HAMZEH ALKASASBEH

Ajloun National University
جامعة عجلون الوطنية

Amman, Jordan

alkasasbehh@anu.edu.jo

+96277081435

PROFILE

I have developed strong interests in mathematical modeling in fluid dynamic which is solved a new mathematical model numerically by using some of numerical methods with the assistance of MATLAB, Mathematica and Maple software. In addition, I published about 38 papers (WoS and Scopus journal). Beyond my research interests, I am an effective communicator and have earned praise from undergraduate students for my ability to explain complex mathematical ideas in a simple and understandable fashion.

EDUCATION

- ◆ **PH.D** - Mathematics, Specialization, Optimization and Mathematical Modeling in Fluid Dynamic, February 2013 to April 2016, (UMP) Malaysia .
- ◆ PhD- Thesis Titled: Numerical Solutions for Convective Boundary Layer Flow over a Solid Sphere of Newtonian and Non-Newtonian Fluids.
- ◆ **Master** - Mathematics, February 2005 to August 2007, Mu'tah University, Al-Karak, Jordan. (Excellent)
- ◆ Master- Thesis Titled: On the Cycles of Graphs
- ◆ **Bachelor** - Mathematics, September 2001 to February 2005, Mu'tah University, Al-Karak, Jordan(Good)
- ◆ High- secondary school, Scientific Stream, July 2001, Ayy secondary School, Jordan. 77.1%

WORK EXPERIENCE

- ▪ Deputy Dean of Scientific Research: Feb 2023 – Present, Ajloun National University, Ajloun, Jordan.
- ▪ Associate Professor, September 2021 – Present, Ajloun National University, Ajloun, Jordan.
- ▪ Dean of the Faculty of Information Technology and Science, October 2019- December 2022, Ajloun National University, Ajloun, Jordan.

Personal Data

Date of birth jun 25, 1982
Marital status: Married
Nationality: Jordanian

PROFESSIONAL ACTIVITIES

1.- Member of the Faculty Council in the Faculty of Science in○ Ajloun National University, since 2017.
2- Member of the University Council Ajloun National University, since 2021

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WORK EXPERIENCE

- Deputy Dean of Scientific Research: Feb 2023 – Present, Ajloun National University, Ajloun, Jordan.
- Associate Professor, September 2021 – Present, Ajloun National University, Ajloun, Jordan.
- Dean of the Faculty of Information Technology and Science, October 2019- December 2022, Ajloun National University, Ajloun, Jordan.
- Head of Mathematics Department, October 2018- December 2022, Ajloun National University, Ajloun, Jordan.
- Assistant Professor, September 2017 – April 2021, Ajloun National University, Ajloun, Jordan.
- Teaching Assistant, February 2013 – February 2015, University Malaysia Pahang, Malaysia.
- Lecturer, January 2011- January 2013, Northern Borders University, Saudi Arabia.
- Part time Lecturer, October 2010- January 2011, Al-Balqa Applied University, Aqaba, Jordan
- Lecturer, February 2009 – July 2010, King Saud University, Saudi Arabia.
- Teacher, February 2005- February 2009 , Ministry of Education, Alkarak, Jordan.

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SKILLS

- The International Computer Driving License (ICDL).
- Mathematic Program (MATLAB, Maple)
- Mathematical Typing (Latex)

Languages

Arabic
English

CONTINUED PROFESSIONAL ACTIVITIES

3- Leader of the search committee in the Faculty of Science in Ajloun National University,, since 2019.

4- Member of the quality assurance committee in the Faculty of Science in Ajloun National University, since 2019.

5.- Member of the website committee in the College of Arts and Sciences in Amman Arab University, 2020.

6 . - Leader of the examinations committee in Faculty of Science in Ajloun National University, 2019.

7 .- Member of the proficiency test committee in Faculty of Science in Ajloun National University, 2019..

REFEREED INTERNATIONAL JOURNALS

- Alkasasbeh, H. T. (2024). Exploring Three-Dimensional MHD Maxwell Hybrid Nanofluid Flow: A Computational Study on a Stretching sheet. Journal of Computational Applied Mechanics. 55 (1): 77-91. (WOS and Scopus Indexed Q2)

- 2.Mohamed, M. K. A., Ishak, A., Rosli, W. M. H. W., Soid, S. K., & Alkasasbeh, H. T. (2023). MHD Natural Convection Flow of Casson Ferrofluid over a Vertical Truncated Cone. Journal of Advanced Research in Fluid Mechanics and Thermal Sciences, 112(1), 94-105. (Scopus Indexed Q3).

