

Name: Ahmed Mostafa Abdelhady Ismaeel.
Nationality: Egyptian.
Birth Date and Place: 10th of March 1986, Sultanate of Oman.
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Educational Qualifications

1. Bachelor of Science (Mathematics) with a grade of **Distinction with first-class honours**, Faculty of Science, Department of Mathematics, University of Assiut, Egypt, 20/9/2003-22/7/2007.
2. Pre-Master with a grade of **very good**, 2009.
3. Master of Science degree (**Mathematics- scientific computing**), Faculty of Science, Department of Mathematics, University of Assiut, Egypt, 26/6/2012.
4. PhD. In Mathematics (**Applied Mathematics**), School of Mathematics and Statistics, University of Glasgow, UK, 13/3/2020.
5. Huawei Certificate for **Artificial Intelligence** (HCIA), 12/12/2022.
6. Huawei Certified **Academy Instructor** (HCAI), 14/5/2023.

Statement positions

1. Teaching Assistant, Department of Mathematics, Faculty of Science, University of Assiut, 15/11/2007-10/8/2012.
2. Assistant Lecturer, Department of Mathematics, Faculty of Science, University of Assiut, 11/8/2012- 30/9/2015.
3. Tutor and Lecturer at School of Mathematics and Statistics, University of Glasgow,1/10/2015-30/12/2020.
4. Assistant Professor, Department of Mathematics, Faculty of Science, University of Assiut, 28/6/2020-31/10/2021
5. Assistant Professor, Faculty of Basic Sciences, King Salman International University, South Sinai, Egypt, 1/11/2021 – 30/1/2025.
6. Assistant Professor, Faculty of Basic Sciences, King Salman International University, South Sinai, Egypt, 1/11/2021 – 30/1/2025.
7. Assistant Professor, Department of Mathematics, College of Science and Humanities in Al-Kharj, Prince Sattam bin Abdulaziz University, Al-Kharj, Saudi Arabia, 1/2/2025 – till now.

Dissertation

1. Computational of Convective Heat Transfer in Nanofluids.
2. A Mathematical Model for Photothermal Therapy of Spherical Tumours.

Field of Interest

1. Mathematical modelling of drug delivery and cancer treatment using thermal therapy.
2. Nanofluid flow as efficient heat transfer fluids and its applications in medicine.
3. Solving system of partial differential equations using some numerical and analytical methods.

Publications

1. **A.M. Ismaeel**, Asymptotic analysis for a nanofluid flow within a microvessel surrounded by tissue, *ZAMM-Journal of Applied Mathematics and Mechanics/Zeitschrift für Angewandte Mathematik und Mechanik*, 105 (2025) e70089. (Q1 journal)
2. **A.M. Ismaeel,** Exact solutions for heat transfer and nanoparticle extravasation across microvessel walls within biological tissues, *International Journal of Numerical Methods for Heat & Fluid Flow* 36, no. 1 (2026) 378-401.
3. N.F. Ahmed, M.A. Mansour, F.S. Ibrahim, **A.M. Ismaeel**, The influence of lymphatic vessels on nanoparticle distribution and heat transfer within tissue, *ZAMM-Journal of Applied Mathematics and Mechanics/Zeitschrift für Angewandte Mathematik und Mechanik*. 105 (2025) e202400363. (Q1 journal)
4. **A.M. Ismaeel**, M.A. Mansour, F.S. Ibrahim, F.M. Hady, Numerical Simulation for Nanofluid Extravasation from a Vertical Segment of a Cylindrical Vessel into the Surrounding Tissue at the Microscale, *Applied Mathematics and Computation*, 417 (2022) 126758. (Q1 journal)
5. M. Mansour, S. Ahmed, F. Hady, F. Ibrahim, **A. Ismaeel**, Numerical Simulation for Nanoparticle Extravasation from a Single 2D Vessel, *Alexandria Engineering Journal*, 61 (2021) 3999. (Q1 journal)
6. **A.M. Ismaeel**, R. S. Kamel, M. R. Hedar, F. M. Hady, Numerical simulation for a Casson nanofluid over an inclined vessel surrounded by hot tissue at the microscale, *SN Applied Sciences,* 5 (2023) 223. (Q1 journal)
7. R.S. Kamel, **A.M. Ismaeel**, F.M. Hady, Numerical Study for a Newtonian Nanofluid over a Vertical Cylindrical Vessel Surrounded by a Hot Tissue, *SN Applied Sciences,* 5 (2023) 315. (Q1 journal)
8. **A.M. Ismaeel**, R.S. Kamel, M.R. Hedar, and F.M. Hady, Numerical simulation of heat transfer and nanoparticle transport in a nanofluid within a tumour surrounding a blood vessel. *Numerical Heat Transfer, Part A: Applications*, (2024) 1-12. (Q2 journal)
9. M. Mansour, S. Ahmed, E. Mohamed, **A. Ismaeel**, Heat Generation Effects on MHD Double Diffusive of Tio 2 -Cu/Water Hybrid Nanofluids in a Lid-Driven Wavy Porous Cavity Using LTNE Condition, *Scientia Iranica*, **in press**. doi: 10.24200/sci.2023.61512.7353 (Q2 journal)
10. N.F. Ahmed, M.A. Mansour, F.S. Ibrahim, **A.M. Ismaeel**, Casson nanofluid flow through tissue incorporating an inclined cylindrical lymphatic vessel. *Assiut University Journal of Multidisciplinary Scientific Research*. 53 (2024) 385-412.
11. R.S Kamel, F.M. Hady, **A. M. Ismaeel**, Numerical Study of Sutterby Nanofluid Flow Over Unstretched Horizontal Cylinder Enveloped by Heated Tissue, *Assiut University Journal of Multidisciplinary Scientific Research* 54 (2025) 20-228.
12. A. Ismaeel, A mathematical model for photothermal therapy of spherical tumors, PhD diss., University of Glasgow, (2020).

