

Dr. EL-SAMNI, Osama

The University of Alexandria
Faculty of Engineering
Department of Mechanical Power Engineering
El-Chatby, Alexandria 21544
Egypt

EDUCATION

- **Ph. D.** Thesis title “*Heat and Momentum Transfer in Turbulent Rotating Channel Flow,*” Department of Mechanical Engineering, The University of Tokyo Japan 2001.
- **M. Sc.** Thesis title “*Numerical Study of Fluid Flow in Curved Channels,*” Department of Mechanical Power Engineering The University of Alexandria, Alexandria, Egypt, 1995.
- **B. Sc.** Department of Mechanical Power Engineering, The University of Alexandria, Alexandria, Egypt, 1991

EMPLOYMENT

- | | | |
|---------------------------------|------------------|--|
| • Teaching & Research Assistant | 1991/8 – 1995/9 | Dept. of Mechanical Power Eng. The University of Alexandria, Egypt |
| • Assistant Lecturer | 1995/10 – 1997/9 | Dept. of Mechanical Power Eng. The University of Alexandria |
| • Researcher | 1997/10 – 1998/3 | Dept. of Mechanical Eng., The University of Tokyo, Japan |
| • Post-doc | 2002/3 – 2002/9 | Dept. of Mechanical Eng., Pusan National University, Pusan, Korea |
| • Lecturer | 2003/1 – to now | Dept. of Mechanical Power Eng. The University of Alexandria |

TEACHING EXPERIENCES

Undergraduate

- Thermodynamics
- Fundamentals of Heat Transfer
- Thermal power plants
- Steam and gas turbines
- Refrigeration and Air-conditioning principals

Post graduate

- Finite Difference techniques
 - Spectral Methods for solving PDE.
 - First Course in Turbulence
-

CURRENT RESEARCH ACTIVITIES

Direct numerical simulation and large eddy simulation of complex flows
Effect of system rotation in turbulent structure, momentum and heat transfer
Coherent structures in turbulent boundary layers
Numerical and Particle Image Velocimetry measurements of turbulent bluff body wakes

RESEARCH INTERESTS

Fluid Mechanics
Convective Heat Transfer
Computational Fluid Dynamics

AWARDS

- Monbusho scholarship from the Japanese Government 1997/10 – 2001/3
- Honors scholarship from Monbukagakusho 2001/4 – 2002/3

HOBBIES AND COMMON INTERESTS

Sports: Soccer, swimming, tennis tables – Chess -Reading and writing - Mountain climbing - Politics, religious and culture exchanges.

PUBLICATIONS

- El-Samni, O. 1999 "Spectral Methods for Solving Partial Differential Equations," Internal Report ILR-9903, Department of Mech. Eng., The University of Tokyo.
- El-Samni, O. and Kasagi, N. 1999 "On Turbulent Flow with Streamwise Rotation," in Statistical Nature of Turbulence and its Dynamical Description Based on Coherent Structure, RIMS, Kyoto, pp. 128-136.
- El-Samni, O. and Kasagi, N. 2000 "Turbulent Channel Flow with System Rotation," Proc. 15th NST Symposium, IIS, the University of Tokyo, pp. 56-62.
- El-Samni, O. and Kasagi, N. 2000 "Passive Scalar Transport in Rotating Turbulent Channel Flows," Proc. 37th National Heat Transfer Symposium, Kobe, pp. 559-560.
- El-Samni, O., and Kasagi, N. 2000 "Heat and Momentum Transfer in Rotating Turbulent Channel Flow," Proc. 4th JSME-KSME Thermal Eng. Conf., Kobe, Vol. 3, pp. 517-522.
- El-Samni, O., and Kasagi, N. 2001 "The Effects of System Rotation with Three Orthogonal Rotating Axes on Turbulent Channel Flow," 7th International Conference of Fluid Dynamics and Propulsion (ASME), Cairo, Egypt, Dec. 19-21.