

Personal Details

Name: Mehdi Hassan Mahmud
 Date of Birth: July first, 1979
 Gender: Male
 Specialty: Applied Mathematics
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Employment History

Sep 2019- 30th May 2021, Research Fellow, School of Mathematics, University of Birmingham, UK,
 (Research project: Maximising cavitation to clean dental implants, EPSRC Grant)
 2015-2019 (PhD- student) Assistant Lecturer at the Mathematics Department / University of Birmingham
 (part times)
 2007-2009 (MSC) Lecturer at the Mathematics Department / College of Science /Salahaddin
 University/Erbil/IRAQ.
 2003-2005 Assistant researcher in the Mathematics Department / College of Science /Salahaddin
 University/Erbil/IRAQ.

Degrees/Qualifications

PhD in Applied Mathematics, School of Mathematics, University of Birmingham, UK, July 2020.

Title of the Thesis: MICROBUBBLE DYNAMICS NEAR RIGID BOUNDARIES

MSc in numerical analysis, Salahaddin University/Erbil-Iraq, August 2009.

BSc in Mathematics, Salahaddin University/Erbil-Iraq, July 2002

Teaching Experience

- Advanced Calculus, Mathematics Department, Salahaddin University-Erbil-Iraq., 2012- 2014
- Latex Package, Mathematics Department, Salahaddin University-Erbil-Iraq., 2013
- Numerical Analysis, Mathematics Department, Salahaddin University-Erbil-Iraq., 2010, 2014
- Visual Basic programming, Mathematics Department, Salahaddin University-Erbil-Iraq., 2010-2012.
- Visual Basic programming, Mathematics Department, Salahaddin University-Soran-Iraq., 2008-2010.
- Computational Mathematics using Matlab, Mathematics Department, Salahaddin University-Erbil-Iraq, IT Department in Lebanese French University-Erbil, 2013-2007,

Research Interests

Bubble dynamics; Modeling Cavitation, Boundary integral method; Numerical Modeling; Computational Fluid Dynamics.

Publications

1. Wang, Q., Mahmud, M., Cui, J., Smith, W.R. and Walmsley, A.D., 2020. Numerical investigation of bubble dynamics at a corner. *Physics of Fluids*, 32(5), p.053306.
2. Vyas, N., Mahmud, M., Wang, Q.X. and Walmsley, A.D., 2020. Imaging and Quantification of the Area of Fast-Moving Microbubbles Using a High-Speed Camera and Image Analysis. *JoVE (Journal of Visualized Experiments)*, (163), p.e61509.

3. Rostam K. Saeed and Mehdi H. Mahmud, Solution of a system of two-dimensional linear Fredholm integral equation of the second kind by quadrature methods, *Australian Journal of Basic and Applied Sciences*, Vol.3, No.3 (2009), 1701-1715.
4. Mehdi H. Mahmud and Rostam K. Saeed, Numerical Solution of System of Two-Dimensional Linear Fredholm Integral Equations of the Second Kind by Adomian Decomposition Method, *Proceeding of the 4th International scientific conference of Salahaddin University-Erbil*, October 18-20, Vol.1 of 4 (2011), 31-34.

Training Courses

1. Academic Consultancy – One Day Workshop, University of Birmingham Enterprise Limited, 29th May 2019.
2. Software Carpentry – Python, the workshop focused on Python and the curriculum will include: The Unix Shell, Version Control with Git, and Programming with Python, University of Birmingham, UK, 27th and 28th December 2018
3. Mathematical Analysis of Incompressible Fluid Flows. A Sussex School and Workshop on the Navier-Stokes and Euler Equations. University of Sussex, Brighton, UK, 18-22 September, 2017.

Academic Administration & Service

- 2013-2015 Member of the Curriculum Development Committee at the Mathematics Departments College of Science /Salahaddin University/Erbil/IRAQ
- 2004-2014, Member of the final examination committee for undergraduate students.
- 2009-2014, Coordinate of the Mathematics Department, College of Science, Salahaddin University-Erbil, IRAQ.

REFERENCES

- **Qianxi Wang**
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- **Professor Damien Walmsley**
Professor of Restorative Dentistry
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- **Rostam Karim Saeed**
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