13. F. Hady, F. Ibrahim, H. El-Hawary, and A. Abdelhady, Effect of Suction/Injection on Natural Convective Boundary-Layer Flow of A Nanofluid Past A Vertical Porous Plate Through A Porous Medium, *Journal of Modern Methods in Numerical Mathematics,* 3 (2012) 53-63.
14. F. Hady, F. Ibrahim, H. El-Hawary, and A. Abdelhady, Forced convection flow of nanofluids past power law stretching horizontal plates, *Applied Mathematics*, 3 (2012) 121-126.

Current Postgraduate Students

1. Rehab Kamel (PhD, 2021-ongoing) Some Problems in Heat and Mass Transfer in Nanofluids with Biological Applications.
2. Mostafa Saleh (MSc, 2025-ongoing) Numerical Solutions for Interstitial Fluid Flow and Nanoparticle Transport in Tumors.
3. Yasmeen (MSc, 2022-ongoing) Drug delivery to elastic biological tissue.

Formal Postgraduate Students

4. Nora Fattah (MSc, 2021-2024) Studying The influence of Nanoparticles Drainage Through Lymphatic Vessels.

Research IDs:

ORCID: https://orcid.org/0000-0003-2798-2131
Scopus ID: https://www.scopus.com/authid/detail.uri?authorId=57278026000
Web of Science Research ID: AAB-8123-2022
Google Scholar: https://scholar.google.com/citations?user=66QldsgAAAAJ&hl=en
Research Gate: https://www.researchgate.net/profile/Ahmed_Ismaeel
Clarivate web of science: https://www.webofscience.com/wos/author/record/AAB-8123-2022

Research Grants:

1. ***Agency:*** The Academy of Scientific Research and Technology (ASRT).
   Grant Title: Numerical Simulation for Cancer Treatment Using Photothermal Therapy.
   Duration: 1/9/2020 - 31/8/2021.
2. ***Agency:*** Prince Sattam bin Abdulaziz University.
   Grant Title: Mathematical Modeling for Cancer Treatment Using Thermal Therapy.
   Duration: 31/8/2025 - 33/8/2026.
3. ***Agency:*** Prince Sattam bin Abdulaziz University.
   Grant Title: Comprehensive Review Articles on Mathematical Modelling Approaches in Photothermal Therapy and Thermal Therapy for Biomedical Applications
   Duration: 6/10/2025 - 5/10/2026.
4. ***Agency:*** Prince Sattam bin Abdulaziz University.
   Grant Title: Predictive Modelling of Microvascular Blood Flow for Biomedical Applications
   Duration: 21/10/2025 - 20/10/2026.

