

Khalid M. Saqr

Associate Professor - Fluid Mechanics

A perceptive and diligent fluid dynamicist with 15+ years experience in Computational Fluid Dynamics (CFD) and turbulence modeling. Published 80+ papers (h-index 23) in leading journals and conference proceedings of the field and secured a total of \$750K in research funding. Participated in and led wide range of CFD projects including problems in turbulent/jet combustion systems building aerodynamics, thermal equipment, wind and marine turbine aerodynamics, and most recently vascular hemodynamics. Supervised PhD and MSc theses and taught under/post graduate courses in leading universities in Asia, Europe and Middle East. Current research is focused on hemodynamic turbulence in the cerebral circulation. Designed research plans, methodologies and data analysis architecture for DNS and LES CFD projects of brain aneurysms, Moyamoya disease, intracranial stenosis and endovascular devices. Contributed to the design of in vitro platforms utilizing laser velocimetry (PIV, LDV, LDA).



Work History

2019-05 -
Current

Visiting Associate Professor

Tohoku University, Sendai, Japan

Biomedical Flow Dynamics Laboratory, Institute of Fluid Science (IFS)

- Co-designed and analyzed 2 PIV experiment series for cerebral aneurysm hemodynamics, ultrasound velocimetry and CFD simulations of Moyamoya disease.
- Contributed to design and writing of 2 national research grants.

2013-06 -
Current

Co-founder and Deputy Director

RCCNB, Alexandria University, Alexandria, Egypt

- Co-founded Research Center for Computational Neurovascular Biomechanics (RCCNB) with Alexandria University.
- RCCNB received \$564,000 in seed fund from Egyptian state ministry of scientific research, STDF CSE program.
- Developed 100+ patient-specific CFD simulations of cerebral aneurysm.
- Working closely with neurosurgeons and neuroradiologists to improve diagnosis techniques and management plans for aneurysm and stenosis patients.

2018-10 -
2019-02

Visiting Associate Professor

Tohoku University, Sendai, Japan

Biomedical Flow Dynamics Laboratory, Institute



Contact info

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@khaledsaqr

WWW

khalidsaqr.bio



Skills

ANSYS Fluent

Excellent

OpenFOAM

Very Good

of Fluid Science (IFS).

- Co-developed large-scale validation study for cerebral aneurysm CFD models funded by JSPS KAKENHI program.
- Co-designed PIV experiments series for idealized aneurysm models.
- Delivered keynote speaker at ICFD'2018, Sendai. Delivered specialized seminars and talks at IFS.

2017-06 -
2017-10

Visiting Associate Professor

Tohoku University, Sendai, Japan

Biomedical Flow Dynamics Laboratory, Institute of Fluid Science (IFS)

- Worked in 2 research projects on hemodynamics of cerebral aneurysm.
- Delivered 2 seminars and 1 invited lecture.
- Grant writing and application for IFS collaborative research program.

2013-09 -
Current

Assistant Professor

AAST&MT, Alexandria, Egypt

- Arab Academy for Science, Technology and Maritime Transport (AAST&MT) is pan-Arab institution established by Arab League in 1971.
- Received tenure in September 2013 as assistant professor and qualified to associate professor in December 2017.
- Taught undergraduate and postgraduate fluid mechanics and CFD courses and supervised M.Sc. theses.

2013-01 -
2014-08

Visiting Research Fellow

Universiti Teknologi Malaysia, Johor, Malaysia

- Research fellowship granted to outstanding researchers worldwide to enrich research culture in UTM and extend research collaboration globally.
- Delivered invited 3 lectures on turbulence modeling.
- Organized and instructed 2 CFD workshops for students and postgraduate researchers.

2011-05 -
2012-01

Visiting Researcher

Universiti Teknologi Malaysia, Johor, Malaysia

- Postdoctoral position at High-Speed Reacting Flow Laboratory.
- Contributed to 3 research projects focused on CFD models of combustion systems including flameless combustion,

Curriculum

Development

Excellent

Research Planning

Excellent

Grant Writing

Excellent

Student Learning

Outcomes

Excellent

PIV / LDV / LDA

Good

deflagration-to-detonation transition, and miniaturized heat exchangers.



Education

2009-01 -
2011-08

Ph.D.: Mechanical Engineering (Thermofluids)

Universiti Teknologi Malaysia (UTM) - Malaysia

2007-01 -
2008-09

Master of Engineering: Mechanical Engineering (Thermofluids)

Universiti Teknologi Malaysia (UTM) - Malaysia

1999-09 -
2004-11

Bachelor of Science: Mechanical Engineering

Alexandria University - Egypt



Editorship

- Editor-in-Chief, CFD Letters (ISSN: 2180-1363)
- Guest Editor, FLUIDS (ISSN: 2311-5521)
- Editorial Board Member, Journal of Advanced Research in Fluid Mechanics and Thermal Sciences (ISSN: 2289-7879)
- Editorial Board Member, Journal of Advanced Research in Applied Mechanics (ISSN: 2289-7895)



Awards

- Affiliate of the African Academy of Sciences (2018-2022)
- AAST&MT Award for Distinguished Publications (2014, 2015, 2016, 2017)
- Albert Nelson Marquise Lifetime Achievement Award, 2017
- Best Paper Award, International Meeting on Advances in Thermofluids (IMAT 2010, 2016)



Conference Chairs

INVITED SPEAKER

15th International Conference on Flow Dynamics (ICFD 2018), Sendai, Japan

34th Annual Meeting of the Japanese Society
of Neuroendovascular Therapy, Sendai, JAPAN
14th International Conference on Flow
Dynamics (ICFD 2017), Sendai, Japan
3rd MENA-SINO Congress (2018), Cairo, Egypt

**COUNTRY COORDINATOR AND SESSION
CHAIRMAN**

9th International Meeting on Advances in
Thermofluids (IMAT 2017)

PUBLICATIONS CHAIR

1st International Conference on Advanced
Technology and Applied Sciences
(ICaTAS2016)

SESSION CHAIRMAN

The 7th International Meeting on Advances in
Thermofluids (IMAT 2014)

SCIENTIFIC COMMITTEE CHAIR

International Marine and Offshore Engineering
Conference (IMOC 2014)

World Virtual Conference on Advanced
Research in Mechanical & Materials
Engineering (18-22 March 2014)

INTERNATIONAL ADVISORY BOARD MEMBER

International Conference on Energy & Thermal
Sciences (ICETS 2014)

· **The 7th International Meeting on Advances in
Thermofluids (IMAT 2014)**



References

Professor Makoto Ohta

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Professor Mazlan A. Wahid

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