- 3.Alkasasbeh, H. T (2023). 'Numerical Investigation of MHD Carreau Hybrid Nanofluid Flow over a Stretching Sheet in a Porous Medium with Viscosity Variations and Heat Transport', Journal of Computational Applied Mechanics, 54(3), 410-424.-doi: 10.22059/jcamech.2023.364255.861 (WOS and Scopus Indexed Q2)

- 4.Alkasasbeh, H. T., Abderrahmane, A., Mourad, A., Guedri, K., Tag, E. M., & Younis, O. Analysis of 3-D MHD Maxwell Hybrid Nanofluid Flow Over a Stretching Sheet. Available at SSRN 4376147. Heliyon (WOS and Scopus Indexed Q1)

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REFEREED INTERNATIONAL JOURNALS

- Alkasasbeh, H. T, Mohamed, M. K. A., (2023) MHD (SWCNTS+ MWCNTS)/ H2O-Based Williamson Hybrid Nanofluids Flow Past Exponential Shrinking Sheet in Porous Medium Frontiers in Heat and Mass Transfer (WOS and Scopus Indexed Q2) https://doi.org/10.32604/fhmt.2023.041539

- .Alkasasbeh, H. T, Feras M Al Faqih, Azher M. Abed, Aissa abderrahmane, Mohammad Ali Fazilati, Davood Toghraie, Abed Mourad, Kamel Guedri, Obai Younis (2023) Computational modeling of hybrid micropolar nanofluid flow over a solid sphere Journal of Magnetism and Magnetic Materials 569 170444 (WOS and Scopus Indexed Q1) https://doi.org/10.1016/j.jmmm.2023.170444

- Alkasasbeh, H. T., Feras M. AlFaqih, Abedalrahman S Shoul (2023) Computational Simulation of Magneto Convection Flow of Williamson Hybrid Nanofluid with Thermal Radiation Effect CFD Letters 15(4), 92-105 (Scopus Indexed Q2).

- .Firas Alwawi, Mohammed Swalmeh, Ibrahim Sulaiman, Nusayba Yaseen, Alkasasbeh, H. T, Tarik Al Soub. (2022) Numerical investigation of heat transfer characteristics for blood/water-based hybrid nanofluids in free convection about a circular cylinder. Journal of Mechanical Engineering and Sciences 16(2) 8931-8942 (WOS and Scopus Indexed Q2).

- Alkasasbeh, H. T., (2022) Mathematical Modeling of MHD Flow Of Hybrid Micropolar Ferrofluids About A Solid Sphere Frontiers in Heat and Mass Transfer 18(43) 1-9 (WOS and Scopus Indexed Q2)

- .Alkasasbeh, H. T., (2022) Numerical Solution of Heat Transfer Flow of Casson Hybrid Nanofluid over Vertical Stretching Sheet with Magnetic Field Effect. CFD Letters 14(3) 39-52 (Scopus Indexed Q2).

- .Alwawi, F. A., Hamarsheh, A. S., Alkasasbeh, H. T., & Idris, R. (2022). Mixed Convection Flow of Magnetized Casson Nanofluid over a Cylindrical Surface. Coatings, 12(3), 296. (WOS and Scopus Indexed Q2).

REFEREED INTERNATIONAL JOURNALS

- .Feras M. Al Faqih1, Alkasasbeh, H, T., Mohammed Z. Swalmeh, Sulaiman M. Ibrahim, Hebah G. Bani Saeed, E. Al Sarairah, Mathematical modeling of the MHD Flow of Casson Nanofluid in the Presence of Oxides Nanoparticles Based $C_2H_6O_2/H_2O$ Under Constant Heat Flux Boundary Condition, International Review of Mechanical Engineering (IREME) 15(3):1-11(Scopus Indexed Q3).

- Mohammed Z Swalmeh, Abid Hussanan, Ibrahim M Sulaiman, Alkasasbeh, H, T, Mustafa Mamat. Boundary Layer Analysis of Micropolar Nanofluid with GO Nanoparticles in Water, Methanol and Kerosene over a Horizontal Circular Cylinder 63(3): 907-915 Petroleum and Coal (Scopus Indexed Q4).