Memberships:

- Ahmed Ismaeel is a member of the Math-Mechanics Professional Learning Community (PLC) for Science, technology, engineering, and mathematics (STEM) teaching Diploma.
  https://sites.google.com/21pstem.org/math-mechanics/home

Presentations and Events:

- British Applied Mathematics Colloquium, University of Bath, 24-26 April 2019.
- A 10 mins presentation for PubhD on at Waterstones Sauchiehall Street, 16th April 2019.
- "7 mins of science", University of Glasgow, 19 January 2019.
- Modelling & Experiments in Drug Delivery Systems (MEDDS) workshop, University of Glasgow, 3rd -5th September 2018.
- Edinburgh Mathematical Society Postgraduate Meeting for Students, Edinburgh, 2018.
- British Applied Mathematics Colloquium, University St Andrews, 26-29 March 2018.
- SofTMech Industry Dialogue, University of Glasgow, 24 Nov 2017.
- Mathematics for Industry PhD Modelling Week, Edinburgh, 31/1/2017.
- 'The Dialogue on Cancer' - between clinicians, biologists and modellers, 25/11/2016.
- British Applied Mathematics Colloquium, University of Surrey 10-12 April 2017.
- CMALS Early Career Researcher Symposium, Glasgow, 02/12/2016.
- Conference of young researchers (Oral). Annual Conference for Young Scientists on Basic Sciences and Technology, Faculty of Science, Assiut University, Assiut, Egypt, 2011.

Computer Skills: Programming with Fortran, Mathematica, C++ , LibMesh Library, Python and MATLAB.

Teaching Experience:

1. Demonstrator, Faculty of Science, Department of Mathematics, University of Assiut, 2007-2012.
2. Assistant Lecturer at the Faculty of Science Department of Mathematics, University of Assiut, 2012-2015.
3. Tutor at School of Maths and Stats, University of Glasgow,2016.
4. Assistant Professor at Assiut University and King Salman International University, 2020-till now.
5. Participating in teaching, regular exercise sessions, preparing and evaluating mid-term exams for undergraduate students in Faculties of Engineering, Education and Science.
6. Ahmed has completed the Equality and Diversity Essentials course at the University of Glasgow in 2017.
7. Ahmed has been delivering lectures for Professional Diploma Program to Prepare Teachers for STEM Schools.
8. Ahmed is a member of the Math-Mechanics Professional Learning Community (PLC) for Science, Technology, Engineering, and Mathematics (STEM) teaching Diploma.
9. Ahmed uses an interactive teaching approach, where he uses simulation applications to visualize mathematics which keep students conscious and help them to be creative.

Contribution to teaching the following courses:

1. Mathematics 1, (At the University of Glasgow).
2. 2B Linear Algebra, (At the University of Glasgow).
3. Calculus, (At the Assiut Uni and King Salman International Uni).
4. Advanced Calculus, (At the Assiut Uni and King Salman International Uni).
5. Mathematical Applications in Mathematics, (At the University of Assiut).
6. Statistics, (At the King Salman International Uni).
7. Probability and Statistics, (At the King Salman International Uni).
8. Computer Skills, (At the King Salman International Uni).
9. Introduction to Information systems & technology, (King Salman International Uni).
10. Structured Programming, (At the King Salman International Uni).
11. Critical Thinking, (At the King Salman International Uni).

Related Professional Experience

Attained and satisfactorily completed the following training programs organized by the FLDC (Faculty and leadership development centre)

1. Code of Ethics (15 hours).
2. International Publishing of Research (15 hours).
3. Strategic planning (15 hours).
4. E-Learning (15 hours).
5. Conference Organization (15 hours).
6. Research Team Management (15 hours).
7. Design Management and Evaluation of e-Courses (15 hours).
8. Project Management (15 hours).
9. Management Skills (15 hours).
10. Collaborative Learning Strategies and Tools (15 hours).
11. Competitive Research Proposal (15 hours).
12. Critical Thinking (15 hours).

I hereby declare that the above-given information is correct and accurate to the best of my knowledge.

Referees

- Peter Stewart, a Professor in Applied Mathematics at the School of Mathematics and Statistics, University of Glasgow. (peter.stewart@glasgow.ac.uk)
- Xiaoyu Luo, a Professor in Applied Mathematics at the School of Mathematics and Statistics, University of Glasgow. (xiaoyu.luo@glasgow.ac.uk)

HUAWEI

Huawei Certification

Ahmed Mostafa Abdelhady Ismaeel

has successfully completed the Huawei certification requirements and is recognized as an

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Valid Through Dec 11, 2025

Validate this certificate's authenticity at
http://support.huawei.com/learning/verifycertificate
Certificate No. 01010200180886253140 9

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CEO
Huawei Technologies Co., Ltd.

HUAWEI

Huawei Certification

Ahmed

has successfully completed the Huawei certification requirements and is recognized as a

Huawei Certified Academy Instructor



Issue Date May 14, 2023

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Certificate No. 02110360185580923461 1409

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