

Curriculum vitae



Personal Information:

- **Name:** Elsayed Ibrahim Saad (E.I. Saad)
- **Date:** 30 October 1974.
- **Nationality:** Egyptian
- **Present Occupation:** Professor of Applied Mathematics,
Department of Mathematics, Faculty of Science, Damanshour University, 22511
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Academic Degrees:

1. Ph.D. in Mathematics, 2006, “Some problems in micropolar fluid flow”, Faculty of Science, Alexandria University, Egypt.
2. M.Sc. in Mathematics, 2002, “Gravity waves in stratified fluids”, Faculty of Science, Alexandria University, Egypt.
3. B.Sc. in Mathematics, 1997, Faculty of Science, Alexandria University, Egypt.

Professional Occupations:

1. Demonstrator; Alexandria University, 4 October 1998 - 15 June 2002.
2. Assistant Lecturer; Alexandria University, 16 June 2002 - 29 August 2006.
3. Lecturer; Alexandria University, 30 August 2006 – 25 October 2007.
4. Lecturer; Damanshour University, 26 October 2007 – 25 December 2012.
5. Associate Professor; Damanshour University, 26 December 2012– 24 March 2018.
6. Professor; Damanshour University, 25 March 2018.
7. Vice-Dean for Education and Student Affairs; Damanshour University, 27 July 2020 – 17 November 2023.

8. Acting Dean, Faculty of Science, Damanhour University, 18 November 2023 to 2 May 2025.

In KSA:

October 2009 — May 2019. Assistant/Associate Professor, Mathematics Department, Faculty of Science and Humanities, Shaqraa University, Dawadmi, KSA

Research Interests

Fluid Dynamics, Porous media, Numerical Analysis.

Membership:

1. Egyptian Syndicate of Scientific Professions.
2. Egyptian Mathematical Society
3. Alexandria University Staff Club

List of Publications:

1. H.H. Sherief, M.S. Faltas, E.I. Saad, Forced gravity waves in two-layered fluids with the upper fluid having a free surface, *Can. J. Phys.* **81**, 675-689, 2003.
2. H.H. Sherief, M.S. Faltas, E.I. Saad, Axisymmetric gravity waves in two-layered fluids with the upper fluid having a free surface, *Wave Motion* **40**, 143-161, 2004.
3. M.S. Faltas, E.I. Saad, Stokes flow with slip caused by the axisymmetric motion of a sphere bisected by a free surface bounding a semi-infinite micropolar fluid, *Int. J. Eng. Sci.* **43**, 953-976, 2005.
4. H.H. Sherief, M.S. Faltas, E.I. Saad, Slip at the surface of a sphere translating perpendicular to a plane wall in micropolar fluid, *Z. Angew. Math. Phys.* **59**, 293-312, 2008.
5. M.S. Faltas, E.I. Saad, Three-dimensional Stokes flow caused by a translating-rotating sphere bisected by a free surface bounding a semi-infinite micropolar fluid, *Math. Meth. Appl. Sci.* **31**, 1233-1256, 2008.
6. E.I. Saad, Motion of a spheroidal particle in a micropolar fluid contained in spherical envelope, *Can. J. Phys.* **86**, 1039–1056, 2008.
7. E.I. Saad, Translation and rotation of a porous spheroid in a spheroidal container, *Can. J. Phys.* **88**, 689–700, 2010.