- .Mohamed, M. K. A., Hussanan, A., Alkasasbeh, H. T., Widodo, B., & Salleh, M. Z. (2021). Boundary layer flow on permeable flat surface in Ag-Al_2O_3/water hybrid nanofluid with viscous dissipation. Data Analytics and Applied Mathematics (DAAM), 2(1), 11-19.

- .Mohamed, M. K. A., Yasin, S. H. M., Salleh, M. Z., & Alkasasbeh, H. T. (2021). MHD Stagnation Point Flow and Heat Transfer Over a Stretching Sheet in a Blood-Based Casson Ferrofluid with Newtonian Heating. Journal of Advanced Research in Fluid Mechanics and Thermal Sciences, 82(1), 1-11. (Scopus Indexed Q3).

- . Alwawi F. A., Alkasasbeh, H. T., Rashad A M., Idris. R (2020) A numerical approach for heat transfer flow of CMC-water based Casson nanofluid from a solid sphere generated by mixed convection under Lorentz force influence. Mathematics, 8(7), 1094. (WOS and Scopus Indexed Q1).

- . Hamarsheh A. S, Alwawi F. A., Alkasasbeh, H. T., Rashad A M., Idris. R (2020). Heat Transfer Improvement in MHD Natural Convection Flow of Graphite Oxide/Carbon Nanotubes-Methanol Based Casson Nanofluids Past a Horizontal Circular Cylinder Processes, 8(11) 1-18, (WOS and Scopus Indexed Q2).

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Amman, Jordan

alkasasbehh@anu.edu.jo

+96277081435

REFEREED INTERNATIONAL JOURNALS

- .. Muhammad K.A. M, Ong, H. R, Alkasasbeh, H. T, Salleh. M. Z., (2020). Heat Transfer of Ag-Al2O3 /Water Hybrid Nanofluid on a Stagnation Point Flow over a Stretching Sheet with Newtonian Heating Journal of Physics Conference Series 1529:042085 DOI: 10.1088/1742-6596/1529/4/042085(WOS and Scopus Indexed Q2).

- Alkasasbeh, H. T, Swalmeh, M. Z, Bani Saeed, H, Al Faqih, F, Talafha, A (2020) Investigation on CNTs-water and human blood based Casson nanofluid flow over a stretching sheet under impact of magnetic field Frontiers in Heat and Mass Transfer 14(15) 1-7 (WOS and Scopus Indexed Q2)

- . Alwawi F. A., Alkasasbeh, H. T., Rashad A M., Idris. R (2020) Heat transfer analysis of ethylene glycol-based Casson nanofluid around a horizontal circular cylinder with MHD effect Journal of Mechanical Engineering Science 0954406220908624 (WOS and Scopus Indexed Q2).

- . Alwawi F. A., Alkasasbeh, H. T., Rashad A M., Idris. R (2020) MHD Natural Convection of Sodium alginate Casson Nanofluid over a Solid Sphere 16 (2020): 102818.Results in Physics (WOS and Scopus Indexed Q1).

- . Swalmeh, M. Z., Alkasasbeh, H. T., Hussanan, A., Mamat, M. (2019). Numerical Study of Mixed Convection Heat Transfer in Methanol based Micropolar Nanofluid about a Horizontal Circular Cylinder Journal of Physics Conference Series 1366:012003 DOI: 10.1088/1742-6596/1366/1/012003 (WOS and Scopus Indexed Q2).

- . Alwawi F. A., Alkasasbeh, H. T., Rashad A M., Idris. R (2019) Natural convection flow of Sodium Alginate based Casson nanofluid about a solid sphere in the presence of a magnetic field with constant surface heat flux Journal of Physics Conference Series 1366:012005 DOI: 10.1088/1742-6596/1366/1/012005 (WOS and Scopus Indexed Q2).

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REFEREED INTERNATIONAL JOURNALS

- . Swalmeh, M. Z., Alkasasbeh, H. T., Hussanan, A., Mamat, M. (2019). Microstructure and Inertial Effects on Natural Convection Flow of Water and Kerosene Oil Based Nanofluids about a Solid Sphere International Journal of AmbientEnergy.1-31 DOI:10.1080/01430750.2019.1665582 (WOS and Scopus Indexed Q1).

- . Swalmeh, M. Z., Alkasasbeh, H. T., Hussanan, A., Mamat, M. (2019) Influence of Microstructure and Inertial on Micropolar Nanofluid Free Convection Flow over a Heated Horizontal Circular Cylinder Theoretical and Applied Mechanics (00),1-8: https://doi.org/10.2298/TAM181120008S (WOS and Scopus Indexed Q2).

