University.

### Education and Academic Degrees

• Degree: Associate Professor in Mechanical Power Engineering

• Year: March 2008

• Faculty: Faculty of Engineering, Shebin El-Kom

• University: Minoufiya University

• Degree: Ph.D. in Mechanical Power Engineering

• Year: Feb. 2002 (very good)

• Faculty: Faculty of Engineering, Institute of Technical Combustion

• University: RWTH-Aachen, Germany

• Thesis Title: "Numerical Simulation of Gas-liquid Interface Dynamics Using the Level Set Method".

Degree: M.Sc. in Mechanical Power Engineering

• Year: Jan. 1995

Faculty: Faculty of EngineeringUniversity: Minoufiya University

• Thesis Title: "Turbulent Flow over Wavy Surfaces".

• Degree: B.Sc. in Mechanical Power Engineering

• Year: May 1988 (Excellent with Honours Degree 92%)

Faculty: Faculty of EngineeringUniversity: Minoufiya University

## • Language & Computer Skills

• English: excellent (Reading/writing/speaking).

• German: very good (Reading/writing/speaking).

• ICDL Certificate.

#### • Teaching and Research Topics

- Fluid Mechanics
- Mechatronics
- Hydraulic Machines
- Computational Thermo-Fluid Dynamics
- Turbulence Modeling
- Level Set Method
- Free Surface Flow
- Hydrogen Energy

## • Research Projects

- A Study on using Multi-Jet Water Sprays to improve Climatic Conditions during Hajj, Sponsored by King Abdulaziz City for Science and Technology, Saudi Arabia, (2002-2003).
- Analysis of Natural Convection over a Heated Vertical Plate, Sponsored by King Abdulaziz City for Science and Technology, Saudi Arabia, (2003-2004).
- A Model of Composite Solid Propellant Combustion Including Chamber-Nozzle Configuration, Project (ID-108), Sponsored by Science & Technology Development (STDF) 29/1/2009-31/7/2011.

### • Recent Publications (Maximum 5)

- 1. <u>A. Balabel</u>, W. El Askary and A. Bagabir, "On The Performance of linear and nonlinear k-ε Turbulence Models in Various CFD Applications", Proceedings of the Tenth International Congress of Fluid Dynamics ICFD-10, Dec. 16-19, Ain Soukhna-Red Sea, Egypt, 2010.
- 2. <u>A. Balabel</u> and W.A. El-Askary, "On the performance of linear and nonlinear k–ε turbulence models in various jet flow applications", European Journal of Mechanics B/Fluids EJMFLU, vol. 30, pp. 325-340, 2011.
- 3. <u>A. Balabel</u>, A. Hegab, M. Nasr and S. El-Behery, "Assessment of Turbulence Models for Gas Flow in two-dimensional Convergent-Divergent Rocket Nozzle", Applied Mathematical Modelling, vol. 35, pp. 3408-3422, 2011.
- 4. <u>A. Balabel</u>, "Numerical Prediction of Droplet Dynamics in Turbulent Flow using the Level Set Method", International Journal of Computational Fluid Dynamics IJCFD, vol. 25, No. 5, pp. 239-253, 2011.
- 5. <u>A. Balabel</u> and M. Zaki, "Experimental Investigation of Solar-Hydrogen Energy System Performance", International Journal of Hydrogen Energy, vol. 36, pp. 4653-4663, 2011.
- 6. <u>A. Balabel</u>, "Numerical Prediction of Turbulent Thermocapillary Convection in superposed Fluid Layers with a free Interface", International Journal of Heat and Fluid Flow, 32(6), 1226-1239, 2011.

#### Additional Data

 A per-reviewer for Quality Projects in Minoufiya University according to the National Authority for Quality Assurance and Accreditation of Education.