8. M.S. Faltas, E.I. Saad, Stokes flow past an assemblage of slip eccentric spherical particle-in-cell models, *Math. Meth. Appl. Sci.* **34**, 1594–1605, 2011.
9. E.I. Saad, Stokes flow past an assemblage of axisymmetric porous spheroidal particle-in-cell models, *J. Porous Media* **15**, 849–866, 2012.
10. E.I. Saad, Motion of two spheres translating and rotating through a viscous fluid with slip surfaces, *Fluid Dyn. Res.* **44**, 055505 (18pp), 2012.
11. M.S. Faltas, E.I. Saad, Stokes flow between eccentric rotating spheres with slip regime, *Z. Angew. Math. Phys.* **63**, 905–919, 2012.
12. M.S. Faltas, E.I. Saad, Slow motion of a porous eccentric spherical particle-in-cell models, *Transp. Porous Med.* **95**, 133–150, 2012.
13. E.I. Saad, Cell models for micropolar flow past a viscous fluid sphere, *Meccanica* **47**, 2055–2068, 2012.
14. E.I. Saad, Stokes flow past an assemblage of axisymmetric porous spherical shell-in-cell models: effect of stress jump condition, *Meccanica* **48**, 1747–1759, 2013.
15. H.H. Sherief, M.S. Faltas, E.I. Saad, Slip at the surface of an oscillating spheroidal particle in a micropolar fluid, *ANZIAM J.* **55**, E1–E50, 2013.
16. E.I. Saad, M.S. Faltas, Slow motion of a porous sphere translating along the axis of a circular cylindrical pore subject to a stress jump condition, *Transp. Porous Med.* **102**, 91–109, 2014.
17. M.S. Faltas, E.I. Saad, Slow motion of spherical droplet in a micropolar fluid flow perpendicular to a planar solid surface, *Eur. J. Mech. B/Fluids* **48**, 266–276, 2014.
18. E.I. Saad, Motion of a slip sphere in a nonconcentric fictitious spherical envelope of micropolar fluid, *ANZIAM J.* **55**, 383–401, 2014.
19. E.I. Saad, Axisymmetric motion of a spherical porous particle perpendicular to two parallel plates with slip surfaces, *Can. J. Phys.* **93**, 784–795, 2015.
20. E.I. Saad, Axisymmetric motion of a porous sphere through a spherical envelope subject to a stress jump condition, *Meccanica* **51**, 799–817, 2016.
21. E.I. Saad, Interactions of two slip spheres moving side by side in a viscous fluid, *Fluid Dyn. Res.* **84**, 015502 (18pp), 2016.

22. H.H. Sherief, M.S. Faltas, E.I. Saad, Stokes resistance of a porous spherical particle in a spherical cavity, *Acta Mech.* **227**, 1075–1093, 2016.
23. E.I. Saad, Motion of a viscous droplet bisecting a free surface of a semi-infinite micropolar fluid, *Eur. J. Mech. B/Fluids* **59**, 57–69, 2016.
24. M.S. Faltas, E.I. Saad, S. El-Sapa, Slip-Brinkman flow through corrugated microannulus with stationary random roughness, *Transp. Porous Med.* **116**, 533–566, 2017.
25. M.S. Faltas, E.I. Saad, Three-dimensional Darcy-Brinkman flow in sinusoidal bumpy tubes, *Transp. Porous Med.* **118**, 435–448, 2017.
26. S. El-Sapa, E.I. Saad, M.S. Faltas, Axisymmetric motion of two spherical particles in a Brinkman medium with slip surfaces, fluid, *Eur. J. Mech. B/Fluids* **67**, 306–313, 2018.
27. E.I. Saad, M.S. Faltas, Time-dependent electrophoresis of a dielectric spherical particle embedded in Brinkman medium, *Z. Angew. Math. Phys.* **69**, 43, 2018.
28. E.I. Saad, Effect of magnetic fields on the motion of porous particles for Happel and Kuwabara models, *J. Porous Media* **21**, 637–664, 2018.
29. E.I. Saad, Start-up Brinkman electrophoresis of a dielectric sphere for Happel and Kuwabara models, *Math. Meth. Appl. Sci.* **41**, 9578–9591, 2018.
30. E.I. Saad, Viscous flow past a porous sphere within a nonconcentric fictitious spherical cell, *Microsyst. Technol.* **25**, 1051–1063, 2019.
31. E.I. Saad, M.S. Faltas, Theory of thermophoresis of a spherical particle embedded in a micropolar fluid, *J. Mol. Liq.* **282**, 527–544, 2019.
32. E.I. Saad, Unsteady electrophoresis of a dielectric cylindrical particle suspended in porous medium, *J. Mol. Liq.* **289** (2019) 111050.
33. E.I. Saad, Time-varying Brinkman electrophoresis of a charged cylinder-in-cell model, *Eur. J. Mech. B/Fluids* **79**, 357–366, 2020.
34. E.I. Saad, M.S. Faltas, Thermophoresis of a spherical particle straddling the interface of a semi-infinite micropolar fluid, *J. Mol. Liq.* **312** (2020) 113289.
35. E.I. Saad, Magnetic fields effect on a porous sphere in a nonconcentric spherical cell, *J. Porous Media* **24** (2021) 1–18.