- . Swalmeh, M. Z., Alkasasbeh, H. T., Hussanan, A., Mamat, M. (2019) Numerical Investigation of Heat Transfer Enhancement with Ag-GO Water and Kerosene Oil Based Micropolar Nanofluid over a Solid Sphere Journal of Advanced Research in Fluid Mechanics and Thermal Sciences 59(2):269-282 (Scopus Indexed Q3)

- Alkasasbeh, H. T., Swalmeh, M. Z., Hussanan, A., Mamat, M. (2019) Numerical Solution of Heat Transfer Flow in Micropolar Nanofluids with Oxide Nanoparticles in Water and Kerosene Oil about a Horizontal Circular Cylinder IAENG International Journal of Applied Mathematics 49(3) 326-333 (Scopus Indexed Q3)

- . Hani A Qadan, Alkasasbeh, H. T., Nusayba Y Mohammad Z Alsawalmeh, Shaima I Alkhalafat (2019) A Theoretical Study of Steady MHD mixed convection heat transfer flow for a horizontal circular cylinder embedded in a micropolar Casson fluid with thermal radiation Journal of Applied and Computational Mechanics 50(1)165-173 10.22059/jcamech.2019.278376.372 (WOS and Scopus Indexed Q2)

- . Husein A. Alzgool, Alkasasbeh, H. T. Sana Abu-ghurra, Mohammed Z. Swalmeh (2019) Numerical Solution of Heat Transfer in MHD Mixed Convection Flow Micropolar Casson Fluid about Solid Sphere with Radiation Effect International Journal of Engineering Research and Technology 12(4) 519-529(Scopus Indexed Q3).

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REFEREED INTERNATIONAL JOURNALS

- Alkasasbeh, H. T.,Sana Abu-ghurra, Husein A. Alzgool, (2019) Similarity solution of Heat Transfer for the Upper-Convected Maxwell Casson Fluid over a Stretching/Shrinking Sheet with Thermal Radiation, JP Journal of Heat and Mass Transfer 17(1) 1-17(Scopus Indexed Q4).

- . Alkasasbeh, H. T., Swalmeh, M. Z., Hussanan, A., Mamat, M. (2019) Effects of mixed convection on methanol and kerosene oil based micropolar nanofluid containing oxide nanoparticles CFD Letters 11 (1) 70-83. (Scopus Indexed Q3)

- . Swalmeh, M. Z., Alkasasbeh, H. T., Hussanan, A., Mamat, M. (2018). Heat transfer flow of Cu-water and Al2O3-water micropolar nanofluids about a solid sphere in the presence of natural convection using keller-box method. Results in Physics 9(2018) 717-728 (WOS and Scopus Indexed Q1).

- Hussanan, A., Salleh. M. Z., Alkasasbeh, H. T, Khan, I,. (2018). MHD flow and heat transfer in a Casson fluid over a nonlinearly stretching sheet with Newtonian Heating. Heat Transfer Research Journal 49(12):1185–1198 (2018) (WOS and Scopus Indexed Q2)

- . Alkasasbeh, H. T., (2018). Numerical Solution on Heat Transfer Magnetohydrodynamic Flow of Micropolar Casson Fluid over a Horizontal Circular Cylinder with Thermal Radiation, Frontiers in Heat and Mass Transfer 10(32) 1-7 (Scopus Indexed Q2)

- Before Ph.D.

- . Alkasasbeh, H. T., Salleh. M. Z., Tahar R. M., Nazar, and Pop, I. (2015). Effect of radiation and magnetohydrodynamic free convection boundary layer flow on a solid sphere with convective boundary conditions. Walailak Journal of Science and Technology. 12(9): 849-861 (Scopus Indexed Q3)

- . Alkasasbeh, H. T., Sarif, N. M., Salleh. M. Z., Tahar R. M., Nazar, and Pop, I. (2015). Effect of radiation and magnetohydrodynamic free convection boundary layer flow on a solid sphere with Newtonian Heating in a micropolar fluid. AIP Conference Proceedings (1643): 662-669. (WOS Indexed)

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REFEREED INTERNATIONAL JOURNALS

- . Alkasasbeh, H. T., Salleh. M. Z., Tahar R. M., Nazar, and Pop, I. (2015). Effect of radiation and magnetohydrodynamic free convection boundary layer flow on a solid sphere with convective boundary conditions in a micropolar fluid. Malaysian Journal of Mathematical Sciences 9(3): 463-480 (Scopus Indexed Q4)