36. M.S. Faltas, E.I. Saad, Thermophoresis-Brinkman flow of an aerosol particle within a spherical cavity, *Phys. Fluids* **35** (2023) 063121.
37. M. Ayman, E.I. Saad, M.S. Faltas, Transient electrophoresis of a conducting cylindrical colloidal particle suspended in a Brinkman medium. *Z. Angew. Math. Phys.* 75 (2024) 53.
38. M. Ayman, E.I. Saad, M.S. Faltas, Influence of concentration on thermophoresis of spherical aerosol particles within a Brinkman medium, *Fluid Dynamics Research* 56 (2024) 055505.
39. M. Ayman, E.I. Saad, M.S. Faltas, Transient Motion of a Rotating Slippery Spherical Particle within a Spherical Cavity Filled with a Porous Medium, *Can. J. Phys.* 103 (2025) 638–653.
40. M.S. Faltas, H.H. Sherief, E.I. Saad, A.S. Aamer, Migration of a porous spherical particle in the presence of a non-deformable interface, *Eur. J. Mech. B/Fluids* 114 (2025) 204277.
41. M.S. Faltas, E.I. Saad, H.H. Sherief, A.S. Aamer, Transient Movement of a Hydrophobic Particle in a Cavity Containing a Brinkmann Medium, *Electron. J. Math. Anal. Appl.* 13 (2025) 1-25.
42. E.I. Saad, M.S. Faltas, Two-particle motion in a Brinkman micropolar medium, *Z. Angew. Math. Phys.* 76 (2025) 208.
43. E.I. Saad, M.S. Faltas, E.A. Ashmawy, R.S. Ghallap, Boundary effects on the thermocapillary motion of a fluid droplet in a porous medium, *Chin. J. Phys.* 98 (2025) 529-545.
44. M.M. Hammad, M.M. Yahia, E.I. Saad, S.B. Doma, From E(5) to shape coexistence: a catastrophe-theoretic phase diagram and Maxwell critical curve for the γ -unstable Bohr model, *Journal of Physics G: Nuclear and Particle Physics* 53 (2026) 035101.
45. E.I. Saad, M.S. Faltas, Laplace-domain drag formula for unsteady motion in a Brinkman micropolar medium with application to spherical particles, *Z. Angew. Math. Phys.* 77 (2026) 158.
46. E.I. Saad, M.S. Faltas, Transient Response of a Hydrophobic Colloidal Particle in a Micropolar Fluid, *Int. J. Eng. Sci.* 227 (2026) 104591.

Book

- E.I. Saad, Slip Boundary Value Problems in Micropolar Fluid Flow, LAP Lambert Academic Publishing, Saarbrücken, 2015.

Activities:

1. Reviewer of the doctoral theses, Paramita Maiti (Calcutta University, Department of Applied Mathematics, India) - Some problems of scattering and generation of waves in water, 2007.
2. School on the algebraic approach to differential equations, co-sponsored by ICTP, Bibliotheca Alexandrina, 12 - 24 November 2007, Alexandria, Egypt.
3. School on recent developments in the theory of elliptic PDE, co-sponsored by CIMPA-UNESCO-EGYPT School, Academy for Science and Technology, 26 January 2009 – 3 February 2009, Alexandria, Egypt.
4. Reviewer of the doctoral theses, Barnali Dutta (Jadavpur University, Department of Mathematics, India) - On some integral equations and applications to water wave problems, 2009.