- Alkasasbeh, H. T., Salleh. M. Z., Tahar R. M., Nazar, and Pop, I. (2015). Numerical solutions of Mixed convection boundary layer flow about a solid sphere in a micropolar fluid with convective boundary conditions. World Applied Sciences Journal 33(9): 1472-1481. (Scopus Indexed Q4)

- Alkasasbeh, H. T., Salleh. M. Z., Tahar R. M. and Nazar, R. (2014). Numerical solutions of free convection boundary layer flow on a solid sphere with convective boundary condition, Journal of Physics: IOP Publishing. 495(1): 012025 (WOS, Scopus Indexed Q2)

- Alkasasbeh, H. T., Salleh. M. Z., Tahar R. M., Nazar, and Pop, I. (2014). Mixed convection boundary layer flow about a solid sphere with convective boundary conditions. Wulfenia Journal, 21(3): 386-404. (WOS, Scopus Indexed)

- Alkasasbeh, H. T., Salleh. M. Z., Tahar R. M., Nazar, and Pop, I. 2014. Free convection boundary layer flow on a solid sphere with convective boundary conditions in a micropolar fluid. World Applied Sciences Journal. 32(9): 1942-1951.(Scopus Indexed Q4)

- Alkasasbeh, H. T., Salleh. M. Z., Nazar, and Pop, I. (2014). Numerical solutions of effect of radiation and magnetohydrodynamic free convection boundary layer flow a solid sphere with Newtonian heating. Applied Mathematical Sciences Journal. 8(140): 6989-7000.(Scopus Indexed)

- . Alkasasbeh, H. T., Salleh. M. Z., Tahar R. M. and Nazar, R. (2014). Effect of radiation on magnetohydrodynamic free convection boundary layer flow near the lower stagnation point of a solid sphere with Newtonian heating. Journal of Engineering and Technology. 5(1): 77-88.(Scopus Indexed)

- Alkasasbeh, H. T., Salleh. M. Z., Tahar R. M., Nazar, R. and Pop, I. (2013). Free convection boundary layer flow near the stagnation point of a solid sphere with convective boundary conditions in a micropolar fluid. AIP Conference Proceedings, (1602): 76-82..(WOS Indexed).

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REFEREED INTERNATIONAL JOURNALS

Conferences

. The Malaysian Technical Universities Conference on Engineering and Technology (MUCET, 2013) was hold between 3 -4 December 2013 in Kuantan, Pahang.

46. The 3rd International Conference on Mathematical Sciences (ICMS 2013)

The 2014 International Conference on Science and Engineering in Mathematics, Chemistry and Physics, (ScieTech, 2014) Jakarta-Indonesia, 13-14 January 2014.

The 2nd ISM International Statistical Conference 2014 (ISM-II): Empowering the Applications of Statistical and Mathematical Sciences

Alkasasbeh, H. T., Sarif, N. M., Salleh. M. Z., Tahar R. M. 2015. Mixed convection boundary layer flow of nanofluid near the lower stagnation point about a solid sphere with convective boundary conditions Proceeding of the 4th ICoGOIA 2015 International Conference 10 -11 August 2015 in Kuantan, Pahang

The International Conference on Fractional Differentiation and its Applications was hold between 16 -18 July 2018 in Amman, Jordan.

Hamzeh T. Alkasasbeh, Mohammed Z. Swalmeh. 2019 Numerical Study of Stagnation Point Flow over a Sphere with GO/ Water and Kerosene Oil Based Micropolar Nanofluid IACMC2019 (2019): 22. Proceeding International Arab Conference on Mathematics and Computations will be hold between 24 -26 April 2019 in Zarqa, Jordan.

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TEACHING EXPERIENCE

- Undergraduate Level
- Calculus I & II,
- Abstract Algebra I & II,
- Number Theory,
- Ordinary Differential Equations I & II
- Numerical Analysis I & II
- Complex Analysis,
- Real Analysis I & II
- Mathematics History
- Mathematical Finance
- Partial Differential Equations
- Statistics,
- Linear Algebra,
- Applied Mathematics for Computer Science,
- Discrete Mathematics,
- Vector Analysis.
- Postgraduate Level
- Ordinary Differential Equations Theory
- Advance Numerical Analysis